

MTSU

2014-2015 Graduate Catalog • Murfreesboro, Tennessee

Part 1 of 2:

Introductory Pages • College of Basic and Applied Sciences

College of Behavioral and Health Sciences • Jones College of Business

College of Education



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Table of Contents

Part 1

About MTSU	1
Academic Calendar	6
College of Graduate Studies	7
The Graduate Council and Graduate Faculty	8
Admission to the College of Graduate Studies	9
Expenses/Tuition and Financial Aid	18
Academic Regulations	25
Policies	35
Doctor of Philosophy Degree	38
Doctor of Education Degree	42
General Information for Specialist and Master's Students	44
Specialist in Education Degree	46
The Master's Program	47
Graduate Certificate Programs	50
Libraries/Archives/Centers	51
Student Resources	55
Campus Life	57

College of Basic and Applied Sciences

Computational Science	59
Mathematics and Science Education	64
Molecular Biosciences	77
Professional Science	81
Aerospace	94
Agribusiness and Agriscience	104
Biology	116
Chemistry	126
Computer Science	138
Engineering Technology	145
Geosciences	156
Mathematical Sciences	161
Physics and Astronomy	182

College of Behavioral and Health Sciences

Criminal Justice Administration	186
Health and Human Performance	192
Human Performance	211

Human Sciences	228
Nursing	234
Psychology	254
Social Work	287

Jones College of Business

Accounting	294
Business Communication and Entrepreneurship	301
Computer Information Systems	308
Economics and Finance	318
Management and Marketing	340

College of Education

Assessment, Learning, and School Improvement	355
Literacy Studies	358
Educational Leadership	363
Elementary and Special Education	416

Part 2

College of Liberal Arts

Art	456
English	459
Foreign Languages and Literatures	476
Global Studies Program	488
History	490
Music	521
Political Science	550
Sociology and Anthropology	563
Speech and Theatre	473

College of Mass Communication

Mass Communication	578
--------------------------	-----

University College

University College	589
--------------------------	-----

Middle Tennessee State University is a member of the Tennessee Board of Regents system, one of the nation's largest systems of public higher education. The Tennessee Board of Regents is the governing board for this system which comprises six universities, thirteen community colleges, and twenty-seven technology centers. The TBR system enrolls more than 80 percent of all Tennessee students attending public institutions of higher education.

Middle Tennessee State University, in its educational programs and activities involving students and employees, does not discriminate on the basis of race, color, national origin, sex, religion, or age. Furthermore, the University does not discriminate against veterans or individuals with disabilities.

The catalog is only available online and is updated yearly in the spring for the next academic year. It is compiled and prepared by the curriculum specialist, Office of the University Provost. If you have questions or need assistance, please contact the curriculum specialist at (615) 904-8210.

Cover image by MTSU Creative and Visual Services

About MTSU

Middle Tennessee State University, a coeducational, tax-supported institution founded in 1911, is located in Murfreesboro less than a mile from the exact geographic center of the state. Murfreesboro, a historic city of over 100,000, is 32 miles southeast of Nashville via I-24 and is easily accessible from any direction. MTSU students and personnel can enjoy the advantages of a metropolitan atmosphere without the impersonalization associated with a big city.

The large and beautifully landscaped campus of approximately 500 acres has more than 200 permanent buildings totaling almost 5.0 million square feet. Visitors may take a virtual tour at tour.mtsu.edu/.

The University is made up of eight undergraduate colleges-the College of Basic and Applied Sciences, the College of Behavioral and Health Sciences, the Jennings A. Jones College of Business, the College of Education, the College of Liberal Arts, the College of Mass Communication, the University College, the University Honors College-and a College of Graduate Studies. MTSU offers curricular breadth in a variety of programs ranging from traditional ones on which the school was founded to new, innovative ones designed for a rapidly changing society. Designated a regional university, MTSU provides services and continuing education to the central Tennessee area.

Some 80 percent of the school's more than 950 full-time faculty members hold terminal degrees. The student body numbers more than 23,000 and comes from 94 Tennessee counties, 47 states, and 77 foreign countries.

Statement of Mission

Middle Tennessee State University is a comprehensive university that embraces its role as the destination of choice for Tennessee undergraduates while expanding its reach nationally and internationally through signature programs and select master's and doctoral programs. The University generates, preserves, and disseminates knowledge and innovation and uses scholarship to enhance teaching and public service. The University is committed to preparing students to thrive in their chosen professions and a changing global society.

A major public institution of higher learning, MTSU is a member of the State University and Community College System of Tennessee.

Approved March 25, 2011, by the Tennessee Board of Regents

Purpose

To fulfill its mission, Middle Tennessee State University

- fosters a student-centered environment conducive to lifelong learning, personal development, and success;
- offers a broad array of high quality, affordable academic programs grounded in a common core of arts and sciences;
- enhances access and academic opportunity for a diverse student population, including distance learning and other special services and programs for first generation, non-traditional, high-achieving, and transfer students;
- challenges students through diverse teaching methods and media including educational technology, experiential learning, undergraduate and graduate research, and co-curricular and extra-curricular activities;
- recruits exceptional faculty and develops resources to support excellence in instruction, research, creative activity, and public and professional service;
- develops and sustains academic partnerships, entrepreneurial activities, outreach and public service that support instruction and research and that meet the needs of communities throughout the region; and
- serves as an emerging center for international study, understanding, and exchange.

Middle Tennessee State University educates students to

- think logically, critically, and creatively;
- make sound judgments with an awareness of ethical, moral, and aesthetic values;
- acquire a working knowledge of a discipline or a group of related disciplines;
- examine, analyze, and shape the contemporary world through scientific knowledge, creative undertakings, and an understanding of culture and history;
- communicate clearly and precisely and understand the proper role of free expression in our society; and
- demonstrate the effective and adaptive use of current and/or emerging technologies.

Vision

Middle Tennessee State University will be a vibrant hub for educating accomplished students who are civically engaged and globally responsible citizens; a seedbed for research and entrepreneurship; and an engine of cultural and economic development.

Community Standards

MTSU is committed to developing and nurturing a community devoted to learning, growth and service. Each person who joins or affiliates with the community does so freely and accepts and practices the following core values and expectations:

- **Honesty and Integrity.** The notions of personal and academic honesty and integrity are central to the existence of the MTSU community. All members of the community will strive to achieve and maintain the highest standards of academic achievement in the classroom and personal and social responsibility on- and off-campus.
- **Respect for Diversity.** The MTSU community is composed of individuals representing different races, ethnicities, sexual orientations, cultures, and ways of thinking. We respect individual differences and unique perspectives and acknowledge our commonalities.
- **Engagement in the Community.** All members of the community are encouraged to participate in educationally purposeful activities that support and enhance the MTSU experience. Active involvement and personal investment in the classroom and throughout the community are hallmarks of an engaged citizen.
- **Commitment to Non-violence.** MTSU is committed to the principles of nonviolence and peaceful conflict resolution. Community members will freely express their ideas and resolve differences using reason and persuasion.

The History of the University

Middle Tennessee State University began as Middle Tennessee State Normal School, opening its doors on Monday, September 11, 1911.

In 1909, the Tennessee General Assembly passed legislation to improve the system of public education by establishing a General Education Fund and creating three normal schools, one in each of the three grand divisions of the state. These institutions were to establish teaching standards or "norms," hence the name. The Murfreesboro school began with four buildings on a dusty site that just a year earlier had been farmland.

Opening with a two-year program for training teachers, Middle Tennessee State Normal School evolved into a four-year teachers college in 1925 with the power of granting the Bachelor of Science degree. In 1943, the General Assembly designated the institution a state college. This new status marked a sharp departure from the founding purpose and opened the way for expanding curricular offerings and programs. In 1965, the institution advanced to university status.

Several significant milestones chart the progress from normal school to university and beyond. During the progressive movement from a two-year normal to a university, several significant milestones may be identified. Responding to the expressed needs of the institution's service area, the Graduate School was established in 1951. The Bachelor of Arts was added that same year. To effect better communications and improve administrative supervision, the schools concept was introduced in 1962.

As MTSU developed and grew, new degree programs included the Doctor of Arts in 1970 and the Specialist in Education in 1974. Library resources dramatically increased, and sophisticated computer services aided instruction and administration. A highly trained faculty enabled the University to continue growth in program offerings. In 1991, the University's six schools-five undergraduate and the graduate school-became colleges. In 1998, MTSU's Honors Program became the Honors College, the first in the state. In 2006, the Division of Continuing Studies and Public Service changed to the College of Continuing Education and Distance Learning. In 2002, approval was granted to redesignate three D.A. programs to Doctor of Philosophy programs, and subsequently five others have been approved. In the 2010 reorganization, Continuing Education and Distance Learning became the University College, and the College of Education and Behavioral Science became the College of Education and the College of Behavioral and Health Sciences.

Since 1911, MTSU has graduated more than 100,000 students. Despite the University's growth from a campus of 100 acres, 125 students, and a faculty of 18, to an academic city of over 500 acres, more than 23,000 students, and a faculty of more than 950, the institution is still essentially a "people's university" with a concern for the diverse needs of the area that it serves. In 1986, James McGill Buchanan ('40) became the first MTSU alumnus to be awarded the Nobel Prize. Buchanan received the Nobel Memorial Prize in Economic Sciences for his development of the theory of public choice, a way of studying the expenditure of public funds. In 1911 the University celebrated it's Centennial year with the theme "A Tradition of Excellence." As the University looks forward to the next 100 years, the theme is exemplified as everyone in the University community-students, faculty, staff, alumni, and friends-strives to be the best.

Accrediting Agencies and Memberships

Middle Tennessee State University is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) to award baccalaureate, masters, and doctorate degrees. Contact the SACSCOC at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Middle Tennessee State University.

AACSB International - The Association to Advance Collegiate Schools of Business

Council of Southern Graduate Schools

ABET, Inc., Computing Accreditation Commission of ABET (<http://www.abet.org>)

Council on Social Work Education

Fuld Institute for Technology in Nursing Education

ABET, Inc., Engineering Technology Accreditation Commission of ABET (<http://www.abet.org>)

Learning Resources Network

National Air Transportation Association

Accreditation Commission for Education in Nursing (ACEN)

National Association for School Psychologists (NASP)

Accreditation Council for Education in Nutrition and Dietetics (ACEND)

National Association for Sport and Physical Education

National Association for the Education of the Young Child

Accrediting Council on Education in Journalism and Mass Communication - ACEJMC

National Association of Schools of Art and Design

American Alliance for Health, Physical Education, Recreation and Dance

National Association of Schools of Music

National Association of State Universities and Land-

American Anthropological Association	Grant Colleges
American Association of Airport Executives	National Association of Student Personnel Administrators
American Association of Colleges and Universities	National Athletic Trainers' Association
American Association of Collegiate Registrars and Admissions Officers	National Business Aviation Association
American Association of Colleges for Teacher Education	National Collegiate Athletic Association
American Association of Colleges of Nursing	National Collegiate Honors Council
American Association of Family and Consumer Sciences	National Commission for Health Education Credentialing
American Association for Leisure and Recreation	National Council for Accreditation of Teacher Education
American Association of State Colleges and Universities	National Intercollegiate Flight Association
American Chemical Society	National Recreation and Parks Association
American College Testing Program	ORAU - Oak Ridge Associated Universities, Partnerships for Innovation
American Council on Education	Physics Teacher Education Coalition
American Historical Association	Southern Association for College Student Affairs
American Political Science Association	Southern Association of Collegiate Registrars and Admissions Officers
American Sociological Association	SREB Council on Collegiate Education for Nursing
Association for Continuing Higher Education	Southern Regional Honors Council
Association of Departments of Foreign Languages	Sun Belt Conference
Association of Technology, Management, and Applied Engineering	Teachers College Association of Extension and Field Services
Aviation Accreditation Board International	Teacher Education Council of State Colleges and Universities
Aviation Technician Education Council	Tennessee Alliance for Continuing Higher Education
Certified Family Life Educator (CFLE)	Tennessee Association of Colleges for Teacher Education
CIM National Steering Committee	Tennessee Association of Collegiate Registrars and Admissions Officers
Coalition of Adult Learning Focused Institution (ALFI)	Tennessee Association of Science Department Chairs
Commission on Accreditation of Allied Health Education Programs	Tennessee Association of Veterans Programs Administrators
Commission on Accreditation of Athletic Training Education (CAATE)	Tennessee Conference of Graduate Schools
Commission on Collegiate Nursing Education	
Council for Accreditation of Counseling to Related	

Educational Programs (CACREP)

Council for Adult and Experiential Learning (CAEL)

Council for Interior Design Accreditation (CIDA)

Council for the Advancement and Support of Education

Council of Graduate Schools

Tennessee College Association

Tennessee Collegiate Honors Council

The College Board

United States Army, Cadet Command

University Aviation Association

Academic Calendar

The calendars listed below are 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, including severe weather, loss of utility services, or orders by federal or state agencies.

Academic Calendar

The academic calendar can be found at www.mtsu.edu/calendar_academic.php.

In the event of inclement weather, MTSU will disseminate closing plans. See mtsunews.com/weather/ for more information.

Graduate Dates and Deadlines

Important dates and deadlines for graduate students can be found at www.mtsu.edu/graduate/student/calendar.php. **NOTE: Application deadline for particular graduate programs may be earlier. Check individual programs for their deadlines.**

Individual Graduate Program Application Deadlines

For students to be guaranteed consideration for admission into a graduate program, applications must be complete. All required materials must be submitted by the specified date. Incomplete applications will be held until all required materials have been received. Individual programs determine if an applicant's file will be considered for review after the deadline. Applicants who wish to be considered for entry into a program for another term must submit a readmission application for the subsequent term. Submitted materials are retained for twelve (12) months from the original submission.

Please note: Admission to graduate studies consists of dual admission to the College of Graduate Studies and an individual graduate program for all degree-seeking students. Deadlines for application may differ for international and domestic students. Individual program deadlines may also differ from those of the College of Graduate Studies. Refer to the deadlines both within and following the University Calendar for details. When there are two deadlines stated, the earlier deadline takes precedent for receipt of all application materials at the College of Graduate Studies. Refer to the Glossary of Terms for additional information.

Contact MTSU Testing Services (www.mtsu.edu/countest/) for information on registering for all entrance exams.

NOTE: Application deadline for particular graduate programs may be earlier. Check individual programs for their deadlines.

Other Dates and Deadlines

Online schedule/registration guide for registration, fee payment, drop/add, and other important dates can be found at www.mtsu.edu/registration/registration-guide.php.

Final exam schedule can be found at www.mtsu.edu/registration/registration-guide.php.

College of Graduate Studies

The College of Graduate Studies provides academic and other support services, including administration of graduate assistantships and scholarships for graduate students, while upholding academic standards. The college also serves as the central collegiate component for uniting the entire graduate academic community at Middle Tennessee State University. In consultation with the graduate faculty, the college establishes policies and procedures to promote excellence in graduate education. These include processes to ensure judicious and selective graduate student admission decisions, rigorous adherence to the academic standards expected of graduate students, monitoring for excellence in graduate program curricula through the graduate program review process, and selectivity in making graduate faculty appointments. The college certifies that every candidate for conferral of a graduate degree has fulfilled all academic requirements. The college contributes assistance to help ensure that each graduate program provides the optimal educational experiences for its graduate students. This support includes the distribution of graduate assistant funds and the provision of graduate fellowships and scholarships.

Mission

The College of Graduate Studies, in partnership with other academic units at Middle Tennessee State University, regional institutions of higher education, and private and public agencies and corporations, is committed to a leadership role in graduate education. This on-going process will result in the development of the technically skilled, entrepreneurial workforce required for sustaining regional, national, and global economies. This mission will be accomplished through seamless integration of teaching and learning, the outstanding scholarship of the University's faculty and students, continued emphasis on enhanced-quality programs, and development of innovative programs with an interdisciplinary focus.

Vision

The vision of the College of Graduate Studies is to make Middle Tennessee State University a destination of choice for prospective graduate students. This will be accomplished by promoting the highest quality in graduate education, research, scholarship, creativity, innovation, mentoring, and training.

Values

The college values excellence in instruction, research, creative activity, and public service. In pursuit of excellence, we actively foster mentoring and internal and external partnerships. The College of Graduate Studies is committed to the active and timely communication of accurate information throughout the University community and the public at large, the treatment of all materials and information in a confidential manner, and truth in advertising.

The Graduate Council and Graduate Faculty

Graduate Council Mission Statement

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

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

Graduate Faculty Membership

Only graduate faculty members are eligible to teach 5000/6000/7000-level courses and serve on thesis or dissertation committees. **Only members with doctoral endorsement are eligible as** dissertation committee chairs. Full members are eligible to serve as thesis committee chairs.

Adjunct Membership

This category applies to part-time adjunct faculty and individuals who are not MTSU faculty members but have specific expertise pertinent to graduate programs. The period of appointment is three years and may be renewed in accordance with Graduate Council criteria. Adjunct members may not direct a doctoral dissertation or a master's thesis but may serve as a committee member/reader. These members are not listed in the graduate catalog. Adjunct faculty membership means that the individual

- holds the terminal degree in the field(s);
- has provided evidence of qualifications to execute assignments successfully;
- has been recommended by the department chair, the college dean, and Graduate Council; and
- has been approved by the dean of the College of Graduate Studies.

Graduate Faculty Listing

A complete listing of current graduate faculty members can be found at w1.mtsu.edu/graduate/faculty/gradfaculty.php.

Admission to the College of Graduate Studies

General Admissions Policies

The University welcomes applications from individuals qualified for graduate study. An applicant initially applies to the College of Graduate Studies. Upon receipt of all required materials and assuming the applicant meets the admission standards of the College of Graduate Studies, applications for degree-seeking students are then forwarded to the individual program for consideration. Applications for admission should be completed online (www.mtsu.edu/graduate/apply.php). Paper applications are available from the College of Graduate Studies. In accepting admission to the College of Graduate Studies, a graduate student assumes responsibility for knowing and complying with the regulations and procedures set forth in this catalog as well as any amendments or revisions that may ensue.

Graduate applicants must have earned a bachelor's degree, although for some programs a master's degree is required for admission. Under certain conditions undergraduate seniors with 98 semester hours of credit may be eligible to take graduate coursework. (See the section on **Eligibility to Enroll in Graduate Courses** below.)

Applicants admitted to graduate programs as **degree-seeking students** are those working toward a graduate degree. Degree-seeking students must be recommended for admission by the graduate program/department and approved by the dean of the College of Graduate Studies.

Students not seeking a degree are classified as **non-degree-seeking students**. Except for those interested in teaching licensure or master's +30, non-degree-seeking students must be admitted to the College of Graduate Studies. They are not admitted into a specific program. Non-degree-seeking students may take classes not restricted to students admitted into specific programs. Non-degree-seeking students may take courses for a reasonable period of time as determined by the dean of the College of Graduate Studies.

NOTE: Non-degree-seeking students are not permitted to enroll in graduate courses in the Jennings A. Jones College of Business.

Students interested in obtaining a teaching license or working on master's +30 hours should apply for admission to either the Initial Licensing Track or the Master's +30 Track.

All applicants to the College of Graduate Studies must have an overall undergraduate grade point average (GPA) of 2.75 (on a 4.00 scale) to be **considered** for unconditional admission. (Also see conditional admission.) Applicants who attended graduate school at another institution must have a minimum cumulative GPA of 3.00 on all graduate work and a minimum of 2.75 on all undergraduate work to be considered for unconditional admission. International students on an F1 visa must meet requirements for unconditional admission.

Individual programs may have higher admission requirements than those of the College of Graduate Studies. Applicants should consult the programs for individual program admission requirements.

The College of Graduate Studies notifies all students of formal admission to both the College of Graduate Studies and to individual graduate programs. Notification of admission to the College of Graduate Studies alone does not imply admission to a specific program. Students pursuing a graduate degree must be fully admitted to the program prior to the completion of their initial semester of coursework.

Admission as a Degree-Seeking Student

All applicants wishing to pursue a graduate degree objective at MTSU **must** formally apply for admission to the College of Graduate Studies as degree-seeking students.

All degree-seeking applicants should submit the following materials to the College of Graduate Studies at least three months prior to the anticipated date of registration:

1. an application for admission, preferably submitted online (www.mtsu.edu/graduate/apply.php);
2. a nonrefundable application and processing fee (required of all applicants) should accompany the application (applications are NOT processed until the fee is paid);
3. official transcripts certifying coursework from each college or university attended. Official transcripts must be mailed directly from the institution to MTSU and must be received prior to completion of the first semester of enrollment, except for the M.B.A. for which all transcripts must be received prior to enrollment. Unofficial transcripts may be used for the initial registration in graduate courses as a demonstration of eligibility for graduate status.
 - a. If the applicant obtained the bachelor's degree at MTSU, only transcripts of work not posted on the MTSU transcript will be required.
 - b. If the applicant obtained the bachelor's degree at another institution, that latter transcript is required. Transcripts of work not posted on the baccalaureate transcript are also required. All post-baccalaureate transcripts are also required.
 - c. If the applicant earned a graduate degree at another institution, that latter transcript is also required. Transcripts of all post-baccalaureate work not appearing on the graduate transcript are also required.
 - d. For international applicants, official or attested university records, with certified translations (if the records are not in English) are required. Notarized copies are not acceptable.
 - e. Any applicant whose highest degree is from a university outside the United States may be required to have his or her credentials evaluated by an acceptable evaluation service. A course-by-course report is required. A list of acceptable evaluation services is listed on the College of Graduate Studies website (www.mtsu.edu/graduate/international.php); however, all acceptable evaluation services are also listed at www.naces.org/members.htm.
4. letters of reference, supplemental applications, resumes, and portfolios may be required by the graduate program and should be submitted to the College of Graduate Studies. Please refer to the relevant graduate program information section of this catalog to determine if additional application materials are required.
5. satisfactory official scores on the Graduate Record Examination (GRE), Miller Analogies Test (MAT), or Graduate Management Admissions Test (GMAT) tests. The GRE, MAT, or GMAT result is used in the evaluation of the academic qualifications of all graduate applicants. However, admission decisions will be based on the overall academic record of the applicant (particularly in comparison with other applicants being accepted into the program), as well as other relevant materials such as letters of recommendation.

NOTE: Both ETS and the GRE Board have advised that a combined GRE score should not be used as an absolute cutoff for admissions decisions but rather should be used as part of an overall evaluation of applicants. The GRE Board statement reads: "A cutoff score based only on GRE scores should never be used as a sole criterion for denial of admission." The College of Graduate Studies subscribes to this principle.

All International applicants who will be attending the University on a visa and who are not native speakers of English or are not graduates of a United States undergraduate or graduate institution or of an undergraduate or graduate program conducted in English must supply a minimum score of 525 (paper-based) or a 71 (Internet-based) on the Test of English as a Foreign Language (TOEFL), taken within the last two years; 85 on the University of Michigan English Proficiency Exam (UMELI); 6 on the International English Language Testing System (IELTS); or have completed level 112 of E.L.S. instruction as a demonstration of English proficiency.

International applicants on F and J visas must provide verification of financial support prior to admission as required by the United States Immigration and Naturalization Service. An affidavit of support is not required for admission; however, international students (F1) requiring issuance of Form I-20 must supply sufficient evidence of financial support for the applicant and all members of his/her family requiring issuance of dependent Form I-20. Further information may be obtained from the Office of International Affairs at www.mtsu.edu/intered/.

Undocumented aliens may be admitted to MTSU as out-of-state students and are not eligible for federal financial aid.

Each graduate program may have additional requirements including application deadlines. Applicants should refer to the section of this catalog entitled Graduate Program Information, peruse the graduate program description in this catalog, and/or contact the director of graduate studies in the relevant program for specific requirements. In general, applicants may not apply more than 6 credit hours taken while in non-degree seeking status toward any degree program. Upon notification of admission by the College of Graduate Studies to a specific graduate program, the

admitted student should contact the director of graduate studies for information on any required prerequisite courses. It is advisable to speak with a departmental academic advisor before enrolling in any graduate course.

An applicant not meeting University or program requirements for admission as a degree-seeking student may appeal to the individual program for special consideration. If recommended for admission by the program, the dean of the College of Graduate Studies has final approval or denial authority.

If an applicant fails to meet the deadline for submitting all materials for admission, it will be necessary for the applicant to reapply for admission. All materials submitted will be retained for one year from the date of submission. Students pursuing a graduate degree must be fully admitted to the program prior to the completion of their initial semester of coursework.

Admission as a Non-Degree-Seeking Student

Non-degree-seeking student admission is available to qualified applicants who wish to enhance their post-baccalaureate education but do not seek a graduate degree. International students on an F1 visa may not be admitted to graduate study as non-degree-seeking students. Applicants wishing to be admitted as non-degree-seeking graduate students must

1. complete an application for graduate admission to the College of Graduate Studies (www.mtsu.edu/graduate/apply.php);
2. pay the non-refundable application fee;
3. submit an official transcript certifying receipt of the bachelor's or post-baccalaureate degree. Official transcripts must be mailed directly from the institution to MTSU and must be received prior to completion of the first semester of enrollment. Unofficial transcripts may be used for the initial registration in graduate courses as a demonstration of eligibility for graduate status.

Not all courses offered at the University are available for non-degree-seeking students. Enrollment in specific courses may be limited to degree-seeking students only. Information concerning eligibility for specific graduate courses may be obtained from individual departments. It is advisable to speak with a departmental academic advisor before enrolling in any graduate course.

NOTE: *Non-degree-seeking students are not permitted to enroll in graduate courses in the Jennings A. Jones College of Business.*

Non-degree-seeking students who wish to change to degree-seeking status must meet College of Graduate Studies' admission requirements and specific graduate program admission requirements to be eligible for consideration.

If transfer to degree-seeking status is approved, appropriate semester hours earned while a non-degree-seeking student may be applied toward a degree program if approved by the director of graduate studies and the dean of the College of Graduate Studies.

Conditional Admission

Occasionally degree-seeking applicants may not meet all the requirements necessary to be recommended for unconditional admission. For example, they may have a low undergraduate grade point average or have low test scores. However, the overall application materials may suggest there is substantial potential for academic success, thus making outright denial counterproductive. In these cases, conditional admission into the College of Graduate Studies may be granted by the dean of the College of Graduate Studies upon the recommendation of the graduate program. Continuation as a degree-seeking student within an individual academic program is contingent upon fulfilling specific requirements stipulated at the time of admission. Conditionally admitted students are not eligible to hold graduate assistantships until all conditions of admission are satisfied.

Admission of MTSU Faculty Members and/or Administrators

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

Misrepresentation of Academic Credentials

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 gain admission to MTSU, represents orally or in writing that such person has

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

Any applicant who misrepresents his or her credentials will be subject to disciplinary action from the University which may include dismissal from the University.

Eligibility to Enroll in Graduate Courses

Ordinarily only graduate students should register for courses numbered 5000 or above. However, any MTSU undergraduate student having completed 98 semester hours of undergraduate credit is eligible to take graduate courses, except in Business Administration, Accounting, English, and Information Systems.

Undergraduate students wishing to take graduate courses must obtain permission from the graduate program and the College of Graduate Studies. Permission is not guaranteed. Not all graduate courses are offered to undergraduate students. If courses are taken for graduate credit while an undergraduate, they may be applied toward a graduate degree at the discretion of the individual graduate program if the earned credit is not used toward the granting of another degree. Undergraduates admitted to an approved Accelerated Bachelor's/Master's (ABM) program are permitted to apply a limited number of graduate courses taken while an undergraduate to their undergraduate degree as well as to the master's degree.

Students may not enroll in 7000-level courses in the Department of Elementary and Special Education and Womack Educational Leadership Department unless they are seeking an Education Specialist or doctoral degree. Non-degree-seeking students are not permitted to enroll in 7000-level courses.

Other Admissions Information

Auditing Courses

A student who chooses to audit a course is one who enrolls and participates in a course without expecting to receive academic credit. The same registration procedure is followed and the same fees charged as for courses taken for credit. An audited course is not applicable to any degree or certificate.

Regular class attendance is expected of an auditor. Students interested in auditing a course should discuss course requirements with the instructor prior to enrolling. Failure to meet course requirements may result in an auditor being removed from the course at the request of the instructor. A successful audit will be recorded on the transcript with the designation NC. Any petition to change from audit to credit or credit to audit must be processed by the last day in the

semester in which a class may be added to the student's schedule of classes. Requests to change from credit to audit after the deadlines must be approved by the dean of the College of Graduate Studies.

Catalog

This catalog is produced for the convenience and benefit of graduate applicants and enrollees and is revised yearly. After the catalog is published, changes in University and/or graduate program requirements may be approved that apply to new applicants or admittees. Thus the information contained herein should not be construed as binding or inferred as an academic contract. New graduate students should request a copy of graduate program requirements in existence at the time of matriculation. These will be the requirements that must be fulfilled to obtain the degree. Notwithstanding, should graduate requirements change while a student is still enrolled, he/she will have the choice of opting for the new requirements or following the original plan in existence at matriculation, subject to any necessary substitutions. Students who fail to maintain continuous enrollment will need to meet current standards for readmission. Students are also encouraged to consult the departmental/program graduate student handbook in the specific program of study.

Hours Before and After the Master's Degree for Teachers

Teachers may count graduate credit received toward the next pay raise, depending upon policies of their Local Education Agency (LEA). No credit will be given for repeated work. The student must request the Office of Teacher Licensure to send proper credentials to the State Department of Education and/or to the applicable local officials. The student is responsible for maintaining current knowledge of which graduate courses and hours are acceptable for licensure.

Immunizations and Health Certificates

Hepatitis B and Meningococcal Meningitis Acknowledgment

The State of Tennessee mandates that each public or private postsecondary institution in the state provide information concerning hepatitis B and meningococcal meningitis to all students entering the institution for the first time. New students must acknowledge that they have read this information before they can register for classes. This information and acknowledgment statement are automatically displayed when new students register for classes on RaiderNet via PipelineMT. If the student is under age 18, a parent or legal guardian is required to sign the form that is linked to the page and return it to Health Services before registration will be allowed.

Additionally all students under age twenty-two (22) who are enrolling for the first time, regardless of the level (freshman or transfer) and who will be living on campus must show proof of immunization against meningitis on or after their sixteenth (16) birthday prior to moving into campus housing. For more information, access www.mtsu.edu/healthservices/immunizations.php.

Measles Immunization

Effective July 1, 1998, the State of Tennessee requires students entering colleges, universities, and technical institutes with enrollment of greater than 200 students to provide proof of two (2) doses of measles, mumps, and rubella (MMR) vaccine on or after the first birthday, or proof of immunity to measles if date of birth is 1957 or after. Students will not be allowed to register for full-time classes until an acceptable form is on file in the Student Health Services Office. More information can be obtained by contacting Student Health Services, 898-2988, or by visiting www.mtsu.edu/healthservices/immunizations.php.

Varicella (chicken pox) Immunization

Effective July 1, 2011, the State of Tennessee requires new full-time enrollees in higher education institutions with enrollments larger than 200 students to provide proof of two (2) doses of Varicella vaccine on or after the first

birthday, history of chickenpox illness diagnosed by a healthcare provider or verified by a physician, advanced practice nurse or physician assistant to whom the illness is described, or proof of immunity to Varicella if date of birth is 1980 or after. Students will not be allowed to register full-time for classes until an acceptable form is on file in the Student Health Services Office. More information can be obtained by contacting Student Health Services, 898-2988, or by visiting www.mtsu.edu/healthservices/Immunizations.php.

Readmission (Reenrollment)

The College of Graduate Studies should be contacted for all matters concerning readmission. A previously enrolled student may reapply online on our website (www.mtsu.edu/graduate/apply.php). A readmission application is required from any student who missed more than one semester (excluding summers), regardless of the reason. For non-degree-seeking post-baccalaureate students, readmission is granted at the discretion of the graduate dean and is subject to space limitations with degree-seeking students given preference for enrollment.

For degree-seeking students, each graduate program may have a specific readmission policy and should be contacted for information. Readmission requires the recommendation of the graduate program and approval by the dean of the College of Graduate Studies. Some graduate programs regularly allow readmission for individuals who have missed no more than one semester or if the "stop-out" period is less than one year; others are more restrictive due to program capacity, curriculum, and ongoing quality improvement. Students seeking to be readmitted must meet the requirements of new applicants.

Reenrollment Following Suspension

Suspended graduate students who wish to resume graduate studies after the period of suspension must reapply to the program. Readmission of a suspended graduate student is not guaranteed. If readmission is granted to a suspended student, reenrollment cannot occur until at least one term (exclusive of Summer) has elapsed following suspension. In other words, if students suspended in the Fall apply to reenroll, they are not eligible for reenrollment prior to Summer. Students suspended in the Spring or Summer may apply for reenrollment in Spring of the following academic year.

Registration

The registration guide contains information concerning registration procedures. The most current information regarding registration and availability of courses will be found online on RaiderNet at www.mtsu.edu/records/sbooks.php.

Student Identification Cards

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

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

International Graduate Admissions

The College of Graduate Studies (CGS) will process all information regarding application to the University and immigration status. The University provides immigration advisement through Designated School Officials (DSOs) located within CGS. The DSOs are responsible for issuing I-20 and DS-2019 documents used for securing F and J visas. They serve as liaisons among faculty members, administrators, and international students. To expedite the processing of your file, please review the information listed below and the information found at: www.mtsu.edu/graduate/international.php.

Admission

An applicant applies to the College of Graduate Studies, and the complete application is forwarded to the individual program for consideration upon receipt of all application materials. The College of Graduate Studies is responsible for the admission of all graduate students to the University. International applicants must meet the admission standards for the College of Graduate Studies and be admitted to an individual graduate program. All inquiries and correspondence regarding admission should be addressed to the College of Graduate Studies. Application information including forms, requirements, and instructions may be obtained by contacting the college or at www.mtsu.edu/graduate.

The College of Graduate Studies requires official or attested university records, with certified translations if the records are not in English. Notarized copies are not acceptable. International applicants whose highest degrees are from universities outside the United States may be required to have their credentials evaluated by an acceptable evaluation service. A list of acceptable evaluation services is listed on the College of Graduate Studies website (www.mtsu.edu/graduate/international.php). The MTSU Graduate Catalog is available online only. Applicants residing outside the United States at the time of application can apply for admission for the Fall and Spring semesters only. Applicants who are already in the United States and in F1 or J1 status may also apply for Summer, depending on the availability of summer courses in the graduate program.

Application to MTSU

International Applicants

1. complete graduate application for admission (www.mtsu.edu/graduate/apply.php); online applications are preferred.
2. submit **\$35 nonrefundable application fee** (money order or check with routing numbers); American Express, Visa and MasterCard are accepted for online applications.
3. submit evidence of freedom from tuberculosis. Forms are located on the College of Graduate Studies website.
4. submit evidence of two measles, mumps, and rubeola (MMR), and varicella (chickenpox) vaccinations. Applicants should consult the MTSU Student Health Services website for current information on immunization requirements (www.mtsu.edu/healthservices).
5. submit a financial statement demonstrating resources sufficient to cover expenses to study at MTSU.
6. submit official TOEFL (paper-based minimum score 525 or Internet-based minimum score 71), UMELI (minimum score 85), IELTS (minimum score 6), or E.L.S. level 112. We do not accept any other than ETS official test scores for the TOEFL.
7. submit completed insurance form for F1 and J1 applicants.
8. submit a front and back copy of I-94, if applicable for transferring students.
9. submit a front and back copy of I-20 or DS-2019, if applicable for transferring students.
10. submit a copy of passport and visa, if applicable for transferring students.
11. must have official transcripts sent from all institution(s) directly to the external evaluation service, if required. If transcripts are written in a foreign language, an official translation in English and an official nontranslated transcript must both be sent. A syllabus of each class may be required in order to receive course substitution credit.
12. submit official GRE or GMAT score. We can only accept GRE copies if our ETS institution code (1466) is listed as a score recipient. Student should select the school codes based on the following: ETS/GRE - 1466; Pearson/GMAT - 6ZR-KJ-25 (M.B.A.-full time), 6ZR-KJ-52 (M.B.A. - part time), 6ZR-KJ-63 (Accounting), 6ZR-KJ-37 (Information Systems).

NOTE: Applying online will expedite the processing of the application. In the event that a paper application is used, sending all documents except transcript(s) and test scores in one envelope will expedite processing of the application. The University will assign a student ID number for record-keeping purposes only. The student ID number should be on all correspondence sent to the College of Graduate Studies. All materials received become the property of MTSU and cannot be returned to the student or forwarded to a third party.

Financial Aid

International students possessing F1 or J1 status must provide verification of financial support prior to issuance of an I-20 as required by the United States Citizenship and Immigration Services (USCIS). Information and appropriate forms are available in the international students section of the CGS website at www.mtsu.edu/graduate/international.php.

Priority Dates for Completed* Files

Fall semester: June 1 of same year; **Spring semester:** October 1 of previous year; **Summer semester:** March 1 of same year. (Applications received after these dates will be reviewed on a case-by-case basis.) Based on time requirements to obtain the necessary documentation, international applicants are encouraged to apply four months or more before the beginning of classes.

***NOTE: A completed file contains ALL materials required for admission.**

Health and Accident Insurance

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

Immigration

It is the student's responsibility to see that he/she possesses legal immigration status. All immigration documents should be kept in a safe place. According to U.S. Citizenship and Immigration Services (USCIS), F1 and J1 students must be enrolled full time (minimum 9 hours) during Fall and Spring semesters. Summer enrollment is optional, unless it is the first term of enrollment. Also, USCIS requires that F1 and J1 applicants meet all admission requirements prior to the first date of enrollment. No conditional enrollment is possible.

Orientation Information

All F1 students must participate in orientation activities including, but not limited to, the following: online orientation, welcome meetings, and informational meetings. Information regarding orientation requirements is sent once the student has received final acceptance into the University and program of study.

Proof of English Proficiency

International students who will be attending the University on a visa and who are not native speakers of English or graduates of a United States undergraduate or graduate institution must submit a Test of English as a Foreign Language (TOEFL) score (minimum score of 525 paper-based or 71 Internet-based), University of Michigan English Language Institute (UMELI) test score (minimum score of 85), International English Language Testing System (IELTS) score (minimum score of 6), or E.L.S. instruction (completion of level 112) as a demonstration of English proficiency in order to be admitted to graduate studies at MTSU.

For information on TOEFL, visit www.ets.org/toefl.

For information on UMELI testing, visit www.iei.edu/.

For information on IELTS testing, visit www.ielts.org/contact_us.aspx.

For information on E.L.S., visit www.els.edu/en.

Residency Classification for Fee-Paying Purposes

The College of Graduate Studies determines residency for international students. All international students will be considered out-of-state for fee-paying purposes until they apply for and receive in-state status. Those who believe they meet the in-state criteria may obtain an application and submit it to CGS. The completed form and supporting documentation should be submitted at minimum one month prior to the start of the term. Failure to file for residency may result in student payment of out-of-state tuition. Students will be informed of the residency decision by mail. Students holding F or J visas do not qualify for in-state classification.

Expenses/Tuition and Financial Aid

Expenses

The question of costs while attending the University is important to every student. It is difficult, however, to accurately estimate yearly expenditures; expenses vary according to the nature of the curriculum, the place of residence (whether in-state or out-of-state), and the student's own habits and needs. It is possible to live simply and to participate in the life of the student community on a modest budget. The best help the University can offer the student in budget planning is to provide available figures for expenses.

Health service and admission to athletic events are available to any currently enrolled student. The payment of the appropriate fees will permit any combination of graduate and undergraduate courses to be taken that may be required or approved. Charges for all coursework will be assessed by student level. The University reserves the right to correct errors in student fee assessments and charges which are discovered subsequent to initial billings and fee statements.

All fees are for the academic year and are subject to change by action of the Tennessee Board of Regents. The new fee amounts will be published each year when approved by the Tennessee Board of Regents (usually around July 1).

Registration Fees

Information on fees and deadlines can be found on the Bursar's website: www.mtsu.edu/tuition.

Late Registration

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

Matriculation Fee for Incompletes

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

Returned Checks

Acknowledged bank errors excepted, a \$30 service charge will be assessed for each returned check (including web check payments). The University will decline to accept checks from any student who has checks returned by the bank more than once or if any check returned is not paid within ten (10) working days. A \$100 late registration fee may be assessed for any returned check given in payment of registration fees.

Automobiles

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

Auditing Charges

An auditor is one who enrolls and participates in a course without expectation of receiving academic credit. The same registration procedure is followed and the same fees charged as for courses taken for credit. An audited course is not applicable to any degree or certification program.

Regular class attendance is expected. Other course requirements, which may be obtained in writing from the instructor, will vary depending upon the nature of the course. Students interested in auditing a course should discuss course requirements prior to enrolling. Failure to meet course requirements may result in removal from the course at the request of the instructor. A successful audit will be recorded on the transcript with the designation NC.

A change from audit to credit or credit to audit must be processed by the last day to add a class.

Persons 60 years of age or older or disabled persons suffering from a permanent total disability which totally incapacitates such persons from working at an occupation which results in an income (T.C.A., Section 49-7-113) who are domiciled in Tennessee may audit courses at any state-supported college or university without paying tuition charges. (Note: The student must pay an application fee and special course fees.) Registration under this program is on a space-available basis; therefore, students cannot priority register. Students who priority register or receive a closed class override prior to the first day of the semester or part of term will be required to select another class. Class selection should be processed no earlier than four weeks prior to the start of term or part-of-term (see Registration Guide for date of registration). Proof of age or disability must be provided.

65-Year-Old/Disabled Credit Student

Persons 65 years of age or older or disabled persons suffering from a permanent total disability which totally incapacitates such persons from working at an occupation which results in an income (T.C.A., Section 49-7-113) who are domiciled in Tennessee may register for classes for credit by paying a service fee not to exceed \$70 per semester. (Note: This fee includes maintenance fees, student activity fees, technology access fees, and registration fees; it does not preclude an application, late fee, change-of-course fee, parking fee, special course fee, etc.) Registration under this program is on a space-available basis; therefore, students cannot priority register. Students who priority register or receive a closed class override prior to the first day of the semester or part of term will be required to select another class. Class selection should be processed no earlier than four weeks prior to the start of term or part-of-term (see Registration Guide for date of registration). No late fee is charged. An application fee is required. In addition, the applicant must be eligible for admission and submit proof of age or disability.

Additional Charges

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

Board

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

Debts

An important part of every student's educational experience is learning to manage money and to responsibly discharge financial obligations incurred. With this in mind, MTSU expects you to promptly pay all University bills and accounts when due.

Failure to meet financial obligations will result in your not being allowed to preregister, register, or receive transcripts, grade reports, or diplomas.

Installment Payment Plan

Students who want to use the Installment Payment Plan must sign up for the payment plan and pay the down payment online via RaiderNet. If a student is eligible, there will be an option in the bill payment system to request a Installment Payment Plan. Students who wish to pay by mail must view the down payment amount online by selecting the option to view the payment plan installments. Students may also sign up for the plan and pay the down payment at the Business Office cashier windows.

Although all charges are due and payable in full at the beginning of each term, students in good financial standing at MTSU may defer payment of up to 50 percent of their registration, housing, and freshman meal plan fees for the Fall and Spring semesters. The deferment of fees is not available for Summer terms.

To be eligible for the Installment Payment Plan, each participant must make a minimum down payment of 50 percent of the registration fees, residence hall rent, and freshman meal plan costs. The balance due must be \$400 or more after all discounts, waivers, financial aid, and other credits are applied. A student who fails to make timely payments in a previous term will be denied the right to participate in the Deferred Payment Plan in future enrollment periods. Any student who makes payment with a check which is subsequently returned will be denied participation in the Installment Payment Plan in all future terms.

The amount deferred will be payable in two monthly installments. For the Fall term, installment payments are due on or before September 30 and October 31. For the Spring term, installment payments are due on or before February 28 and March 31. The University is not obligated to send reminder notices before the payment is due. Participants in this plan must apply all discounts, waivers, credits, and financial aid (including student loans) toward payment of registration fees before a deferment will be considered. Financial aid and other credits received after the initial payment will be applied to the remaining balance, and future amounts due will be recomputed. No refunds can be made until all fees are paid in full. Students will not be withdrawn for failure to pay the second or third payments. However, the balance must be paid in full before the student can preregister for future terms, even if preregistration is prior to the due date.

Each participant will be charged a \$50 nonrefundable service fee each term to defray administrative costs. This fee is payable along with the 50 percent down payment on or before the registration fee payment deadline. An additional late payment charge of \$25 will be assessed for each installment not paid on or before the due date and each 30-day period past the second installment up to a maximum of \$100. Withdrawals from classes will not alter the remaining balance due except to the extent that any refund may be applied. Students who make payments with checks that are returned will be charged a \$30 return check service fee as well as any applicable late fees.

If a payment is not received in the Business Office by the scheduled payment due date, the University will withhold all services from the student-including grades, transcripts, and future registration-until the fees have been paid in full including any assessed late fees.

All existing rules and policies pertaining to returned checks, refunds, withdrawals, dropped classes, and collection costs are applicable to the Installment Payment Plan.

Payment of the minimum amount due on the Installment Payment Plan finalizes registration. The class schedule will not be dropped. It is not necessary to also confirm on RaiderNet. The Installment Payment Plan service fee, late fee, and minimum amount are subject to change in future terms.

Additional fees for classes, dorms, or meal plans added after initial registration payment or confirmation must be paid by the late registration fee payment deadline. If students are eligible for the Installment Payment Plan, any unpaid fees after this date will be processed as a deferred payment. The \$50 Installment Payment Plan service charge and any applicable \$25 late payment fees will be charged.

Students who are not eligible for the payment plan will be subject to withdrawal from all classes or from the dorm for nonpayment or subject to service charges and late payment fees.

For more information and detailed instructions on how to sign up for the Installment Payment Plan, check online at www.mtsu.edu/tuition/payment-plan.php. Questions regarding the Installment Payment Plan should be directed to the MT One Stop at (615) 898-2111.

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

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

Veterans' Dependents' Post Secondary Education Assistance

Pursuant to T.C.A. § 49-7-102, certain statutory fee exceptions exist for dependents and spouses of military personnel killed, missing in action, or officially declared a prisoner of war while serving honorably as a member of the armed forces during a period of armed conflict. Contact the Veteran's Affairs Office at (615) 898-2601 or (615) 898-5040 for more information.

Registration Confirmation

If fees are paid in full by financial aid, Federal Direct or PLUS loans, TELS (Lottery) scholarship, pre-paid tuition programs, Vocational or Veteran's rehabilitation or other credits, students must complete the registration process by confirming that they will attend MTSU for the term. If balance is a credit or zero, they must Confirm Registration on RaiderNet by the fee payment deadline.

To confirm registration, students should

- log in to PipelineMT at www.mtsu.edu;
- click on RaiderNet then on the Student tab;
- select Student Account;
- select Confirm Enrollment/Registration Payment/Account Detail for Term;
- select the term. The account balance summary and account detail for the term will be displayed.
- click "Yes, I will attend during ..." and wait for a confirmation number.

Students will be given a confirmation number and should write down the confirmation number and date as proof of confirmation. If in doubt, students should try the process again and the system will tell them if registration has been confirmed. The confirmation number will not be repeated. If the student does not receive a confirmation number and is instead taken to the bill payment system, aid is either not on the account or a balance is still due.

Please note: Reviewing the class schedule does not confirm registration; students **MUST** select the Confirm Registration option, then select the option "Yes, I attend during ..." When this option is selected, **the student will be given a confirmation number if the registration is confirmed.** When a **confirmation number** is assigned, the system will hold classes. If registration is not confirmed before the fee payment deadline, the class schedule will be deleted from the computer. Financial aid refunds cannot be processed until confirmation is completed.

Check the online registration guide and www.mtsu.edu/tuition for detailed instructions, dates, and deadlines for each term.

All students who preregister and decide not to attend MTSU should access RaiderNet prior to the final fee payment date for the term to drop all classes from their records. If they decide not to attend MTSU after confirming, they must withdraw from the University.

Fee Adjustments

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

Tuition, program services fees, and out-of-state tuition will be adjusted as follows:

1. Courses cancelled by the University will receive a 100% reversal of tuition and fees.
2. Students who preregister and drop classes or withdraw from all classes prior to the first day of class will receive a 100% reversal of tuition and fees. See the current online registration guide for fee adjustments and schedule adjustment dates.
3. A full (100%) reversal of tuition and fees will be provided in case of a student's death.
4. Tuition, registration fees, materials and course fees, residence hall rent, and meal plans will be adjusted at the rates of 75 percent or 25 percent to students who officially withdraw from the University prior to the dates specified in the registration guide published each semester. The same fee adjustment schedule applies to students who drop below full-time to an hourly load. The calculation of tuition and fee adjustments for a complete withdrawal from the University is based on the percentage charge of all courses dropped for the term. There will only be an adjustment in fees if the new calculated charge is less than the original charge. Not all withdrawals will result in a refund or reduction in fees. The calculation of tuition and fee adjustments for dropped courses is based on the charge for currently enrolled hours plus a percentage charge of all courses dropped. There will only be a reduction in fees if the new calculated charge is less than the original charge. Not all dropped courses will result in a refund or reduction in fees.

Refunds due to fee adjustments will be processed beginning approximately two weeks after the end of each fee adjustment period. It takes several weeks to process all the refunds. The University will offset against proposed refunds any amount owed by the student to the University.

Drop/Withdrawal from class. Students who drop or withdraw from classes will have a balance due under the Deferred Payment Plan. Fees are adjusted based on the drop or withdrawal date. The fee adjustment percentage is NOT applied to the amount of payment, but rather as a percentage adjustment of total fees. A refund would be issued to the student only if the newly adjusted amount of fees is less than the amount that has been paid by the student. Withdrawal from classes does not negate the student's responsibility to pay the balance of fees after the semester has begun.

Additional information on tuition and fee adjustments can be found on the Bursar's website:
www.mtsu.edu/bursar/feeadjustment.php.

Refunds of Housing Expenses

Residence Halls

Applications for residence halls and on-campus apartments must be accompanied by the required prepayment as outlined in the license agreement. Prepayment is a security of good faith that denotes the applicant's serious intent to reside in on-campus housing. Prepayment fees for 2012-2013 are \$300, \$150 of which is applied toward Fall semester charges, and \$150 of which is applied toward Spring semester charges. This prepayment is refundable prior to check-in according to the following schedule. All cancellations must be submitted in writing to the Housing and Residential Life Office. Prepayment amounts represent approximately 25 percent of the total semester fee and may vary from year to year. Students should contact Housing and Residential Life to verify specific changes.

Academic Year (Fall and Spring) Applications

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

Spring Semester Only Applications

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

Summer Housing

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

Housing Fees

The refunds of residence hall fees after registration will be prorated on a weekly calendar basis when the student is forced to withdraw from the residence hall because of approved medical reasons confirmed in writing by a licensed physician.

Full refund will be made in the case of death. No refund will be made other than under the above conditions, except as specified in the Student Housing Agreement.

Direct Deposit of Financial Aid Credit Balance Refunds

Students receiving financial aid who expect to receive a refund must first be sure they have met all financial aid eligibility requirements, confirmed registration, have no holds, and completed all necessary paperwork. Students may choose to receive their refunds via direct deposit to personal bank accounts or sign up for the SunTrust reloadable VISA paycard.

All students must sign up for direct deposit online through RaiderNet. Online sign-up via e-Refund must be completed at least seven (7) days prior to the first day of classes to have the refunds available in accounts on the first day of classes.

Detailed instructions are available online at www.mtsu.edu/tuition/direct-deposit.php. It is critical that all information be entered correctly to avoid delay of refunds.

Those who choose to receive the SunTrust reloadable Visa card must come by the Business Office, Cope 103, to apply to receive a card. Cards will be mailed to the student's home address within two weeks and refunds will be

loaded as they become available. SunTrust reloadable Visa cards may be used at ATMs or anywhere Visa cards are accepted. These cards will remain active and will be reloaded each time there is a financial aid credit balance refund. **Students should contact SunTrust for lost, stolen, or destroyed cards.**

Financial Aid

The University offers financial aid assistance to eligible students through funding received from federal, state, institutional, foundation, and external sources. Generally, students must complete the Free Application for Federal Student Aid (FAFSA) at www.fafsa.gov each year to be considered for financial aid. The FAFSA School Code for MTSU is 003510. For current information about financial aid, visit the MT One Stop website at www.mtsu.edu/one-stop.

Academic Regulations

Academic Credentials, T.C.A. Sec. 49-7-133, Misrepresentation of

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

Academic Integrity

Students at MTSU are expected to be intellectually honest and forthright in their academic activities. Proper credit should be given to sources of all work done. To attempt to use the ideas or words of others or to falsify data is to plagiarize (i.e., adopt, present, or reproduce ideas, statements, images, or works of others as one's own without proper acknowledgment) or fabricate (i.e., falsify any information or citation) respectively, neither of which is acceptable. Appropriate action will be taken as deemed necessary by the College of Graduate Studies, up to and including expulsion from MTSU and the rescinding of any graduate degree awarded as a result of a breach in academic integrity.

Academic Standards-Retention, Probation, and Suspension

Degree-seeking students are expected to take appropriate courses and make satisfactory progress toward their degree objectives as determined by the graduate program. A graduate student at the master or specialist level must maintain a cumulative GPA of **at least 3.00** for all graduate work completed at MTSU as well as in the major. A doctoral student must maintain a minimum GPA of **at least 3.25 after the initial two (2) semesters of enrollment**. Six semester hours of C grade (C+, C, or C-) coursework may be applied toward a master's or specialist's degree; seven hours of C grade may count toward a Ph.D. No grade below C- may be applied toward a degree; however, all grades are included in calculation of cumulative GPA.

A graduate student failing to meet the applicable minimum cumulative graduate GPA retention standard will be placed on **academic probation** for the subsequent term. Probation in itself has no serious consequences other than to alert the student of potential academic problems and the requirement to (re)establish satisfactory academic status. Once on probation, a student has three consecutive semesters in which to restore the cumulative GPA to the minimum required. If the student fails to attain the required GPA at the close of the third semester of probation, the student will be suspended automatically.

A student placed on suspension will not be allowed to continue coursework in subsequent semesters. Students wishing to reenroll must formally appeal the suspension to the Graduate Council Suspension Appeals Committee. Deadlines and directions for submitting an appeal can be found at www.mtsu.edu/graduate/pdf/acadsusapl.pdf In the event that a student is suspended and subsequently upon appeal is granted permission to reenroll, should the student fail to maintain the minimum cumulative GPA, there will be no second probationary period. The student will be permanently suspended at the close of the semester and no longer eligible for matriculation in any program at MTSU.

Access to Records

For the MTSU policy concerning student access to educational records, see Student Access to Educational Records.

Appeal of Academic Suspension

A student may seek reversal of academic suspension, for cause, by petitioning in writing the Graduate Council Suspension Appeals Committee. Appeal forms are available on the College of Graduate Studies Web site (www.mtsu.edu/graduate/pdf/acadsusapl.pdf) and should be submitted to the dean of the College of Graduate Studies. Deadlines are listed in the University Calendar; however, appellants should contact the College of Graduate Studies to confirm the applicable deadline dates.

Appeals, Other

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

The Graduate Council and the College of Graduate Studies have approved in principle the document ***Appeal Advisory Committee of the Graduate Council***. Copies of this document are made available to all graduate students at the website (www.mtsu.edu/graduate/pdf/StudentAppealsGradCouncil.pdf) and in the College of Graduate Studies, Sam H. Ingram Building 121A.

Classes-Cancellation of Scheduled Classes

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

Credit Hour Unit

A credit hour unit is one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for 15 weeks, or equivalent academic activities, to achieve the student learning outcomes for the credit hour. Laboratory and studio classes usually earn one credit for each two hours of attendance or equivalent for a semester unless otherwise indicated.

Degree Plan, Filing a Form

In consultation with the graduate advisor, each degree-seeking student must file a formal outline of the degree program on a degree plan available at the College of Graduate Studies or on the website (www.mtsu.edu/graduate/forms.php). Degree plans should be completed within the first 21 hours of enrollment. Individual departments are responsible for monitoring the completion of prerequisites. In general, a doctoral student will not be permitted to register for more than 30 semester hours unless an approved degree plan is on file. The degree plan requires the approval of the major professor and/or the graduate coordinator. The degree form may not be filed in the same semester that the student expects to be graduated.

Degree Plan, Revision Form

Changes in degree programs are permitted upon proper filing and approval of a Change in Degree Plan Form, which is available at the College of Graduate Studies Web site (www.mtsu.edu/graduate/pdf/DegreePlanReviseALL.pdf).

Changes in degree programs will take effect at the beginning of the semester after the change in degree plan is approved. When unforeseen circumstances arise during the semester of graduation, an exception to the implementation date may occur at the request of the director of graduate studies and with the approval of the dean of Graduate Studies.

Examinations, Comprehensive (for Specialist's and Master's Students)

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

Examinations, Qualifying and Preliminary (for Ph.D. Students)

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

Examinations, Other

Any graduate student may be required to take one or more additional tests designed to measure general educational achievement and/or achievement in selected major areas.

Graduate credit may not be earned by CLEP or Special Examination.

Grades, Appeal of Course Grades

Level One

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

Level Two

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

NOTE: In cases where the department chair is the person against whom the complaint is lodged, then the dean in whose college the department is located shall assume the duties of the chair in the investigation and decision making.

Additional Information

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

Grades, Grade Point Average (Quality Credits)

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

The following system is used in determining grade point average:

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

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

Grades, Marking System

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

A, A-
B+, B, B-
C+, C, C-
D+, D, D-
F

Grades That Do Not Influence Grade Point Average

W - Withdrawal
NC - No credit (audit)
I - Incomplete

S - Satisfactory
U - Unsatisfactory
P - Pass

The P/F grade is given only in those courses with prior approval to use pass/fail grading. Courses may be taught on a pass/fail basis only after approval of the Graduate Council. Course descriptions state if pass/fail grading applies.

Pass or Satisfactory/Unsatisfactory grades are **not** used in determining the grade point average. However, satisfactory grades do count toward graduation credit requirements and are treated in every other respect as being equivalent to traditionally graded courses. Any course in which an "unsatisfactory" is received does not count toward graduation credit requirements.

The grade I indicates that the student has not completed all course requirements due to illness or other uncontrollable circumstances, especially those which may occur toward the close of the term. Mere failure to make up work or turn in required work on time does not provide a basis for the grade of I unless the extenuating circumstances noted above are acceptable to the instructor. When a student fails to appear for a final examination without known cause, the grade to be reported should be determined as follows: If the student has done satisfactory work to that point, the grade I may be reported on the assumption that the student was ill or will otherwise present sufficient reason for official excuse; if the student has attended irregularly and has not done satisfactory work to that point, the grade F should be reported.

The "incomplete" must be removed during the succeeding semester, excluding summer. Otherwise, it converts to a grade of F. A student should not make up the "incomplete" by registering and paying again for the same course. The I grade carries no value until converted to a final grade.

Grades by RaiderNet

Students may view their grades online each semester by selecting the appropriate option on RaiderNet. No student can view grades on RaiderNet until all debts or obligations owed to MTSU have been discharged.

Intent to Graduate

An Intent to Graduate form, available on the College of Graduate Studies website (www.mtsu.edu/graduate/intent.php), must be filed by the student by the end of the second week of the semester in which the student plans to graduate or no later than the end of the first week of S2-June term (for August graduation).

Prerequisites

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

Repeated Courses

A graduate student may repeat graduate courses in which a grade of B- or lower was earned. However, there are certain restrictions and limitations. A **maximum of two (2) courses**, not to exceed eight (8) credits combined, may be repeated. The grade in the second attempt **replaces** the original assigned grade in the first attempt regardless of the earned grade. For all additional courses or subsequent repeated courses, there will be **no grade replacement**; i.e., **all earned grades** will be used in the grade point average calculation and are recorded on the transcript.

Graduate students may not repeat a course in which they have previously earned the grade of A, A-, B+, or B without written approval from the director of graduate studies and dean of the College of Graduate Studies. If granted, there will be no grade replacement in the GPA calculation; i.e., all attempts will be used in the grade point average calculation and recorded on the transcript.

Semester Hour Load of Student

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

- Full-time - 9-12 graduate hours
- Three-quarter time - 7-8 graduate hours
- One-half time - 5-6 graduate hours

Graduate students are limited to a maximum of 12 graduate hours per semester. If an exception is requested, overload forms must be signed by the director of graduate studies and the dean of the College of Graduate Studies (www.mtsu.edu/graduate/pdf/OverloadRequest.pdf). Full-time status for students holding graduate assistantships is six (6) graduate semester hours.

Teacher Education Program, Postbaccalaureate

The post-baccalaureate teacher education program is designed for individuals who have completed a baccalaureate degree but who did not complete teacher preparation. The College of Education requires candidates to address any course and program deficiencies in their undergraduate education to ensure the attainment of the knowledge and skills required in general education, professional education, and the major for the teaching field. Additional coursework and program requirements will be determined by the teacher licensure analyst. Transcript analysis forms for the post-baccalaureate program are available at www.mtsu.edu/education/OPL/icensure/Request_for_Transcript_Analysis_Form_3-2011.pdf.

Postbaccalaureate students must also make formal application for admission to the teacher education program. Admission to teacher education is a prerequisite to enrollment in upper-division courses in Elementary Education (ELED), Reading (Literacy) (READ), Special Education (SPED) (except SPED 3010), Foundations of Education (FOED), or Youth Education (YOED).

Teacher Licensure

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

Time Limit

Students have six (6) years from the initial semester of matriculation to complete the requirements for a master's or specialist's degree. There is a ten-year time limit from initial matriculation to complete all requirements for the doctoral degree. Exceptions to these time limitations, for good cause, will be considered by the dean of the College of Graduate Studies when submitted in writing with a proposed timeline for completion and the recommendation of the advisor and the director of graduate studies.

Transcripts

Student copies and official copies of a student's record are furnished free of charge upon written request by the student. No transcript will be provided for a student who has any financial indebtedness to the University or who has

not completed admission procedures. Official transcripts from other institutions must be obtained directly from those institutions.

Transfer Credit

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

No graduate credit may be obtained by correspondence or work experience. A maximum of 12 semester hours of residence credit (6 in the major area) may be transferred and applied to a master's or specialist's degree.

Doctoral students should check with their director of graduate studies for the policy on transfer of credits into their doctoral degree program.

Withdrawals from the University

The College of Graduate Studies handles all issues relating to graduate students withdrawing from the University. Students are highly encouraged to consult with the College of Graduate Studies before making any decisions about withdrawing. Please also consult the Registration Guide (www.mtsu.edu/registration/registration-guide.php) for withdrawal and fee adjustment deadlines. Questions about withdrawing should be directed to the College of Graduate Studies via phone at (615) 898-2840 or via email at graduate@mtsu.edu.

General Withdrawal Guidelines:

1. Withdrawing Prior to Term - Students finding it necessary to withdraw from all classes prior to the beginning of a term may withdraw via RaiderNet.
2. Withdrawing During a Term
 - a. During the first two weeks (14 calendar days) of a term, courses may be dropped via RaiderNet (link to RaiderNet) without assignment of a grade on the official transcript.
 - b. Beginning on 15th calendar day through 60% of a term, student can drop some or all courses via RaiderNet (link to RaiderNet) and a grade of "W" will be assigned.
 - c. After 60% of the term, a complete withdrawal from ALL classes can be accomplished via RaiderNet (link to RaiderNet), through the last day to withdraw in each term. Instructors assign the appropriate grade of "W" if the student is passing or "F/FA" if the student is failing.
 - d. After 60% of the term, individual courses cannot be dropped via RaiderNet. Individual courses may be dropped if appropriate signatures are obtained on a drop form and submitted to the MT One Stop.
 - e. The deadline to withdraw from the University (all classes) and receive a grade of "W" or "F," as determined by the instructor is generally one week prior to the last day of classes and will be noted in the Registration Guide for each term.

NOTE: Fees, Financial Aid, Housing, etc. can be impacted anytime a student withdraws or drops a course. Consult the Registration Guide and those offices for more information.

Summer differs; please check Registration Guide for specific dates.

If extreme extenuating circumstances necessitate a graduate student's withdrawal from the University after 60% of the term, exceptions may be made. A grade of "W" may be recorded with written concurrence of the faculty member, but only if the extenuating circumstances are first verified by the College of Graduate Studies. Students who fall under this category should schedule an appointment with the withdrawal coordinator in the College of Graduate

Studies and provide a written statement and all documentation to support their extenuating circumstances. The University Withdrawal Policy can be reviewed at www.mtsu.edu/policies/student-affairs/III-00-06.php.

Glossary of Terms

Admission to degree status-Admission to the College of Graduate Studies as a graduate student for the purpose of seeking a graduate degree. This status requires completing a graduate admission application; meeting all entrance and test requirements; transmittal of relevant official transcripts; payment of an application fee; approval by the graduate program/department; and approval by the College of Graduate Studies. In the case of international students or domestic students whose highest degree is from an institution outside the United States, an external evaluation of the relevant official transcripts from an evaluation source such as WES may also be required for all non-English transcripts.

NOTE: *Some graduate programs allow applicants to begin taking classes prior to an admission decision whereas others prohibit such enrollment. An applicant should seek information from the relevant graduate program about its policy.*

Admission to non-degree status-Admission to the College of Graduate Studies as a post-baccalaureate student for the purpose of officially taking graduate courses but not seeking a graduate degree through MTSU. This status requires completing a graduate admission application; transmitting relevant official transcripts; payment of an application fee; and approval by the College of Graduate Studies. Not all graduate courses are open to non-degree students; thus the student should consult with the director of graduate study in the department.

Advancement to candidacy-Status of the student who has completed all or a substantial portion of the curriculum and has successfully passed the culminating examination (comprehensive exams for master's students or preliminary exams for doctoral students). Advancement to candidacy is recognition that the student is prepared to commence the thesis or dissertation research. For non-thesis students, it verifies that the student has completed all degree requirements and is eligible for graduation. The Advancement to Candidacy form is submitted to the College of Graduate Studies by the director of graduate studies and identifies the members of the thesis or dissertation committee (www.mtsu.edu/graduate/pdf/ThesisCommittee_Candidacy.pdf).

Cognate-Six semester hours of related coursework.

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

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

Conditional admission-The granting of temporary admission into a graduate program with certain stipulations being placed upon the student. Continuation in the program as a degree-seeking student is contingent upon fulfilling the specific requirements established at the time of the admission. Conditional admission into the College of Graduate Studies may be granted if the applicant has less than the minimum requirements, i.e., either the required minimum grade point average for graduate study or the test scores (but not both) are not met. Such admission is at the discretion of the graduate dean.

Continuous enrollment-Enrollment during the regular academic year (Fall and Spring Semesters) unless the academic program requires year-round enrollment. Continuous enrollment is expected of all students from initial enrollment until completion of dissertation for doctoral students and until completion of thesis for all specialist's and master's students. Students in non-thesis programs should maintain continuous enrollment through their culminating experience.

Degree plan-The degree plan specifies the courses that the student is required to take to complete the curricular requirements. This form must be filed and approved prior to completion of 21 hours at the master's and specialist's levels and 30 hours at the doctoral level (or earlier if required by the graduate program) by the pertinent graduate program personnel (e.g., graduate advisor, director of graduate studies, etc.), and the dean of the College of Graduate Studies (or designee). The form may be amended as needed by submitting an approved Change of Degree Plan Form (www.mtsu.edu/graduate/pdf/DegreePlanReviseALL.pdf).

Director of graduate studies-A faculty member who holds graduate faculty status appointed to serve as the principal officer of a graduate program with respect to curricular and other relevant matters.

Full-time/part-time graduate status-See "student load."

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

Graduate analyst-A staff member within the College of Graduate Studies assigned to assist the individual graduate student with respect to all relevant administrative matters from the point of admission through graduation.

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

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

Hold-A block placed on registration (or transcripts). For example, a registration hold will be placed on all non-admitted, degree-seeking applicants having graduate status after their first semester.

Intent to graduate-Indication that the candidate is planning to complete all degree requirements during the current term. An Intent to Graduate Form, signed by the advisor, must be filed by the candidate **by the date listed on the College of Graduate Studies website for the semester of planned graduation**. This authorizes release of the student's file for final evaluation and authorizes information to be collected for issuance of the diploma.

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

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

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

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

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

Preliminary examination-The second of a set of doctoral examinations that are taken at the end of coursework and are preliminary to entering the dissertation phase. Preliminary examinations may be both written and oral and are inclusive of coursework and supplementary readings. Students should consult with their advisors as to the individual program's policy on timing and content of examinations.

Prerequisites-Courses that are required for completion in order to provide the necessary academic background for subsequent graduate coursework. Prerequisites are determined and monitored by the individual graduate program.

Qualifying examination-An examination given to doctoral students to assess the level of mastery of knowledge in the discipline and to determine if the student is qualified to continue as a candidate for the doctoral degree. Individual programs often require the successful completion of the qualifying examination after the first year of the doctoral program. Students should consult with their advisors as to the individual program's policy on timing and content of examinations. Written portions of the examination are to be kept on file in the department for a period of five (5) years, and the student has the right of access. Passing the examination is a milestone in academic achievement by a doctoral student.

Readmission (reenrollment)-Applications for readmission must be filed if a graduate student fails to maintain continuous graduate enrollment. If granted, the student may reenroll for the identified term. Readmission, if granted, is based on competitiveness with current applicants and is not guaranteed. The department or program should be consulted for its readmission policy.

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

Satisfactory progress-Successful advancement of a student toward his/her degree objective in the judgment of the faculty and dean of the College of Graduate Studies. To be deemed as making satisfactory progress, a graduate student must maintain a cumulative GPA of 3.00 (3.25 in doctoral programs) or greater and **must** successfully complete sufficient and appropriate graduate courses. These graduate courses must apply toward the graduate curriculum in a manner consistent with completion of the degree objective and within the established time limit.

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

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

Stop-out-Events in life-such as family leave, illness, or military duty-may result in a student being unable to maintain continuous enrollment. In such a case, students may request permission to interrupt their studies on a temporary basis. A stop-out is the period of time during which a student fails to register for successive academic sessions. If the stop-out period exceeds one academic year (Fall and Spring semesters), the student may be required to fulfill degree requirements in existence at the time of reenrollment, rather than those in place at the original matriculation. A formal request to stop-out must be filed by the student, endorsed by the director of graduate studies in their department, and approved by the dean of the College of Graduate Studies prior to the beginning of the stop-out period. If approved prior to the beginning of the stop-out, this period is not counted toward the time limit for degree completion. A stop-out may be utilized no more than one time during the time limit for the degree program.

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

Transfer credit-Student's coursework taken at other colleges and universities that is formally transferred to the MTSU graduate record. In general, only coursework taken while in graduate status **prior** to attending MTSU will be transferred and only if those courses were not used in partial satisfaction of degree requirements at the previous

university. Transfer credit should demonstrate equivalency to existing MTSU courses acceptable for the graduate degree and requires the approval of the student's director of graduate studies and the dean of the College of Graduate Studies during the first semester of enrollment at MTSU. In general, credits completed seven (7) or more years prior to admission to a degree program at MTSU will not be considered for transfer.

Policies

Graduate Student Bill of Rights and Responsibilities

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

Rights

1. Graduate students have a right to be respected as individuals of merit and as junior colleagues of faculty. The student's vulnerability must not be exploited in any way by faculty, administration, or staff. (Reference: Faculty Handbook, Ethics Guidelines, Section IV, I.B., I.C.2, page 2)
2. Graduate students have a right to an accurate and timely description of the availability and the likelihood of financial and resource support within their program and within the University and will be given an equal opportunity to compete for support for which they are eligible.
 - a. Prospective and currently enrolled graduate students should be provided a thorough description of the requirements and qualifications necessary for holding teaching assistantships and graduate assistantships and receiving financial support from the University.
 - b. Prospective and currently enrolled graduate students should be provided a thorough description of the requirements and qualifications for all academic and financial awards in their programs and in the Graduate Catalog. They are to be assured that competition for any and all academic awards will be available to eligible graduate students and that evaluation for such awards will be fair and objective. They also should be informed of the procedures for evaluating applicants.
3. Graduate students have a right to be informed of specific requirements for achieving an advanced degree. Each department should communicate clearly these requirements to its students, and it should notify currently enrolled students in writing of any changes. Prospective and currently enrolled graduate students have a right to know of the normal time to complete a degree within a specific graduate program.
4. Graduate students have a right to a nonbiased evaluation of their progress toward achieving an advanced degree (Constitution of the Student Government Association, Art. II Sec. 3). The criteria should be clearly understood by the graduate advisor and student.
5. If a graduate student requests an explanation, reasons for unsatisfactory performance on preliminary, qualifying, or comprehensive examinations should be given in writing.
6. Graduate students have a right to substantive feedback and regular guidance concerning their academic performance.
 - a. Graduate students and their thesis/dissertation directors should arrive at and maintain a mutually agreeable schedule of evaluative/supervisory conferences.
 - b. Graduate students must be notified in writing of unsatisfactory performance before any attempt is begun to dismiss them from a graduate program. Only the dean of the College of Graduate Studies can dismiss a student from a graduate program for academic reasons and normally only upon the recommendation of the graduate program coordinator and department chair. Graduate students have the right to appeal for cause any decision affecting their academic standing as a graduate student. Cause excludes grade appeals, which are under the purview of the MTSU Grade Appeals Committee. The burden of responsibility rests with the appellant to provide a timely, cogent, and convincing written documentation of the facts upon which the appeal is based. Further information may be obtained from the appeals document from the Graduate Council, Section III.
7. Graduate students have a right to freedom from unlawful discrimination in any actions, including those based on gender, race, age, sexual orientation, disability, and religious or political beliefs. (Constitution of the Student Government Association, Art. II Sec. 1.2.6; MTSU Policies and Procedures Manual IV: 07:06,

IV:07:16:i). University grievance procedures should be available upon request at the Graduate College. Opportunities for informal resolution should also be explained to the student when appropriate.

8. Graduate students have a right to reasonable confidentiality in their communications with professors. (Constitution of the Student Government Association, Art. II Sec. 4; MTSU Policies and Procedures Manual II:02:00)
 - a. In general, a student's performance or behavior should not be discussed by a professor with other students.
 - b. Discussion among faculty of a student's performance should be of a professional nature and should be limited to the student's academic performance and fitness as a graduate student; the substance of the communication should be based on need-to-know, relevant information.
9. Graduate students have a right to refuse to perform tasks if those tasks are not closely related to their academic or professional development as part of their defined responsibilities.
10. Graduate students have a right to receive fair recognition for their efforts and contributions to cooperative research projects, including co-authorship of publications. Due effort and recognition should be determined prior to the project commencement whenever possible.
11. Graduate students should be represented in the decision-making process relative to graduate issues in their departments and programs; however, the representation is program-specific, possibly taking many different forms. Graduate students should have the opportunity annually to evaluate their professors in writing without fear of retribution.
12. Graduate students have a right to review vitae of faculty members within their degree programs/departments who are qualified/eligible to serve on their graduate committees. These vitae should be made available at the time the students are accepted into their programs to aid them in selecting their committee members.

Responsibilities

1. Graduate students have a responsibility to read and become familiar with the **Graduate Catalog** and the Student Rights and Responsibilities booklet.
2. Graduate students have a responsibility to complete and submit all documents required for admission to the College of Graduate Studies and to their departments.
3. Graduate students have a responsibility to conduct themselves in all academic activities in a manner befitting the professoriate. Graduate students' behavior should be a credit to themselves, the degree program/department, and the University. (Student Rights and Responsibilities booklet)
4. Graduate students have a responsibility to devote appropriate time and energy toward achieving the advanced degree within a reasonable time frame as specified by their graduate programs.
5. Graduate students have a responsibility to uphold ethical norms and honesty in research methodology and scholarship. (Student Rights and Responsibilities booklet; MTSU Policies and Procedures Manual I:01:24; "A Statement of Graduate Students' Research Rights and Responsibilities at MTSU's Jennings A. Jones College of Business")
6. Graduate students have a responsibility to not misrepresent themselves academically. It is a Class A misdemeanor to misrepresent academic credentials. Any graduate student who misrepresents his or her credentials to gain admission into MTSU will be subject to disciplinary action from the University, which may include dismissal from the University.
7. Graduate students have a responsibility to communicate regularly with faculty members and advisors, especially in matters related to research and progress within the graduate program.
8. Graduate students are encouraged to participate in the campus community to the extent that they are able and to enrich the campus in whatever ways possible, including contributing to the following:
 - a. the academic development and the social environment of the department in which they are pursuing the advanced degree and
 - b. decision-making relative to graduate student issues in the department, student government, and university.

Family Educational Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their educational records. Students must be afforded notice of their rights under FERPA and the types of personally identifiable information considered as directory information. The University policy may be accessed at w1.mtsu.edu/policies/pdfs/AccessToEducationalRecords.pdf.

Doctor of Philosophy Degree

Middle Tennessee State University offers the Doctor of Philosophy (Ph.D.) degree in Economics, English, Human Performance, Literacy Studies, Computational Science, Mathematics and Science Education, Molecular Biosciences, and Public History. The Ph.D. degree is offered for the purpose of developing doctoral-level expertise combining pedagogy with scholarly achievement and research excellence (applied or theoretical) in the fields of economics, English, human performance, literacy studies, computational science, mathematics and science education, molecular biosciences, or public history. Above all, the Ph.D. recipient from MTSU is a scholar who has acquired advanced academic skills and is well prepared to teach at the collegiate level, conduct independent scholarly investigation, and provide service to the private and public sectors associated with her/his academic discipline.

Admission

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

University Requirements Leading to the Ph.D. Degree

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

General Course and Credit Requirements

The required minimum is 60 semester hours of coursework with at least two-thirds of the program at the 7000 level. No more than 12 semester hours of dissertation research (course 7640) may be applied toward this 60-hour requirement. If recommended by the student's graduate advisor and approved by the graduate dean, a limited number of semester hours of coursework taken at the master's level may be applied toward this 60-hour requirement. In the case of a non-degreed D.A. student from MTSU or in the case of a D.A. recipient from MTSU wishing to pursue a Ph.D., additional hours (not to exceed twenty-five percent (25%) or twenty (20) hours whichever is greater of the D.A. requirements) may be applied toward the 60-hour requirement if recommended by the director of graduate studies and approved by the graduate dean.

The 60-credit requirement must include the following:

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

Additional Program Requirements

Each doctoral program establishes degree requirements that are specific to that discipline and **may be in excess of the minimum University requirements**. Students should consult the appropriate graduate program section in this catalog. The graduate advisor/director of graduate studies within each graduate program, in consultation with the advisory committee when relevant, may also specify additional requirements above the required sixty (60) hours for the Ph.D., such as prerequisites, a reading knowledge of foreign language(s), a working knowledge of statistics, computer literacy, or specific courses related to graduate teaching assistantships or research assistantships.

Pre-dissertation Advisory Committee

As soon as practicable, each Ph.D. student will be assigned an advisor or advisory committee. The advisor/committee is appointed by the director of graduate studies, in consultation with the student and the potential major professor. If warranted, the advisor/committee membership may be reconstituted upon a recommendation from the director of graduate studies and approval by the dean of the College of Graduate Studies.

The advisor/committee provides academic guidance to formulate a curricular plan best suited for the academic needs and interests of the student.

Degree Plan

As early as possible during the student's program of study, he/she should complete a degree plan in consultation with his/her advisor/advisory committee. The degree plan must be approved by the student's advisor and submitted to the College of Graduate Studies before the completion of 30 graduate hours. The degree plan may be amended as necessary by submission of a Change to Degree Plan Form.

Examinations

Each Ph.D. student may be required to take a set of examinations administered by a graduate program. A less than satisfactory outcome (including a fail decision on any component of the examinations) may result in additional academic requirements and/or a re-examination. A re-examination may be given only once. A second fail decision on any component of the examinations results in a recommendation to the dean of the College of Graduate Studies for academic dismissal. The student may appeal the dismissal recommendation, for cause, to the Appeals Advisory Committee of the Graduate Council via the chair of the Graduate Council or the dean of the College of Graduate Studies.

Qualifying Examinations: Each Ph.D. student may be required to take a qualifying examination. The qualifying examination is administered by a graduate program early in the student's doctoral program; often after the first year of the doctoral program. Students should consult with their advisors as to the individual program's policy on the timing and content of the administration. It may assess overall knowledge upon entry into the program or prior to entering the dissertation phase. The results of this examination should be used, in part, to plan the student's academic program. To be eligible to take this examination, the student must be fully admitted to the College of Graduate Studies and to the graduate program. Programs may have additional requirements or assess students by different means. The student should contact the individual program to determine qualifying examination requirements.

Preliminary Examination: The Ph.D. student must also pass an additional or subsequent written and/or oral examination. This examination is referred to as the Preliminary Examination. The student must be in good academic standing and must have at least a 3.25 grade point average in all graduate work. The preliminary examination is intended to assess whether a candidate is qualified to continue in a doctoral program, advance to candidacy, and pursue dissertation work.

All written examinations are given at least one month before the close of the Fall, Spring, and/or Summer semesters. Permission for the Ph.D. student to schedule the preliminary examination requires the approval of the student's

advisory committee. Applications may be obtained from the department. The student should contact the individual program to determine the deadlines for submitting these applications.

A satisfactory or passing performance on the written and/or oral examinations means that the candidate is qualified to continue the program as planned.

Written Preliminary Examination

1. The purpose of the written examination is to evaluate the candidate's overall knowledge of the field, integrative skills, ability to organize material, and competency in written expression. The maximum time limit for the written examination is eight hours.
2. The written examination is administered by the major department (i.e., the graduate program).
3. The graded written examinations are maintained in the department for a period of five (5) years and are available to the student upon request.

Oral Preliminary Examination

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

Advancement to Candidacy

After a student successfully completes the preliminary examination, the program files an Advancement to Candidacy Form with the dean of the College of Graduate Studies. At this time the dissertation committee is formally constituted and usually has the same membership as the pre-dissertation advisory committee, although this is not mandatory. For example, should the student's research area change, it may be appropriate to replace one or more of the original advisory committee members with faculty better qualified to provide research mentoring in the new area of inquiry. The Advancement to Candidacy Form certifies that the student has successfully completed the preliminary examination and lists the proposed chair and members of the dissertation committee. Upon approval, the College of Graduate Studies will notify the applicant of advancement to candidacy.

Before an applicant is officially admitted to candidacy for the Ph.D. degree, the student must have satisfied the following requirements:

1. Advancement to Candidacy and degree plan forms must be filed by the deadlines published in the Graduate Catalog and the registration guide (www.mtsu.edu/records/sbooks.php). The Advancement to Candidacy Form may not be filed in the same semester in which the student is to be graduated.
2. The student must have at least a 3.25 grade point average on all coursework listed on the degree plan as well as any other graduate work undertaken at Middle Tennessee State University within the specified time limit (ten years). Grades of D or F are not accepted for any graduate degree credit, and no more than seven (7) hours of C grade may count toward Ph.D. degree requirements. However, all C, D, and F grades will be included in the student's GPA computation.

Defense of Dissertation

Upon submission of the completed dissertation, the doctoral candidate who has successfully completed all requirements for the degree will be scheduled by the chair of her/his dissertation committee, in consultation with the other committee members, to defend the dissertation. The College of Graduate Studies must be notified of the dissertation title, date, time, and location of the defense at least two weeks prior to the date of the examination. The defense is open to all members of the University community who wish to attend. The dissertation defense is administered by the dissertation committee according to program guidelines. Successful defense of the dissertation must be attested to in writing by all members of the dissertation committee.

Residency

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

Time Limit

There is a ten-year limit for completing all Ph.D. degree requirements. Thus, all coursework offered toward the doctoral degree as well as the dissertation must be completed within ten years after matriculation (i.e., the first semester of enrollment). All graduate level coursework considered for transfer credit into the Ph.D. program must be degree-applicable and have been completed within seven (7) years prior to the first enrollment in the Ph.D. program.

Transfer Credits

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

Doctor of Education Degree

Middle Tennessee State University offers the Doctor of Education (Ed.D.) degree in Assessment, Learning, and School Improvement. The Ed.D. degree is offered for the purpose of developing doctoral-level expertise in applying educational research to real-world educational environments in order to improve the quality of learning across the student population. Above all, the Ed.D. recipient from MTSU is an educational scholar who has acquired the advanced academic skills needed to be a change leader in contemporary educational settings by assessing challenges, researching best practices, and applying those to student learning in order to bring about school improvement.

Admission

General admission requirements for the Ed.D. degree may be found in the admission section of this catalog. Applicants for admission to this degree objective must hold a master's degree.

University Requirements Leading to the Ed.D. Degree

Following are the minimum University requirements that must be met to be eligible for the granting of the Ed.D. degree.

General Course and Credit Requirements

The required minimum is 60 semester hours of coursework with at least two-thirds of the program at the 7000 level. No more than 12 semester hours of dissertation research (course 7640) may be applied toward this 60-hour requirement.

The 60-credit requirement must include the following:

- a. At least 48 hours in discipline-specific coursework. Undergraduate or dual-listed 4000/5000 courses (or their equivalents) cannot be used toward this requirement.
- b. At least 12 semester hours for the dissertation research (course 7640).

NOTE: Once an Ed.D. student has begun taking dissertation research, she/he is expected to enroll in at least 1 semester hour of dissertation research until the dissertation is completed. Failure to maintain continuous enrollment will require the student to apply for readmission to the program. Readmission is not guaranteed.

Additional Program Requirements

Each doctoral program establishes degree requirements that are specific to that discipline and may be in excess of the minimum University requirements. Students should consult the appropriate graduate program section in this catalog. The graduate program director of each graduate program may also specify additional requirements above the required sixty (60) hours for the Ph.D., such as prerequisites, publication of a research-based article, and/or presentation of a research-based conference paper.

Degree Plan

As early as possible during the student's program of study, she/he should complete a degree plan in consultation with the graduate program director. The degree plan must be approved by the student's advisor and submitted to the College of Graduate Studies before the completion of 30 graduate hours. The degree plan may be amended as necessary by submission of a Change to Degree Plan form.

Examinations

Each Ed.D. student may be required to take a set of examinations administered by the graduate program. A less than satisfactory outcome (including a fail decision on any component of the examinations) may result in additional academic requirements and/or a re-examination. A re-examination may be given only once. A second fail decision on any component of the examinations results in a recommendation to the dean of the College of Graduate Studies for academic dismissal. The student may appeal the dismissal recommendation, for cause, to the Appeals Subcommittee of the Graduate Council via the chair of the Graduate Council or the dean of the College of Graduate Studies.

Qualifying Examinations: Each Ed.D. student may be required to take a qualifying examination. The qualifying examination is administered by a graduate program early in the student's doctoral program, often after the first year of the doctoral program. Students should consult their advisors as to the individual program's policy in the timing and content of the examination. It may assess overall knowledge upon entry into the program or prior to entering the dissertation phase. To be eligible to take this examination, the student must be fully admitted to the College of Graduate Studies and to the graduate program. Programs may have additional requirements or assess students by different means. The student should contact the individual program to determine qualifying examination requirements.

Preliminary Examination: The Ed.D. student may also be required to pass an additional or subsequent written and/or oral examination. This examination is referred to as the Preliminary Examination. The student must be in good academic standing and must have at least a 3.25 grade point average in all graduate work. The preliminary examination is intended to assess whether a candidate is qualified to continue in a doctoral program, advance to candidacy, and pursue dissertation work.

All written examinations are given at least one month before the close of the Fall, Spring, and/or Summer semesters. Permission for the Ed.D. student to schedule the preliminary examination requires the approval of the student's advisor and the program's director of graduate studies. The student should contact the individual program to determine the deadlines for submitting these applications.

A satisfactory or passing performance on the written and/or oral examinations means that the candidate is qualified to continue the program as planned.

The graded written examinations are maintained by the program for a period of five (5) years and are available to the student upon request.

Advancement to Candidacy

After a student successfully completes the preliminary examination, the program files an Advancement to Candidacy Form with the dean of the College of Graduate Studies. At this time the dissertation committee is formally constituted and usually has the same membership as the pre-dissertation advisory committee, although this is not mandatory. For example, should the student's research area change, it may be relevant to replace one or more of the original advisory committee members with faculty better qualified to provide research mentoring in the new area of inquiry. The Advancement to Candidacy Form certifies that the student has successfully completed the preliminary examination and lists the proposed chair and members of the dissertation committee. Upon approval, the College of Graduate Studies will notify the applicant of advancement to candidacy.

Before an applicant is officially admitted to candidacy for the Ed.D. degree, the student must have satisfied the following requirements:

1. Advancement to Candidacy and degree plan forms must be filed by the deadlines published in the Graduate Catalog and registration guide. The Advancement to Candidacy Form may not be filed in the same semester in which the student is to be graduated.
2. The student must have at least a 3.25 grade point average on all coursework listed on the degree plan as well as any other graduate work undertaken at Middle Tennessee State University within the specified time limit (ten years). Grades of D or F are not accepted for any graduate degree credit, and no more than seven

(7) hours of C grade may count toward Ed.D. degree requirements. However, all C, D, and F grades will be included in the student's GPA computation.

Defense of Dissertation

Upon submission of the completed dissertation, the doctoral candidate who has successfully completed all requirements for the degree will be scheduled by the chair of her/his dissertation committee, in consultation with the other committee members, to defend the dissertation. The College of Graduate Studies must be notified of the dissertation title, date, time, and location of the defense at least two weeks prior to the date of the examination. The defense is open to all members of the University community who wish to attend. The dissertation defense is administered by the dissertation committee according to program guidelines. Successful defense of the dissertation must be attested to in writing by all members of the dissertation committee.

Residency

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

Time Limit

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

NOTE: The Ed.D. in Assessment, Learning, and School Improvement is a cohort program and is intended to be completed as part of a cohort of students over a three-year period. Students who withdraw or otherwise fail to continue with their cohort must apply for readmission. Readmission is not guaranteed.

General Information for Specialist and Master's Students

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

Admission Requirements

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

Admission is granted to a specific program of study, and a student may not change the major, the concentration, or the minor without a recommendation by the relevant graduate advisor(s) and the written approval of the dean of the College of Graduate Studies.

All applicants must hold a bachelor's degree from an accredited university. In addition, applicants for the Specialist in Education (Ed.S.) degree must also hold a master's degree from an accredited university.

Comprehensive Examinations

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

Degree Plan

The degree plan is established in consultation with the graduate advisor and sets out the curricular plan to follow for the purpose of graduation. The degree plan must be filed and approved prior to the completion of 21 credit hours (or earlier if required by the graduate program). The form is approved by the pertinent graduate program personnel (e.g., major professor, graduate advisor, etc.) and the dean of the College of Graduate Studies (or designee). It may not be filed in the semester in which the student anticipates to be graduated.

M.A.T. and M.S.T. degree plans must also be signed by the dean of the College of Education or an appropriate representative if licensure is being sought. The degree plan for the M.Ed. requires that the student have a professional license to teach and thus must also be signed by the dean of the College of Education or an appropriate representative.

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

Degree Plan Change

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

Faculty Advisors

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

Intent to Graduate

By the end of the second full week of the term in which the student intends to graduate, or by the end of the first week of the Summer June Term (for August graduation), the candidate must file an Intent to Graduate form (www.mtsu.edu/graduate/intent.php) with the College of Graduate Studies, pay relevant fees at the Business Office, and complete the College of Graduate Studies exit survey. All degree requirements must be completed prior to the date of graduation.

Thesis

The thesis in final form must be electronically submitted no later than the date specified in the University Academic Calendar, which is approximately six weeks before graduation. It must be approved by the major professor, the reader(s), and the department chair prior to submission. Guidelines for electronic submission of theses are found in the College of Graduate Studies Thesis and Dissertation Manual. Guidelines for the thesis vary from department to department. While the responsibility for the technical quality and content of the thesis or dissertation lies in the graduate committee, the College of Graduate Studies imposes format requirements to ensure an appropriate appearance for your thesis or dissertation and recognizes the quality of the product you have produced by accepting it. Final responsibility for the thesis or dissertation lies with the author. The University reserves the right to refuse any manuscript that is not in agreement with the **MTSU Thesis and Dissertation Manual** formatting guidelines, is not in suitable condition for archiving, is in any form plagiarized or fabricated, or does not meet the quality standard expected of a graduate thesis. Thus a thesis not meeting standards may be rejected by the dean of the College of Graduate Studies and graduation delayed.

NOTE: Once the student has begun taking thesis research, he/she is expected to enroll in at least 1 semester hour of thesis research (course 6640) until the thesis is completed.

Specialist in Education Degree

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

Common Requirements for All Specialist Degree Programs

All specialist candidates must

1. complete all applicable coursework **after** receipt of the master's degree.
2. file a degree plan with the College of Graduate Studies prior to the completion of 21 credit hours. No courses at the 5000 level or lower may apply toward the specialist degree.
3. successfully complete a written (and/or oral) comprehensive examination. The examination may be taken no more than twice.
4. complete all specific graduate program requirements. These additional specific degree requirements are found under the applicable department.

Second Specialist Degree from MTSU

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

The Master's Program

Middle Tennessee State University offers graduate degrees and certificate programs encompassing over 80 areas of study. These include the Master of Accountancy (M.Acc.), Master of Arts (M.A.), the Master of Arts in Teaching (M.A.T.), the Master of Business Administration (M.B.A.), the Master of Business Education (M.B.E.), the Master of Criminal Justice (M.C.J.), the Master of Education (M.Ed.), the Master of Fine Arts (M.F.A.), the Master of Music (M.M.), the Master of Science (M.S.), the Master of Science in Nursing (M.S.N.), the Master of Science in Teaching (M.S.T.), the Master of Professional Studies (M.P.S.), and the Master of Social Work (M.S.W.).

Common Requirements for all Master's Degree Programs

All master's candidates must

1. satisfactorily complete the undergraduate prerequisites.
2. complete a minimum of 30 (or more) semester hours of graduate coursework. No more than 30 percent of the total degree hours may be dually listed as undergraduate/graduate hours. No undergraduate courses may apply toward the graduate program requirements. If a thesis is required, normally no more than three hours will apply toward the 30 (or more) semester hour program requirement. However, additional semester hours of thesis research (6640) may be taken and will appear on the student's transcript.
3. file a degree plan with the College of Graduate Studies prior to the completion of 21 credit hours.
4. successfully complete a written (and/or oral) comprehensive examination; the examination may be taken no more than twice.
5. complete all specific graduate program requirements.

Program Leading to the M.Acc. Degree

A Master of Accountancy (M.Acc.) degree program is offered by the Department of Accounting in the Jennings A. Jones College of Business. Specific program requirements may be found under Accounting.

Programs Leading to the M.A. Degree

Departments offering programs leading to the Master of Arts degree include Economics and Finance, English, History, Music, Political Science, Psychology, and Sociology and Anthropology.

Normally, the Master of Arts degree requires a thesis; however, graduate programs in English, Economics, History, Music, and International Affairs (Political Science) include a nonthesis option requiring more than 30 semester hours. Specific program requirements may be found under the appropriate program.

Program Leading to the M.A.T. Degree

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

Program Leading to the M.B.A. Degree

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

Program Leading to the M.B.E. Degree

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

Program Leading to the M.C.J. Degree

The Master of Criminal Justice degree program is a joint program with Tennessee State University. Students may seek professional employment in the operational agencies in the field of criminal justice or pursue relevant research or teaching positions.

Programs Leading to the M.Ed. Degree

Departments offering programs leading to the Master of Education degree include Womack Educational Leadership and Elementary and Special Education. The M.Ed. degree provides programs of study in Administration and Supervision, Curriculum and Instruction, Professional Counseling, Literacy, and Special Education. Specific degree requirements are found under Administration and Supervision, Advanced Studies in Teaching and Learning, Curriculum and Instruction, Literacy, Professional Counseling, and Special Education.

Program Leading to the M.F.A. Degree

The Master of Fine Arts (M.F.A.) with a major in Recording Arts and Technologies is offered by the Department of Recording Industry to prepare practitioners in the field of audio and music recording and production for advanced work in an integrated electronic media environment. Specific degree requirements are found under Recording Arts and Technologies.

Program Leading to the M.P.S. Degree

MTSU offers in collaboration with other Tennessee Board of Regents institutions the Master of Professional Studies for individuals seeking interdisciplinary training within the social sciences and their current profession. Specific degree requirements are found under Professional Studies.

Programs Leading to the M.S. Degree

The University offers the Master of Science degree in the areas of Aviation Administration, Biology, Chemistry, Computer Science, Engineering Technology, Exercise Science, Health and Human Performance, Horse Science, Human Sciences, Information Systems, Leisure and Sport Management, Management, Mass Communication, Mathematics, and Professional Science. Specific degree requirements are found under the applicable program.

Normally, the Master of Science degree requires a thesis; however, graduate programs in Computer Science, Exercise Science, Health and Human Performance, Engineering Technology, Leisure and Sport Management, Management, Mass Communication, Professional Science, Horse Science, and Mathematics include a nonthesis option requiring more than 30 semester hours. (Specific program requirements may be found under the appropriate program.)

Program Leading to the M.S.N. Degree

The Master of Science in Nursing Degree (M.S.N.) is offered through the Regent's Online Degree Program (RODP) and is delivered following the standard protocol established for the delivery of RODP courses and programs. Specific program requirements may be found under Nursing.

Program Leading to the M.S.T. Degree

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

Program Leading to the M.S.W. Degree

The Master of Social Work degree program is a collaborative program with Middle Tennessee State University, Tennessee State University, and Austin Peay State University. Specific degree requirements are found under Social Work.

Second Master's Degree from MTSU

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

Graduate Certificate Programs

Graduate certificate programs provide advanced study beyond the baccalaureate degree and are intended as both professional development and as an intermediate step towards a desired graduate degree. Middle Tennessee State University offers graduate certificates in Archival Management, College and University Teaching, Family Nurse Practitioner, Gerontology, Health Care Management, Heritage Studies, Historic Preservation, Museum Management, United States Culture and Education, and Women's and Gender Studies. The Gerontology, Health Care Management, and United States Culture and Education certificates are interdisciplinary programs involving courses and faculty in multiple MTSU departments. The certificate in United States Culture and Education is open only to international students.

Requirements

Prospective students should apply to the College of Graduate Studies. Once a student is admitted to the college, his or her application is transmitted to the director of the individual certificate program for admission consideration. For admission to the interdisciplinary graduate certificate programs in Gerontology and Health Care Management, students must possess a bachelor's degree with an undergraduate grade point average of 2.75 (4.0 scale) and are required to submit a letter demonstrating their interest, detailing prior field experience, and outlining career goals and aspirations.

Students enrolled in the certificate program must comply with existing policies applicable to all graduate programs at MTSU. The time limit for use of credit toward the certificate is six years from the date of enrollment in the earliest course applied toward the certificate, including transferred courses. Students must maintain a cumulative graduate grade point average of 3.00 in courses leading to the certificate. Students may transfer up to six (6) credit hours of approved coursework into the certificate program.

Graduate Certificates

- Advanced Practice: Family Nurse Practitioner Certificate (RODP)
- Archival Management
- College and University Teaching
- Heritage Studies
- Historic Preservation
- Museum Management

Interdisciplinary Certificate Programs

- Gerontology
- Health Care Management
- United States Culture and Education
- Women's and Gender Studies

Libraries/Archives/Centers

Numerous library and archive resources are located on the MTSU campus. Copying of materials housed in these facilities is permitted only in compliance with federal copyright statutes and in accordance with departmental rules and regulations.

Libraries

Center for Educational Media

The Center for Educational Media, located in the Learning Resources Center and the College of Education building consists of several related units and facilities, including Audio/Visual Services, a television studio, a satellite and webcasting center, and the Education Resource Channel @ Middle Tennessee, one of MTSU's two education access television stations.

Audio/Visual Services maintains an inventory of audio/visual equipment for faculty check-out, repairs campus audio/visual equipment, performs equipment set-ups for events, provides dubbing services, records off-air programming for classroom use, and supports satellite and webcasting services. Audio/Visual Services also offers professional video production services for MTSU faculty and administrators, including studio production, remote production, postproduction, satellite uplinks and downlinks, and webcasts.

The Satellite and Webcasting Center offers quality educational programming via satellite to K-12 schools in many rural Tennessee counties and via cable television to viewers in Rutherford and five other middle Tennessee counties. Programs are also webcast to viewers across the state. The satellite facilities can be scheduled by units across campus for local, statewide, or national broadcasts of special events and programs. Both digital and analog C-band transmission options are available.

The Education Resource Channel @ Middle Tennessee delivers classroom enrichment and professional development programs to K-12 schools and general educational programming to the public. The channel serves middle Tennessee via Comcast (Rutherford County), DTC Communications, and AT&T U-Verse. Programs include MTSU productions and licensed programs from non-profit organizations and commercial educational media vendors.

Albert Gore Research Center

Named for Senator Albert Gore Sr. (B.S., MTSU '32), the Albert Gore Research Center houses the university archive and a variety of historical documents, photographs, oral history recordings, and museum objects available to students and the public for research. A unit of the College of Liberal Arts, the center strives to educate the MTSU community and the public about the histories of MTSU, of American democracy, of equine studies, and of life in middle Tennessee, and to lead the preservation of materials vital to those histories. The Margaret Lindsley Warden Library for Equine Studies is nationally significant for researchers in this field. The center is a member of the Association of Centers for the Study of Congress and a partner in the Library of Congress Veterans History Project. Visit gorecenter.mtsu.edu for more information or to donate materials.

James E. Walker Library

The James E. Walker Library supports a quality education at MTSU. The centrally located facility offers print and online research collections that provide access to a wealth of resources for all disciplines. Library staff provides expert help to support course assignments, term papers, and student research. The library building offers a selection of individual and group study areas, quiet zones, and comfortable seating. More than 350 desktop and laptop computers are available for accessing information resources and doing coursework.

Special features of the library include two instruction rooms for learning how to use library resources, a Digital Media Studio with specialized hardware and software, Special Collections, Media Library, Howard Music Library, Curriculum

Collection, the University Writing Center, and an Adaptive Technologies Center to meet needs of students with disabilities. The Research Commons is full of technology and collaborative areas with moveable furniture where students can create their own learning spaces. Also now available are more group zones, large reservable group meeting places, and presentation practice rooms.

Walker Library is open extended hours for students' convenience. Librarians and staff are available to help with reference, research, and computer use. Students can request help in person, by phone, email, instant messaging, or text. Students use their MTSU ID cards to borrow books and other materials for extended periods while their PipelineMT accounts provide access to online information resources from any location.

More information can be found on the library's website at library.mtsu.edu/.

Women's and Gender Studies Library

The Women's and Gender Studies Program, located in JUB 308, maintains a collection of books and other research materials related to women's and gender studies. Most volumes circulate. (See also Women's and Gender Studies Minor.)

Centers

Center for Health and Human Services

The Center for Health and Human Services is a federation of academic units that share the common goal of preparing the health and human services workforce in Tennessee. Coordinated by the chairholder of the Adams Chair of Excellence in Health Care Services, the center encourages quality interdisciplinary education, research, and service programs in health and human service areas. The center also collaborates with public agencies and private not-for-profit organizations to develop and implement programs designed to improve the health of the middle and greater Tennessee community. MTSU programs affiliated with this center include Aging Studies; School of Nursing; Departments of Psychology, Sociology and Anthropology, Social Work, Health and Human Performance, and Human Sciences; Communication Disorders; Pre-professional Health Sciences; and graduate studies in gerontology and health care management.

Center for Historic Preservation

One of two Centers of Excellence at MTSU, the Center for Historic Preservation (www.mtsuhistpres.org/) was established in 1984. It is a research and public service institute committed to the preservation, protection, enhancement, and sensitive promotion of the historic environment. Through its varied projects, programs, and activities, the center responds directly to the needs and concerns of communities and organizations working to include heritage in their future economic development strategies. Providing leadership and assistance on a local, state, regional, and national basis, the center's work falls within four initiatives.

Rural preservation recognizes the unique heritage, resources, and problems of rural areas and small towns. The overall goal is to create a heritage infrastructure for successful, long-term project development in small towns that have outstanding resources but lack the expertise to use heritage resources for cultural and economic improvement. National Register nominations for individual buildings, historic districts, and cemeteries are an ongoing priority of this initiative. The Tennessee Century Farms Program, established in 1985 in partnership with the Tennessee Department of Agriculture, is centered on program expansion, new publications, agritourism potential, and regional conservation planning for farms that have been in the same family for at least 100 years. The Rural African American Church Project, established in 1997 in partnership with African American heritage groups and the National Trust for Historic Preservation, is a continuing project that documents the state's historic black churches.

Heritage education addresses the use of cultural heritage resources as across-the-disciplines teaching tools in the K-12 grades. The center works with school systems, community heritage organizations, and higher education teacher training programs to assist in developing and presenting materials that meet current curriculum standards. Most

recently, the center entered into a partnership with the Library of Congress to direct Teaching with Primary Sources across Tennessee. Serving educators and students at all levels, the center partners with other MTSU departments and educational institutions and organizations throughout the state.

The Tennessee Civil War National Heritage Area (www.tncivilwar.org/) was created by Congress in 1996. The Heritage Area focuses on the preservation, interpretation, and heritage development of the multiple legacies of the Civil War and Reconstruction era in Tennessee. The center is the only university unit in the nation to serve as the administrative head of a National Heritage Area, which are partnership units of the National Park Service. The Heritage Area provides technical services to institutions, agencies, and property owners across the state and develops funding partnerships with groups, governments, and institutions which work with the center to establish joint projects and programs of long-lasting benefit to the state and nation. As part of the Heritage Area effort, the center plays an active role in the Alliance of National Heritage Areas and assists the alliance's Heritage Development Institutes, which are professional training workshops held across the nation.

Heritage Diversity focuses on incorporating the stories and traditions of all Tennesseans into the history and preservation of the state. Identifying, documenting, and assisting in the interpretation of historic African American schools, cemeteries, farmsteads, and businesses and contributions to the arts are a part of this initiative. National Register documentation of Tennessee and southern sites associated with the civil rights movement are continuing projects. Women in architecture and preservation as well as women involved in farming across the state address important issues. The center works with the National Park Service to document and develop preservation alternatives for National Register-eligible properties along the Trail of Tears in Tennessee.

Graduate-level staff teach historic preservation courses each year for the Department of History and direct a number of theses and dissertations. The center hosts graduate assistants from the Ph.D. program in Public History as well as those studying at the M.A. level. Graduate and undergraduate students who work at the center assist staff on a variety of applied research and public service projects, gaining valuable interdisciplinary experiences to supplement their in-class training. The Downtown Heritage Center in Murfreesboro and the Glen Leven Farm in Nashville provide learning labs for students to address issues and programs in preservation and history.

Our largest history project, ***The Tennessee Encyclopedia of History and Culture*** Online Edition, is a partnership among the center, the Tennessee Historical Society, and the University of Tennessee Press. Revised in 2001, the encyclopedia Web site is a comprehensive reference for the state's history. "Southern Places," a digital humanities website developed by the MTSU Walker Library, highlights the center's fieldwork and documentary projects across the region.

Center for Popular Music

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

The CPM's library and archive is one of the largest and best popular music research collections in the world. Materials in the center's archive and library fall into three broad categories. First are extensive holdings of the various types of media in which music has been fixed and sold as a commodity. These include print materials such as sheet music, song books, song broadsides and songsters, and sound recordings in formats ranging from cylinders to compact discs. The center's sound archive is one of the largest in the country and consists of more than 200,000 commercial sound recordings as well as many hours of unique unpublished recordings of music and interviews. The CPM's sheet music collection of approximately 110,000 items is the largest in the Southeast, and its library of gospel songbooks is one of the most extensive of any repository not associated with a religious organization. Second are various materials that are needed to study popular and vernacular music in all its musical, cultural, historical, technological, and commercial contexts, including such items as photographs, posters, playbills, concert programs, trade catalogs, music manuscripts, news clippings, and personal papers of musicians, songwriters, and business

people. Third are books, periodicals, and other reference materials about popular music. The center has one of the largest and most comprehensive libraries of books and periodicals about popular music anywhere.

Materials in the center's collection do not circulate but are available to anyone doing research on popular music. Resources support undergraduate, graduate, and faculty research in a variety of disciplines and departments. In keeping with one of the aims of the Centers of Excellence program, the Center for Popular Music serves as a research resource for people far beyond the bounds of the University. Center staff members have fielded research queries from every state in the union and from more than thirty foreign countries. Authors, journalists, media producers, performers, and students writing dissertations have all made use of the center's archive and library.

Public programs sponsored by the center include lectures, conferences, symposia, and concerts of contemporary and historical popular music.

Student Resources

Career Development Center

The Career Development Center (CDC) is a comprehensive center serving all departments and colleges of MTSU with career exploration, on-campus recruiting, and job searching. For more information, contact the Career Development Center, (615) 898-2500, or visit www.mtsu.edu/career/.

Child Care Lab

The MTSU Child Care Lab provides quality care for children ages 3-5 whose parents are attending or working at MTSU. For more information, contact the Child Care Lab, (615) 898-2970, or visit www.mtsu.edu/childcare/.

Counseling Services

Counseling Services offers crisis intervention, assessment, community referral, and limited personal counseling services, all designed to support students in their emotional, intellectual, and social growth. While we strive to be available to all students needing these services, we assume special responsibility for those in need of immediate assistance. Our goal is to understand students' concerns and to develop and implement counseling and referral plans that respond to their needs as effectively and expediently as possible. Counseling Services also coordinates the University's testing program, offering such standardized tests as the CLEP, ACT residual, the PRAXIS series, and others. For more information, contact Counseling Services, (615) 898-2670, or visit www.mtsu.edu/countest.

Disabled and Access Center

The Disability and Access Center offers a wide variety of services to students with disabilities, including testing accommodations, providing access to the latest in adaptive computer technologies, and acting as a liaison to University departments. MTSU also provides an ADA/504 coordinator, Watson Harris, Peck Hall 203, (615) 898-5366. For more information, contact Disability and Access Services, (615) 898-2783, or visit www.mtsu.edu/dssemail/.

Housing and Residential Life

Housing and Residential Life creates living-learning communities which promote personal and academic growth among a diverse student body. Additional information regarding on campus accommodations can be found at www.mtsu.edu/living-on-campus/.

Intercultural and Diversity Affairs

Intercultural and Diversity Affairs promotes cultural awareness, understanding, and a sense of belonging for all students at MTSU. For more information, contact Intercultural and Diversity Affairs, (615) 898-5812, or visit www.mtsu.edu/idac/.

June Anderson Center for Women and Nontraditional Students

The June Anderson Center for Women and Nontraditional Students provides student support services conducive to learning and personal development for both women students and for adult students who generally work fulltime, are married, have children, and other adult responsibilities beyond their college experiences. The center provides information and referrals about all aspects of academic and social life. For more information, contact June Anderson Center for Women and Nontraditional Students, (615) 898-5812, or visit www.mtsu.edu/jac/.

Student Health Services

Student Health Services ensures the delivery of affordable, accessible and high quality health care integrated with the promotion of lifelong wellness for MTSU students. A prepaid student health fee covers the cost of basic office visits, and an on-site Pharmacy provides access to over-the-counter and prescription medication. For more information about student health services and student health insurance, contact Student Health Services, (615) 898-2988, or visit www.mtsu.edu/healthservices/

Campus Life

Athletics

The MTSU Athletics program strives for excellence in the development of its student-athletes and the quality of its 17 sports teams. The program supports the academic, athletic, and social education of its student-athletes by encouraging them to develop the values of respect for themselves and others and to take pride in achievement and making positive contributions to the communities in which they live.

MTSU is committed to quality athletic programs that bring the campus community together and promote a sense of pride and tradition in academic and athletic excellence. Athletics also brings the University regional and national recognition and provides a link between the University and its alumni and the community at large. It helps generate alumni and public support for all aspects of the University. The athletics program provides quality faculty and leadership to campus programs. It gives students, faculty, and alumni opportunities for innovative public service activities such as the "Reading Raider" program, which has partnered with area elementary schools to promote student reading skills. It uses athletic, financial, and Housing and Residential Life physical resources to maintain and develop athletic programs to accomplish the mission of the University.

The University is a member of Conference USA and the National Collegiate Athletic Association, competing in NCAA Division I in all sports. MTSU is represented annually in baseball, basketball, cross-country, football, golf, tennis, indoor track, and outdoor track for men and by basketball, cross-country, golf, soccer, softball, tennis, indoor track, outdoor track, and volleyball for women.

Both full-time and part-time students are admitted to all home football, basketball, and baseball games by presenting their valid ID cards at the gate. Athletic events in other sports require no admission and are open to the public and campus community. The ticket office is located at Floyd Stadium Gate 1A. Ticket information can be obtained by phoning (615) 898-2103 or 1-888-YES-MTSU or visiting GoBlueRaiders.com!

MTSU's Title IX coordinator is Carol Clark, (615) 898-5133.

Information Technology

The MTSU Information; Technology Division (ITD) supports computing and information technology resources of the University. ITD manages the campus network and MTSU's primary academic and administrative computing systems; provides telecommunication services for the campus; promotes and supports instructional technology, including faculty consultation and training and maintenance support for all campus technology-based classrooms; provides technical support and training for the use of computer hardware and software; provides a 7 day a week (hours vary daily) Information Technology help desk when classes are in session; supports MTSU's primary administrative applications including RaiderNet, PipelineMT, and the data warehouse; and administers the STA (Student Technology Assistant) program, the campus ID system, and the MTSU website.

All MTSU students, staff, and faculty are provided with an account that provides access to on-campus information technology resources as well as state, regional, national, and international networks. Students may activate their account at www.mtsu.edu/pipelinemt by clicking on the new user's link. The account will be ready to use within ten (10) minutes. Faculty and staff accounts are automatically created after job data has been entered into Banner Administrative system. Documentation is sent to the department of the faculty or staff members with login information. Faculty and staff can reset their passwords by going to www.mtsu.edu/changpw and choosing the appropriate link. Additional information regarding faculty, staff, and class accounts can be found at www.mtsu.edu/itd/facstaff_accounts_itd.php. For access to forms to create an organizational or retirement email account visit www.mtsu.edu/forms_emp_alpha.php and look for email.

Parking and Transportation Services

The Parking and Transportation Services Office issues parking permits and enforces parking regulations for the MTSU community.

All students (including part-time, full-time, graduate students, night students, etc.), administrators, faculty, and staff (whether full- or part-time) intending to park a vehicle on campus must obtain a permit through Parking and Transportation Services and place the permit on or in the vehicle being operated on campus. Each individual is responsible for violations received by any vehicle bearing his/her parking permit.

Police Department

The MTSU Police Department maintains 24-hour coverage with police patrol and communications operators and is responsible for the safety and protection of the MTSU community. Services provided include law enforcement, communication of emergency services, building security, escorts, and general assistance to students.

College and University Security Information Act

Pursuant to the provisions of the "College and University Security Information Act," Public Chapter No. 317, enacted by the 1989 General Assembly, Middle Tennessee State University makes available crime rates and statistics as well as security policies and procedures to interested parties. Persons wishing to review or receive a copy of this information, may contact the Police Department, Middle Tennessee State University, Murfreesboro, TN 37132, (615) 898-2424.

Information to help avoid becoming a victim of crimes such as theft and sexual assault is available in the MTSU Student Handbook and the Police Department Orientation calendar or online at <http://police.mtsu.edu>.

Religious Opportunities

The Philosophy Department offers courses for academic credit in religious studies. In addition, every MTSU student is encouraged to attend worship services of his/her choice. The University seeks neither to promote nor to exclude any creed. Several campus ministries are located in facilities that border the campus.

College of Basic and Applied Sciences

Computational Science, Ph.D.

John Wallin, Program Director

(615) 494-7735

John.Wallin@mtsu.edu

www.mtsu.edu/graduate/cpsphd/

The Ph.D. in Computational Science is an interdisciplinary program in the College of Basic and Applied Sciences and includes faculty from the departments of Biology, Chemistry, Computer Science, Mathematical Sciences, and Physics and Astronomy. This program is research intensive and applied in nature, seeking to produce graduates with competency in the following three key areas:

1. mastery of the mathematical methods of computation as applied to scientific research investigations coupled with a firm understanding of the underlying fundamental science in at least one disciplinary specialization;
2. deep knowledge of programming languages and computing technology so that graduates can adapt and grow as computing systems evolve; and
3. skills in effective written and oral communication so that graduates are prepared to assume leadership positions in academia, national labs, and industry.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Doctor of Philosophy in Computational Science program is based on a comprehensive assessment of a candidate's qualifications including Graduate Record Examination (GRE) scores, undergraduate and graduate grade point average, and letters of recommendation.

Applicants who do not meet these minimums but whose application materials indicate high potential for success may be admitted conditionally. Such students must meet the conditions of their admission in the time stated to remain in the program of study.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

The application deadline is February 15 for those wishing to be considered for graduate assistantships for the following Fall. Late applications may be considered, but admission and financial support in the form of an assistantship are not guaranteed.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php).
2. submit official scores for the verbal, quantitative, and analytical writing measures of the GRE that indicate potential for success in the Computational Science program. The GRE is an important measure and is given significant consideration in the admissions review process. Successful applicants typically have Verbal and Quantitative scores at or above the 50th percentile for persons intending graduate study in science with a combined V + Q score exceeding 297 (current scale) or 1,000 (former scale);
3. submit official transcripts showing a GPA in previous academic work that indicates potential for success in advanced study. Successful applicants typically have a minimum 3.50 GPA in their graduate work or a minimum 3.00 GPA when entering with a bachelor's degree. Applicants should hold a bachelor's, master's, or doctoral degree in a science discipline;
4. provide letters of recommendation from at least three professors or professionals that address the applicant's potential to successfully complete a Ph.D. in the Computational Science program.

Degree Requirements

The Ph.D. in Computational Science requires completion of 72 semester hours.

Candidate must

1. make at least two research presentations at regional, national, or international meetings as the lead or coauthor;
2. be lead author or make significant contribution as coauthor of two articles published, in press, or under review in high quality, peer-reviewed journals;
3. make a significant contribution to the development of at least one external grant proposal in collaboration with an MTSU faculty member serving as principal investigator.

Curriculum: Computational Science

Candidate must complete 72 hours in the following course of study:

Foundation Courses (11 hours)

- COMS 6100 - Fundamentals of Computational Science **3 credit hours**
- COMS 6500 - Fundamentals of Scientific Computing **4 credit hours**
- CSCI 6020 - Data Abstraction and Programming Fundamentals **4 credit hours**

Computational Science Core (26 hours)

- CSCI 6050 - Computer Systems Fundamentals **4 credit hours**
- CSCI 6330 - Parallel Processing Concepts **3 credit hours**
- CSCI 7300 - Scientific Visualization and Databases **3 credit hours**
- COMS 7100 - Applied Computational Science **4 credit hours**
- COMS 7300 - Numerical Methods in Computational Science **4 credit hours**
- COMS 7950 - Research Seminar in Computational Science **2 credit hours**
- MATH 7450 - Mathematical Modeling I **3 credit hours**
- COMS 7800 - Teaching Internship **3 credit hours**

Electives (17 hours)

Each student, in consultation with his/her advisor and committee, will select at least 17 hours of 6000/7000 credit within science departments. Three courses must be selected from the following list:

- BIOL 6350 - Biostatistical Analysis **4 credit hours** AND
- BIOL 6351 - Biostatistical Analysis Lab **0 credit hours**
- BIOL 6390 - Advanced Cell and Molecular Biology **4 credit hours** AND
- BIOL 6391 - Advanced Cell and Molecular Biology Lab **0 credit hours**
- BIOL 6450 - Advancements in Molecular Genetics **4 credit hours**
- BIOL 6760 - Bioinformatics **4 credit hours**
- CHEM 7400 - Computational Chemistry I **4 credit hours**
- CHEM 7410 - Computational Chemistry II **4 credit hours**
- CHEM 7720 - Advanced Topics in Physical Chemistry **3 credit hours**
- COMS 7654 - Professional Seminar: Topic **1-3 credit hours**
- CSCI 6100 - Analysis of Algorithms **3 credit hours**
- CSCI 7350 - Data Mining **3 credit hours**
- MATH 6260 - Advanced Differential Equations I **3 credit hours**

- MATH 6300 - Optimization **3 credit hours**
- MATH 7750 - Mathematical Modeling II **3 credit hours**
- PHYS 7400 - Computational Physics I **3 credit hours**
- STAT 7400 - Computational Statistics **3 credit hours**

Directed Research (6 hours)

Students must complete 6 hours of directed research before advancement to candidacy.

- COMS 7500 - Directed Research in Computational Science **1-6 credit hours**

Dissertation (12 hours)

- COMS 7640 - Dissertation Research **1-6 credit hours**

Program Notes

Applicants holding a master's degree will be expected to have earned at least 21 semester hours of graduate mathematics, science, or engineering credit with evidence of strong mathematical skills and experience in computation through coursework, employment, and/or research experiences. Applicants applying from the baccalaureate level must have an appropriate science degree with evidence of strong mathematical skills and experience in computation through coursework, employment, and/or research experiences.

Students entering with a master's degree in a mathematical, science, or engineering discipline may, on the recommendation of the program coordination committee and with the approval of the graduate dean, have up to 12 credit hours accepted from their master's if it directly corresponds to coursework in the Computational Science curriculum.

Students admitted to the Computational Science program may be required to participate in an intensive computational science leveling program before beginning their coursework.

Applicants lacking necessary foundational coursework in previous degrees will be required to complete these courses as part of their program of study in addition to the degree requirements.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 30 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Computational Science

COMS 6100 - Fundamentals of Computational Science

3 credit hours

Prerequisite: Admission to the Computational Science Ph.D. program or permission of instructor.

Foundational overview of the mathematical and scientific underpinnings of computational science. Introduces the principles of finding computer solutions to contemporary science challenges. Offers preparation for core and elective courses in the Ph.D. program in Computational Science by reviewing essential mathematical methods and basic science principles drawn from biology, chemistry, and physics. Special topics include techniques of high performance computing and applications, parallel systems, and theory of computation, case studies in computational chemistry, physics, and mathematical biology.

COMS 6500 - Fundamentals of Scientific Computing

4 credit hours

Prerequisite: Graduate standing or permission of instructor. Fundamentals of problem solving approaches in computational science, including computer arithmetic and error analysis, linear and nonlinear equations, least squares, interpolation, numerical differentiation and integration, optimization, random number generations and Monte Carlo simulation. Students will gain computational experience by analyzing case studies using modern software packages such as MATLAB.

COMS 7100 - Applied Computational Science

4 credit hours

Prerequisite: Consent of instructor. Intense lecture and practice-based course in computational methods, with a research program offered. Possible topics include computational aspects of linear algebra; contemporary numerical methods (finite difference-based and boundary integral equation-based) for solving initial and boundary value problems for ordinary and partial differential equations arising in engineering, natural sciences, and economics and finance.

COMS 7300 - Numerical Methods in Computational Science

4 credit hours

Prerequisite: COMS 6500 or permission of instructor. Numerical methods for solving ordinary and partial differential equations, partial differential integral

equations, and stochastic differential equations. Convergence and stability analyses, finite difference methods, finite element methods, mesh-free methods and fast Fourier transform are also included.

COMS 7500 - Directed Research in Computational Science

1-6 credit hours

For Ph.D. students prior to advancement to candidacy. Selection of a research problem, review of pertinent literature, protocol design, collection and analysis of data, and preparation of results for publication. S/U grading.

COMS 7640 - Dissertation Research

1-6 credit hours

Prerequisite: Advancement to candidacy within the Computational Science Ph.D. program. Involves the student working with their research advisor on any of the aspects of the Ph.D. dissertation from the selection of research problem, a review of the pertinent literature, formulation of a computational approach, data analysis, and composition of the dissertation.

COMS 7654 - Professional Seminar: Topic

1-3 credit hours

(Same as MSE/MOBI 7654.) Focuses on a specific topic in a given semester. Topics include themes for advancing graduate students professional knowledge such as grant proposal preparation process, making successful presentations, and publishing research in the field. May be repeated with different topic.

COMS 7700 - Advanced Concepts in Computational Science

3-4 credit hours

Advanced topics and protocols specific to different subdivisions of computational science not covered in core or elective courses offered through the program. Students will work under the direct supervision of the instructor. Lecture and/or laboratory components. May be repeated for 6 to 8 credit hours.

COMS 7800 - Teaching Internship

3 credit hours

Designed for graduate students in Computational Science in order to develop better classroom skills and to build an understanding that good teaching practices can be learned and continuously improved. S/U grading.

COMS 7950 - Research Seminar in Computational Science

2 credit hours

Prerequisite: Admission to the Computational Science Ph.D. program or permission of instructor. Seminar course to build a broader understanding of problems and research topics in computational science through advanced reading of selected journal articles, group discussion, and presentations by both external and internal speakers in computational science.

Mathematics and Science Education, Biological Education Concentration, Ph.D.

Angela Barlow, Program Director

(615) 898-5353

Angela.Barlow@mtsu.edu

The Doctor of Philosophy (Ph.D.) in Mathematics and Science Education is an interdisciplinary program requiring students to (1) develop substantial content mastery of mathematics and/or science; (2) demonstrate an understanding of educational theories, research methodologies, and best practices; and (3) conduct discipline-based educational research at the interface between the fields of mathematics or science and education. This program aims to produce college-level professors and researchers to perform, evaluate, and integrate the results of research in mathematics and science education. It also seeks approaches to improve the way K–16 science, technology, engineering, and mathematics (STEM) courses are taught.

The goals of this program are to prepare students to

- understand the field of mathematics and science education in terms of theory and practice, research, curriculum design, and student learning;
- conduct original research that generates new knowledge about the teaching and learning of mathematics and science; and
- assume leadership roles in mathematics and science education, including teacher education, discipline-based educational research, and curriculum and instruction.

All students in the Mathematics and Science Education Ph.D. program will be expected to complete a minimum of two consecutive semesters of full-time study in residence at MTSU.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Ph.D. in Mathematics and Science Education with a concentration in Biological Education is based on a comprehensive assessment of a candidate's qualifications including Graduate Record Examination (GRE) scores, undergraduate and graduate grade point average, and letters of recommendation.

Admission requires

1. an earned bachelor's or master's degree from an accredited university or college. Applicants holding only a bachelor's degree will be expected to have earned that degree in an area of mathematics or science and will be expected to earn a master's degree in science, mathematics, or education as they complete the requirements of the Ph.D. All applicants to this program will either possess a mathematics or science degree upon admission or will be required to earn a content master's as a part of their program of study.
2. an acceptable grade point average (GPA). Successful applicants typically have a minimum 3.25 GPA in their most recent graduate work or a minimum 3.00 GPA when entering with a bachelor's degree. Applicants holding a master's degree should have earned at least 24 semester hours of graduate mathematics, science, and/or education credit.

Application Procedures

Applicants must submit all application materials to the College of Graduate Studies.

Application deadline: February 15 for those wishing to be considered for graduate assistantships for the following Fall. Late applications may be considered, but financial support in the form of an assistantship is not guaranteed.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts showing a grade point average (GPA) in previous academic work that indicates potential for success in advanced study;

3. submit official scores for the verbal, quantitative, and analytical writing measures of the GRE that indicate potential for success in the Mathematics and Science Education program. Although specific minimum scores are not set, evaluation of scores is an important factor in admission decisions.
4. provide letters of recommendation from at least three professors or professionals that address the applicant's potential to successfully complete a Ph.D. in Mathematics and Science Education.

NOTE: *International students must also meet the College of Graduate Studies requirement for proof of English language proficiency. This may be accomplished by submission of TOEFL, UMELI test, or IELTS scores that meet the college's requirements or by successful completion of level 112 of ELS coursework.*

Applicants who do not meet these minimums but whose application materials indicate high potential for success may be admitted conditionally. Such students must meet the conditions of their admission in the time stated to remain in the program of study.

Degree Requirements

Once admitted to the program, each candidate must

1. complete at least 75 post-baccalaureate semester hours as described in the Curriculum section below. (Students entering with a master's degree in mathematics, education, or a science discipline may have up to 15 graduate hours of previous coursework applied after determination that the content of the courses is directly equivalent to existing courses in the Mathematics and Science Education curriculum.)
2. make at least two research presentations at regional, national, or international meetings as the lead or coauthor;
3. be lead author or make significant contribution as coauthor of two articles published, in press, or under review in high quality, peer-reviewed journals;
4. in collaboration with an MTSU faculty member serving as principal investigator, make a significant contribution to the development of at least one external grant proposal;
5. complete the MSE 7800 - Teaching Internship. Those who lack teaching experience are required to complete MSE 7800 in a K-12 teaching experience;
6. complete a dissertation and successfully defend it in the final oral examination.

Curriculum: Mathematics and Science Education, Biological Education

All Ph.D. candidates must complete 75 hours in the following course of study:

Core Courses (30 hours)

- MSE 7800 - Teaching Internship **3 credit hours**
- MSE 7820 - Seminar in Mathematics and Science Education **1 credit hours** *
- MSE 7840 - Special Topics in Mathematics and Science Education **2 credit hours** *
- PSY 7190 - Advanced Cognitive Psychology **3 credit hours**
- PSY 7280 - Psychological Statistics: Regression **3 credit hours** AND
- PSY 7281 - Psychological Statistics: Regression Lab **0 credit hours**
- PSY 7290 - Psychological Statistics: ANOVA **3 credit hours** AND
- PSY 7291 - Psychological Statistics: ANOVA Lab **0 credit hours**
- SPSE 7010 - Educational Research Methodology **3 credit hours**
- SPSE 7170 - Learning Theories and the Educational Process **3 credit hours**
- SPSE 7180 - Qualitative Evaluation and Research Methods **3 credit hours**
- SPSE 7220 - Advanced Educational Technology **3 credit hours**

***Students are required to take these courses at least twice before candidacy.**

Concentration Core (18 hours)

- BIOL 6200 - Speciation **3 credit hours**
- BIOL 6460 - Conservation Biology **4 credit hours**
- BIOL 7900 - Teaching and Learning Biology **3 credit hours**
- Biology **4 credit hours**
- BIOL 6450 - Advancements in Molecular Genetics **4 credit hours** OR
- BIOL 6760 - Bioinformatics **4 credit hours**

Electives (14–15 hours)

In consultation with his or her major advisor and dissertation committee, each student will choose 14–15 credit hours from courses in the College of Basic and Applied Sciences and the College of Education at the 6000 or 7000 level. Students in the Biological Education concentration should select their electives to ensure that they have completed at least 21 hours of coursework with a BIOL rubric.

Dissertation (12 hours)

- MSE 7640 - Dissertation Research in Mathematics and Science Education **1 to 6 credit hours**

Program Notes

Candidate must

1. file a degree plan with the College of Graduate Studies prior to the completion of 30 semester hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Mathematics and Science Education, Chemical Education Concentration, Ph.D.

Angela Barlow, Program Director
(615) 898-5353

Angela.Barlow@mtsu.edu

The Doctor of Philosophy (Ph.D.) in Mathematics and Science Education is an interdisciplinary program requiring students to (1) develop substantial content mastery of mathematics and/or science; (2) demonstrate an understanding of educational theories, research methodologies, and best practices; and (3) conduct discipline-based educational research at the interface between the fields of mathematics or science and education. This program aims to produce college-level professors and researchers to perform, evaluate, and integrate the results of research in mathematics and science education. It also seeks approaches to improve the way K–16 science, technology, engineering, and mathematics (STEM) courses are taught.

The goals of this program are to prepare students to

- understand the field of mathematics and science education in terms of theory and practice, research, curriculum design, and student learning;
- conduct original research that generates new knowledge about the teaching and learning of mathematics and science; and
- assume leadership roles in mathematics and science education, including teacher education, discipline-based educational research, and curriculum and instruction.

All students in the Mathematics and Science Education Ph.D. program will be expected to complete a minimum of two consecutive semesters of full-time study in residence at MTSU.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Ph.D. in Mathematics and Science Education with a concentration in Chemical Education is based on a comprehensive assessment of a candidate's qualifications including Graduate Record Examination (GRE) scores, undergraduate and graduate grade point average, and letters of recommendation.

Admission requires

1. an earned bachelor's or master's degree from an accredited university or college. Applicants holding only a bachelor's degree will be expected to have earned that degree in an area of mathematics or science and will be expected to earn a master's degree in science, mathematics, or education as they complete the requirements of the Ph.D. All applicants to this program will either possess a mathematics or science degree upon admission or will be required to earn a content master's as a part of their program of study.
2. an acceptable grade point average (GPA). Successful applicants typically have a minimum 3.25 GPA in their most recent graduate work or a minimum 3.00 GPA when entering with a bachelor's degree. Applicants holding a master's degree should have earned at least 24 semester hours of graduate mathematics, science, and/or education credit.

Application Procedures

Applicants must submit all application materials to the College of Graduate Studies.

Application deadline: February 15 for those wishing to be considered for graduate assistantships for the following Fall. Late applications may be considered, but financial support in the form of an assistantship is not guaranteed.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts showing a grade point average (GPA) in previous academic work that indicates potential for success in advanced study;

3. submit official scores for the verbal, quantitative, and analytical writing measures of the GRE that indicate potential for success in the Mathematics and Science Education program. Although specific minimum scores are not set, evaluation of scores is an important factor in admission decisions.
4. provide letters of recommendation from at least three professors or professionals that address the applicant's potential to successfully complete a Ph.D. in Mathematics and Science Education.

NOTE: International students must also meet the College of Graduate Studies requirement for proof of English language proficiency. This may be accomplished by submission of TOEFL, UMELI test, or IELTS scores that meet the college's requirements or by successful completion of level 112 of ELS coursework.

Applicants who do not meet these minimums but whose application materials indicate high potential for success may be admitted conditionally. Such students must meet the conditions of their admission in the time stated to remain in the program of study.

Degree Requirements

Once admitted to the program, each candidate must

1. complete at least 75 post-baccalaureate semester hours as described in the Curriculum section below. (Students entering with a master's degree in mathematics, education, or a science discipline may have up to 15 graduate hours of previous coursework applied after determination that the content of the courses is directly equivalent to existing courses in the Mathematics and Science Education curriculum.)
2. make at least two research presentations at regional, national, or international meetings as the lead or coauthor.
3. be lead author or make significant contribution as coauthor of two articles published, in press, or under review in high quality, peer-reviewed journals.
4. in collaboration with an MTSU faculty member serving as principal investigator, make a significant contribution to the development of at least one external grant proposal.
5. complete the MSE 7800 - Teaching Internship. Those who lack teaching experience are required to complete MSE 7800 in a K-12 teaching experience.
6. complete a dissertation and successfully defend it in the final oral examination.

Curriculum: Mathematics and Science Education, Chemical Education

All Ph.D. candidates must complete 75 hours in the following course of study:

Required Core Courses (30 hours)

- MSE 7800 - Teaching Internship **3 credit hours**
 - MSE 7820 - Seminar in Mathematics and Science Education **1 credit hours** *
 - MSE 7840 - Special Topics in Mathematics and Science Education **2 credit hours** *
 - PSY 7190 - Advanced Cognitive Psychology **3 credit hours**
 - PSY 7280 - Psychological Statistics: Regression **3 credit hours** AND
 - PSY 7281 - Psychological Statistics: Regression Lab **0 credit hours**
 - PSY 7290 - Psychological Statistics: ANOVA **3 credit hours** AND
 - PSY 7291 - Psychological Statistics: ANOVA Lab **0 credit hours**
 - SPSE 7010 - Educational Research Methodology **3 credit hours**
 - SPSE 7170 - Learning Theories and the Educational Process **3 credit hours**
 - SPSE 7180 - Qualitative Evaluation and Research Methods **3 credit hours**
 - SPSE 7220 - Advanced Educational Technology **3 credit hours**
- * **Students are required to take these courses at least twice before candidacy.**

Concentration Core (19 hours)

- CHEM 6100 - Intermediate Organic Chemistry **3 credit hours**
- CHEM 6230 - Intermediate Analytical Chemistry **4 credit hours**
- CHEM 6300 - Intermediate Physical Chemistry **3 credit hours**
- CHEM 6400 - Intermediate Inorganic Chemistry **3 credit hours**
- CHEM 6500 - Biochemistry I **3 credit hours**
- CHEM 7900 - Teaching and Learning in Chemistry **3 credit hours**

Electives (14–15 hours)

In consultation with his or her major advisor and dissertation committee, each student will choose 14–15 credit hours from courses in the College of Basic and Applied Sciences and the College of Education at the 6000 or 7000 level. Students in the Chemical Education concentration should select their electives to ensure that they have completed at least 21 hours with a CHEM rubric.

Dissertation (12 hours)

- MSE 7640 - Dissertation Research in Mathematics and Science Education **1 to 6 credit hours**

Program Notes

Candidate must

1. file a degree plan with the College of Graduate Studies prior to the completion of 30 semester hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which they intend to graduate.

Mathematics and Science Education, Interdisciplinary Science Education Concentration, Ph.D.

Angela Barlow, Program Director
(615) 898-5353

Angela.Barlow@mtsu.edu

The Doctor of Philosophy (Ph.D.) in Mathematics and Science Education is an interdisciplinary program requiring students to (1) develop substantial content mastery of mathematics and/or science; (2) demonstrate an understanding of educational theories, research methodologies, and best practices; and (3) conduct discipline-based educational research at the interface between the fields of mathematics or science and education. This program aims to produce college-level professors and researchers to perform, evaluate, and integrate the results of research in mathematics and science education. It also seeks approaches to improve the way K–16 science, technology, engineering, and mathematics (STEM) courses are taught.

The goals of this program are to prepare students to

- understand the field of mathematics and science education in terms of theory and practice, research, curriculum design, and student learning;
- conduct original research that generates new knowledge about the teaching and learning of mathematics and science; and
- assume leadership roles in mathematics and science education, including teacher education, discipline-based educational research, and curriculum and instruction.

All students in the Mathematics and Science Education Ph.D. program will be expected to complete a minimum of two consecutive semesters of full-time study in residence at MTSU.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Ph.D. in Mathematics and Science Education with a concentration in Interdisciplinary Science Education is based on a comprehensive assessment of a candidate's qualifications including Graduate Record Examination (GRE) scores, undergraduate and graduate grade point average, and letters of recommendation.

Admission requires

1. an earned bachelor's or master's degree from an accredited university or college. Applicants holding only a bachelor's degree will be expected to have earned that degree in an area of mathematics or science and will be expected to earn a master's degree in science, mathematics, or education as they complete the requirements of the Ph.D. All applicants to this program will either possess a mathematics or science degree upon admission or will be required to earn a content master's as a part of their program of study.
2. an acceptable grade point average (GPA). Successful applicants typically have a minimum 3.25 GPA in their most recent graduate work or a minimum 3.00 GPA when entering with a bachelor's degree. Applicants holding a master's degree should have earned at least 24 semester hours of graduate mathematics, science, and/or education credit.

Application Procedures

Applicants must submit all application materials to the College of Graduate Studies.

Application deadline: February 15 for those wishing to be considered for graduate assistantships for the following Fall. Late applications may be considered, but financial support in the form of an assistantship is not guaranteed.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts showing a grade point average (GPA) in previous academic work that indicates potential for success in advanced study;

3. submit official scores for the verbal, quantitative, and analytical writing measures of the GRE that indicate potential for success in the Mathematics and Science Education program. Although specific minimum scores are not set, evaluation of scores is an important factor in admission decisions.
4. provide letters of recommendation from at least three professors or professionals that address the applicant's potential to successfully complete a Ph.D. in Mathematics and Science Education.

NOTE: International students must also meet the College of Graduate Studies requirement for proof of English language proficiency. This may be accomplished by submission of TOEFL, UMELI test, or IELTS scores that meet the college's requirements or by successful completion of level 112 of ELS coursework.

Applicants who do not meet these minimums but whose application materials indicate high potential for success may be admitted conditionally. Such students must meet the conditions of their admission in the time stated to remain in the program of study.

Degree Requirements

Once admitted to the program, each candidate must

1. complete at least 75 post-baccalaureate semester hours as described in the Curriculum section below. (Students entering with a master's degree in mathematics, education, or a science discipline may have up to 15 graduate hours of previous coursework applied after determination that the content of the courses is directly equivalent to existing courses in the Mathematics and Science Education curriculum.)
2. make at least two research presentations at regional, national, or international meetings as the lead or coauthor;
3. be lead author or make significant contribution as coauthor of two articles published, in press, or under review in high quality, peer-reviewed journals;
4. in collaboration with an MTSU faculty member serving as principal investigator, make a significant contribution to the development of at least one external grant proposal;
5. complete the MSE 7800 - Teaching Internship. Those who lack teaching experience are required to complete MSE 7800 in a K-12 teaching experience;
6. complete a dissertation and successfully defend it in the final oral examination.

Curriculum: Mathematics and Science Education, Interdisciplinary Science Education

All Ph.D. candidates must complete 75 hours in the following course of study:

Core Courses (30 hours)

- MSE 7800 - Teaching Internship **3 credit hours**
- MSE 7820 - Seminar in Mathematics and Science Education **1 credit hours** *
- MSE 7840 - Special Topics in Mathematics and Science Education **2 credit hours** *
- PSY 7190 - Advanced Cognitive Psychology **3 credit hours**
- PSY 7280 - Psychological Statistics: Regression **3 credit hours** AND
- PSY 7281 - Psychological Statistics: Regression Lab **0 credit hours**
- PSY 7290 - Psychological Statistics: ANOVA **3 credit hours** AND
- PSY 7291 - Psychological Statistics: ANOVA Lab **0 credit hours**
- SPSE 7010 - Educational Research Methodology **3 credit hours**
- SPSE 7170 - Learning Theories and the Educational Process **3 credit hours**
- SPSE 7180 - Qualitative Evaluation and Research Methods **3 credit hours**
- SPSE 7220 - Advanced Educational Technology **3 credit hours**

***Students are required to take these courses at least twice before candidacy.**

Concentration Core (18 hours)

Students who choose this concentration must select at least 18 hours (in consultation with their major advisors and dissertation committee) from the courses listed in the Biological Education, Chemical Education, and Mathematics Education concentrations in Mathematics and Science Education or from the courses listed below:

- BIOL 7850 - Intermediate Life Science **3 credit hours**
- MATH 6100 - Mathematics for Teachers **3 credit hours**
- MATH 6330 - Algebra for Teachers **3 credit hours**
- MATH 6340 - Geometry for Teachers **3 credit hours**
- MATH 6350 - Probability and Statistics for Teachers **3 credit hours**
- MSE 7900 - Teaching and Learning Mathematics and Science **3 credit hours**
- PSCI 6020 - Investigations in Physical Science **1 to 3 credit hours**
- PSY 6480 - Advanced Topics in Quantitative Psychology **3 credit hours**
- PSY 6550 - Structural Equation Modeling **3 credit hours**
- PSY 7210 - Advanced Psychometrics **3 credit hours**
- PSY 7580 - Multivariate Data Analysis **3 credit hours**
- PSCI 7800 - Intermediate Physical Science **3 credit hours**

Students must take one of the following courses:

- BIOL 7900 - Teaching and Learning Biology **3 credit hours**
- CHEM 7900 - Teaching and Learning in Chemistry **3 credit hours**
- MSE 7900 - Teaching and Learning Mathematics and Science **3 credit hours**
- MATH 7900 - Teaching and Learning Mathematics **3 credit hours**

Electives (14–15 hours)

In consultation with his or her major advisor and dissertation committee, each student will choose 14–15 credit hours from courses in the College of Basic and Applied Sciences and the College of Education at the 6000 or 7000 level.

Dissertation (12 hours)

- MSE 7640 - Dissertation Research in Mathematics and Science Education **1 to 6 credit hours**

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Mathematics and Science Education, Mathematics Education Concentration, Ph.D.

Angela Barlow, Program Director
(615) 898-5353

Angela.Barlow@mtsu.edu

The Doctor of Philosophy (Ph.D.) in Mathematics and Science Education is an interdisciplinary program requiring students to (1) develop substantial content mastery of mathematics and/or science; (2) demonstrate an understanding of educational theories, research methodologies, and best practices; and (3) conduct discipline-based educational research at the interface between the fields of mathematics or science and education. This program aims to produce college-level professors and researchers to perform, evaluate, and integrate the results of research in mathematics and science education. It also seeks approaches to improve the way K–16 science, technology, engineering, and mathematics (STEM) courses are taught.

The goals of this program are to prepare students to

- understand the field of mathematics and science education in terms of theory and practice, research, curriculum design, and student learning;
- conduct original research that generates new knowledge about the teaching and learning of mathematics and science; and
- assume leadership roles in mathematics and science education, including teacher education, discipline-based educational research, and curriculum and instruction.

All students in the Mathematics and Science Education Ph.D. program will be expected to complete a minimum of two consecutive semesters of full-time study in residence at MTSU.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Ph.D. in Mathematics and Science Education with a concentration in Mathematics Education is based on a comprehensive assessment of a candidate's qualifications including Graduate Record Examination (GRE) scores, undergraduate and graduate grade point average, and letters of recommendation.

Admission requires

1. an earned bachelor's or master's degree from an accredited university or college. Applicants holding only a bachelor's degree will be expected to have earned that degree in an area of mathematics or science and will be expected to earn a master's degree in science, mathematics, or education as they complete the requirements of the Ph.D. All applicants to this program will either possess a mathematics or science degree upon admission or will be required to earn a content master's as a part of their program of study.
2. an acceptable grade point average (GPA). Successful applicants typically have a minimum 3.25 GPA in their most recent graduate work or a minimum 3.00 GPA when entering with a bachelor's degree. Applicants holding a master's degree should have earned at least 24 semester hours of graduate mathematics, science, and/or education credit.

Application Procedures

Applicants must submit all application materials to the College of Graduate Studies.

Application deadline: February 15 for those wishing to be considered for graduate assistantships for the following Fall. Late applications may be considered, but financial support in the form of an assistantship is not guaranteed.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts showing a grade point average (GPA) in previous academic work that indicates potential for success in advanced study;

3. submit official scores for the verbal, quantitative, and analytical writing measures of the GRE that indicate potential for success in the Mathematics and Science Education program. Although specific minimum scores are not set, evaluation of scores is an important factor in admission decisions.
4. provide letters of recommendation from at least three professors or professionals that address the applicant's potential to successfully complete a Ph.D. in Mathematics and Science Education.

NOTE: International students must also meet the College of Graduate Studies requirement for proof of English language proficiency. This may be accomplished by submission of TOEFL, UMELI test, or IELTS scores that meet the college's requirements or by successful completion of level 112 of ELS coursework.

Applicants who do not meet these minimums but whose application materials indicate high potential for success may be admitted conditionally. Such students must meet the conditions of their admission in the time stated to remain in the program of study.

Degree Requirements

Once admitted to the program, each candidate must

1. complete at least 75 post-baccalaureate semester hours as described in the Curriculum section below. (Students entering with a master's degree in mathematics, education, or a science discipline may have up to 15 graduate hours of previous coursework applied after determination that the content of the courses is directly equivalent to existing courses in the Mathematics and Science Education curriculum.)
2. make at least two research presentations at regional, national, or international meetings as the lead or coauthor;
3. be lead author or make significant contribution as coauthor of two articles published, in press, or under review in high quality, peer-reviewed journals;
4. in collaboration with an MTSU faculty member serving as principal investigator, make a significant contribution to the development of at least one external grant proposal;
5. complete the MSE 7800 - Teaching Internship. Those who lack teaching experience are required to complete MSE 7800 in a K-12 teaching experience;
6. complete a dissertation and successfully defend it in the final oral examination.

Curriculum: Mathematics and Science Education, Mathematics Education

All Ph.D. candidates must complete 75 hours in the following course of study:

Core Courses (30 hours)

- MSE 7800 - Teaching Internship **3 credit hours**
- MSE 7820 - Seminar in Mathematics and Science Education **1 credit hours** *
- MSE 7840 - Special Topics in Mathematics and Science Education **2 credit hours** *
- PSY 7190 - Advanced Cognitive Psychology **3 credit hours**
- PSY 7280 - Psychological Statistics: Regression **3 credit hours** AND
- PSY 7281 - Psychological Statistics: Regression Lab **0 credit hours**
- PSY 7290 - Psychological Statistics: ANOVA **3 credit hours** AND
- PSY 7291 - Psychological Statistics: ANOVA Lab **0 credit hours**
- SPSE 7010 - Educational Research Methodology **3 credit hours**
- SPSE 7170 - Learning Theories and the Educational Process **3 credit hours**
- SPSE 7180 - Qualitative Evaluation and Research Methods **3 credit hours**
- SPSE 7220 - Advanced Educational Technology **3 credit hours**

***Students are required to take these courses at least twice before candidacy.**

Concentration Core (18 hours)

- MATH 6120 - Advanced Linear Algebra **3 credit hours**
- MATH 6170 - Sets and Logic **3 credit hours**
- MATH 6190 - Analysis I **3 credit hours**
- MATH 7320 - Mathematical Problem Solving **3 credit hours**
- MATH 7900 - Teaching and Learning Mathematics **3 credit hours**
- STAT 6602 - Problems in Statistics-Regression Analysis **3 credit hours** OR
- STAT 6603 - Problems in Statistics-Nonparametric Statistics **3 credit hours** OR
- STAT 6604 - Problems in Statistics-Experimental Design **3 credit hours**

Electives (14–15 hours)

In consultation with his or her major advisor and dissertation committee, each student will choose 14–15 credit hours from courses in the College of Basic and Applied Sciences and the College of Education at the 6000 or 7000 level. Students should select their electives to ensure that they have completed at least 21 hours of coursework with a MATH or STAT rubric for the Mathematics Education concentration.

Dissertation (12 hours)

- MSE 7640 - Dissertation Research in Mathematics and Science Education **1 to 6 credit hours**

Program Notes

Candidate must

1. file a degree plan with the College of Graduate Studies prior to the completion of 30 semester hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which they intend to graduate.

Mathematic and Science Education

MSE 7500 - Directed Research in Mathematics and Science Education

1 to 6 credit hours

For Ph.D. students. Selection of a research problem, review of pertinent literature, protocol design, collection and analysis of data, and preparation of results for publication. May be repeated multiple times for credit. Up to 6 hours of credit may be applied to the Mathematics and Science Education Ph.D. degree. S/U grading.

MSE 7640 - Dissertation Research in Mathematics and Science Education

1 to 6 credit hours

Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of the dissertation. Once enrolled, students must register for at least one credit hour of dissertation research each semester until completion. S/U grading.

MSE 7654 - Professional Seminar: Topic

1-3 credit hours

(Same as COMS 7654/MOBI 7654.) Focuses on a specific topic in a given semester. Topics include themes for advancing graduate students professional knowledge such as grant proposal preparation process, making successful presentations, and publishing research in the field. May be repeated with different topic.

MSE 7700 - Advanced Concepts in Mathematics and Science Education

3 to 4 credit hours

Covers advanced topics specific to different subdisciplines of mathematics and science education not covered in core or elective courses offered through the program. Students will work under the direct supervision of the instructor. Involves lecture and/or laboratory components. Repeatable for 6-8 credit hours.

MSE 7800 - Teaching Internship

3 credit hours

Prerequisite: Permission of department. Admission based on recommendations and performance in teaching. Offered every term.

MSE 7810 - Teaching Internship

3 credit hours

Prerequisite: Permission of department. Admission based on recommendations and performance in teaching. Offered every term.

MSE 7820 - Seminar in Mathematics and Science Education

1 credit hours

Required of graduate students specializing in mathematics and science education. Involves presentations on current issues, related research, and policy developments in mathematics and science education. May be repeated.

MSE 7840 - Special Topics in Mathematics and Science Education

2 credit hours

Required of graduate students specializing in Mathematics and Science Education. May be repeated.

MSE 7900 - Teaching and Learning Mathematics and Science

3 credit hours

Focus on theoretical and practical issues regarding how students learn mathematics and science, best practices for teaching mathematics and science topics, and issues from current literature on the teaching and learning of mathematics and science.

Molecular Biosciences, Ph.D.

Elliot Altman, Program Director
(615) 898-2847

Elliot.Altman@mtsu.edu

The Doctor of Philosophy (Ph.D.) in Molecular Biosciences is an interdisciplinary program in the College of Basic and Applied Sciences that includes faculty from the departments of Biology, Chemistry, Mathematical Sciences, and Physics and Astronomy. It is a rigorous, research-oriented course of study that aims to help students develop an understanding of cellular function and biological mechanisms at a molecular scale.

All students in the program will be expected to complete a minimum of two consecutive semesters of full-time study in residence at MTSU. Only full-time students will be admitted.

Please see undergraduate catalog for information regarding undergraduate programs.

Admissions Requirements

Admission to the Ph.D. in Molecular Biosciences program is based on a comprehensive assessment of a candidate's qualifications, including

1. an earned bachelor's, master's, or doctoral degree from an accredited university or college in biochemistry, biology, chemistry, or a closely related subject. In addition, the following undergraduate courses are specifically recommended:
 - a. six semesters of a combination of general biology, microbiology, cell biology, genetics, and biochemistry courses, including some laboratory coursework;
 - b. two semesters of general/inorganic chemistry and at least one semester of organic chemistry, which should include a laboratory component;
 - c. two semesters of physics;
 - d. one semester of calculus.

NOTE: Students who lack any component of these minimum course requirements will be asked to remedy their deficiency or demonstrate competency in these areas.

2. an acceptable grade point average in all college work taken. Successful applicants typically have a minimum 3.50 GPA in their graduate work or a minimum 3.00 GPA when entering with a bachelor's degree.
3. acceptable scores on the Graduate Record Examination (GRE).
4. letters of recommendation that address the applicant's potential to successfully complete a Ph.D. in Molecular Biosciences.

NOTE: International students must also meet the College of Graduate Studies requirement for proof of English language proficiency. This may be accomplished by submission of TOEFL, UMELI, or IELTS scores that meet the college's requirements or by successful completion of level 112 of ELS coursework.

Applicants who do not meet these minimums but whose application materials indicate high potential for success may be admitted conditionally. Such students must meet the conditions of their admission in the time stated to remain in the program of study.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Application deadline: The application deadline is February 15 for those wishing to be considered for graduate assistantships for the following Fall. Late applications may be considered, but financial support is not guaranteed.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php).
2. submit official transcripts of all previous college work.
3. submit official scores for the verbal, quantitative, and analytical writing measures of the GRE that indicate potential for success in the Molecular Biosciences program. The GRE is an important measure and is given significant consideration in the admissions review process. Successful applicants typically have scores on

the Verbal and Quantitative measure at or above the 50th percentile for persons intending graduate study in science with a combined score that exceeds 297 (current scale) or 1,000 (former scale).

4. provide letters of recommendation from at least three professors or professionals that address the applicant's potential to successfully complete a Ph.D. in the Molecular Biosciences program.
5. submit a one- to two-page statement explaining why he/she is seeking a Ph.D. degree, listing areas of research interest, and indicating three professors in the program whose research he/she finds intriguing. Faculty research interests can be found at www.mtsu.edu/graduate/mbsphd/.

Degree Requirements

Students entering with a master's degree in a science discipline may have up to 16 graduate hours of previous coursework applied after determination that the content of the courses is directly equivalent to existing courses in the Molecular Biosciences curriculum.

Candidate must

1. complete 76 post-baccalaureate semester hours (see Curriculum section below for specifics);
2. make at least two research presentations at regional, national, or international meetings as the lead author or coauthor;
3. be lead author or make significant contribution as coauthor of two articles published, in press, or under review in high-quality, peer-reviewed journals;
4. in collaboration with an MTSU faculty member serving as principal investigator, make a significant contribution to the development of at least one external grant proposal;
5. complete a dissertation and successfully defend it in the final oral examination.

Curriculum: Molecular Biosciences

Candidate must complete 76 hours in the following course of study:

Core Courses (28 hours)

- BIOL 6380 - Experimental Immunology **4 credit hours**
- BIOL 6390 - Advanced Cell and Molecular Biology **4 credit hours**
- BIOL 6760 - Bioinformatics **4 credit hours**
- CHEM 6500 - Biochemistry I **3 credit hours**
- CHEM 6510 - Biochemistry II **3 credit hours**
- MOBI 7010 - Lab Rotation **4 credit hours**
- MOBI 7100 - Research Ethics **3 credit hours**
- STAT 7020 - Introduction to Biostatistics **3 credit hours**

Electives (14 hours)

Each student, in consultation with his/her advisor and committee, will select at least 14 hours of elective coursework from at least two of the rubrics represented below. Other courses not listed below may be substituted with approval of the student's advisor and committee.

- BIOL 6270 - Cell Metabolism and Human Disease **3 credit hours**
- BIOL 6290 - Advanced Scanning Electron Microscopy **4 credit hours**
- BIOL 6360 - Energy Dispersive X-Ray Theory and Analysis **1 credit hours**
- BIOL 6410 - Advanced Transmitting Electron Microscopy **4 credit hours**
- BIOL 6430 - Clinical and Pathogenic Microbiology **4 credit hours**
- BIOL 6440 - Advanced Virology **4 credit hours**
- BIOL 6450 - Advancements in Molecular Genetics **4 credit hours**

- BIOL 6590 - Environmental Toxicology **4 credit hours**
- BIOL 6720 - Advanced Animal Development **4 credit hours**
- BIOL 6730 - Advanced Microbial Physiology and Biochemistry **4 credit hours**
- BIOL 6750 - Advanced Plant Biotechnology **4 credit hours**
- BIOL 6770 - Issues in Biotechnology **2 credit hours**
- BIOL 7010 - Analysis of Genetic Markers **4 credit hours**
- CHEM 6100 - Intermediate Organic Chemistry **3 credit hours**
- CHEM 6110 - Topics in Organic Chemistry **3 to 6 credit hours**
- CHEM 6230 - Intermediate Analytical Chemistry **4 credit hours**
- CHEM 6300 - Intermediate Physical Chemistry **3 credit hours**
- CHEM 6520 - Topics in Biochemistry **3 to 6 credit hours**
- CHEM 6530 - Biochemical Techniques **2 credit hours**
- CHEM 6610 - Environmental Chemistry **3 credit hours**
- CHEM 7110 - Advanced Topics in Organic Chemistry **3 credit hours**
- CHEM 7510 - Advanced Biochemistry **3 credit hours**
- MOBI 7200 - Biomolecular Modeling and Simulation **3 credit hours**
- PHYS 7010 - Principles of Molecular Biophysics **3 credit hours**
- STAT 6604 - Problems in Statistics-Experimental Design **3 credit hours**

Special Topics Courses and Seminars (16 hours)

Students are required to complete a minimum of four special topics courses and four seminars.

- MOBI 7300 - Special Topics in Molecular Biosciences **2 credit hours**
- MOBI 7400 - Seminar in Molecular Biosciences **2 credit hours**

Directed Research (6 hours before candidacy)

- MOBI 7500 - Directed Research in Molecular Biosciences **1 to 6 credit hours**

Dissertation (12 hours)

- MOBI 7640 - Dissertation Research in Molecular Biosciences **1 to 6 credit hours**

Program Notes

Candidate must

1. file a degree plan with the College of Graduate Studies prior to the completion of 30 semester hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the semester in which candidate intends to graduate.

Molecular Biosciences

MOBI 7010 - Lab Rotation 4 credit hours

Allows students to participate in the research programs of molecular biosciences faculty members. Should be taken prior to selection of a committee chair by the student. A typical semester of lab rotation will involve three four-week rotations with three faculty members.

MOBI 7100 - Research Ethics 3 credit hours

Involves discussion of proper experimental management, colleague interactions, and case studies of scientific misconduct.

MOBI 7200 - Biomolecular Modeling and Simulation 3 credit hours

Prerequisites: Differential equations and linear algebra. Introduces the modeling of biomolecular structure and dynamics. Covers three broad topics: (a) biomolecular structure; (b) molecular force field origin, composition, and evaluation techniques; and (c) simulation techniques-computational sampling by geometric optimization, Monte Carlo methods, and molecular dynamics.

MOBI 7300 - Special Topics in Molecular Biosciences 2 credit hours

Intense discussion-oriented course that covers current topics in molecular biosciences in a journal club-type/seminar format. Must be repeated four times for credit. Two hours lecture.

MOBI 7400 - Seminar in Molecular Biosciences 2 credit hours

Presentations on current issues or research developments in molecular biosciences. Presenters will be drawn from faculty and graduate students as well as invited outside speakers. May be repeated four times for credit.

MOBI 7500 - Directed Research in Molecular Biosciences 1 to 6 credit hours

For Ph.D. students prior to advancement to candidacy. Selection of a research problem, review of pertinent literature, protocol design, collection and analysis of data and preparation of results for publication. S/U grading.

MOBI 7640 - Dissertation Research in Molecular Biosciences 1 to 6 credit hours

For Ph.D. candidates. Ongoing investigation of a research problem, review of pertinent literature, protocol design, collection and analysis of data and preparation of results for publication and as Ph.D. dissertation. Students must complete a total of at least 12 hours to earn degree. S/U grading.

MOBI 7654 - Professional Seminar: Topic 1-3 credit hours

(Same as COMS 7654/MSE 7654.) Focuses on a specific topic in a given semester. Topics include themes for advancing graduate students professional knowledge such as grant proposal preparation process, making successful presentations, and publishing research in the field. May be repeated with different topic.

Professional Science, Actuarial Sciences Concentration, M.S.

Saeed Foroudastan, Program Director
(615) 494-7618

Saeed.Foroudastan@mtsu.edu

The College of Basic and Applied Sciences offers the Master of Science with a major in Professional Science (M.S.) with six concentrations: Actuarial Sciences, Biostatistics, Biotechnology, Engineering Management, Geosciences, and Health Care Informatics.

The concentration in Actuarial Sciences offers preparation, basic knowledge, and professional skills to work as an actuary and to pass actuarial professional examinations.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Master of Science in Professional Science with a concentration in Actuarial Sciences requires

1. an earned bachelor's degree from an accredited university or college with a course in Multivariate Calculus (MATH 3110 or the equivalent) with a grade of C (2.00) or better and a course in Linear Algebra (MATH 2010 or equivalent) with a grade of C (2.00) or better;
2. basic competency in word processing, electronic mail, library retrieval systems, presentation graphics, spreadsheets, and databases;
3. appropriate undergraduate preparation for advanced study of actuarial sciences.

Application Procedure

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts from all collegiate institutions attended;
3. submit three letters of reference;
4. submit an official Graduate Record Examination (GRE) report. A composite GRE score of 286 (current scale) or 900 (former scale) is expected for consideration for unconditional admission.

Degree Requirements

Once admitted to the program, each candidate must complete a minimum of 36 semester hours of graduate credit (see specifics in Curriculum section below).

Curriculum: Professional Science, Actuarial Sciences

Candidate must complete 36 hours in the following course of study:

Core Courses (15 hours)

- ACTG 6100 - Accounting and Legal Issues for Managers **3 credit hours**
- BCEN 6820 - Managerial Communication **3 credit hours**
- BCEN 6910 - Internship Program **3 credit hours**
- MGMT 6740 - Leadership and Motivation **3 credit hours**
- STAT 5140 - Probabilistic and Statistical Reasoning **3 credit hours**

Concentration Courses (21 hours)

Required Courses (9 hours)

- ACSI 6020 - Construction and Evaluation of Actuarial Models **3 credit hours**
- ACSI 6030 - Actuarial Models for Life Contingencies **3 credit hours**
- ACSI 6040 - Actuarial Models for Financial Economics **3 credit hours**

Four courses from the following (12 hours):

- ACSI 5220 - Mathematics of Corporation Finance **3 credit hours**
- ACSI 5230 - Mathematics of Compound Interest **3 credit hours**
- ACSI 5240 - Mathematics of Interest Theory, Economics, and Finance **3 credit hours**
- ACSI 5330 - Actuarial Mathematics I **3 credit hours**
- ACSI 5630 - Mathematics of Risk Management **3 credit hours**
- ACSI 5640 - Mathematics of Options, Futures, and Other Derivatives **3 credit hours**
- ACSI 6010 - Credibility Theory and Loss Distributions **3 credit hours**
- ECON 5620 - Econometrics and Forecasting **3 credit hours**
- ECON 6390 - Social Insurance, Pensions, and Benefits **3 credit hours**
- FIN 5390 - Employee Benefits **3 credit hours**
- STAT 5200 - Statistical Methods for Forecasting **3 credit hours**
- STAT 6160 - Advanced Mathematical Statistics I **3 credit hours**
- STAT 6180 - Advanced Mathematical Statistics II **3 credit hours**
- ACSI 6600 - Problems in Actuarial Science **1 to 6 credit hours**
- MATH 6601 - Problems in Mathematics-Advanced Calculus **1 to 9 credit hours** OR
- MATH 6602 - Problems in Mathematics-Number Theory **1 to 9 credit hours** OR
- MATH 6603 - Problems in Mathematics-Mathematics of Finance **1 to 9 credit hours** OR
- MATH 6604 - Problems in Mathematics-Mathematics of Life Contingencies **1 to 9 credit hours** OR
- MATH 6605 - Problems in Mathematics-Numerical Analysis **1 to 9 credit hours** OR
- MATH 6606 - Problems in Mathematics-Topology **1 to 9 credit hours** OR
- MATH 6607 - Problems in Mathematics-Abstract Algebra **1 to 9 credit hours** OR
- MATH 6608 - Problems in Mathematics-Combinatorics and Graph Theory **1 to 9 credit hours**

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Professional Science, Biostatistics Concentration, M.S.

Saeed Foroudastan, Program Director

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Saeed.Foroudastan@mtsu.edu

The College of Basic and Applied Sciences offers the Master of Science with a major in Professional Science (M.S.) with six concentrations: Actuarial Sciences, Biostatistics, Biotechnology, Engineering Management, Geosciences, and Health Care Informatics.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Master of Science in Professional Science with a concentration in Biostatistics requires

1. an earned bachelor's degree from an accredited university or college with a course in multivariate calculus with a grade of C (2.00) or better and a course in linear algebra with a grade of C (2.00) or better;
2. basic competency in word processing, electronic mail, library retrieval systems, presentation graphics, spreadsheets, and databases;
3. the appropriate undergraduate preparation for advanced study of biostatistics.

Once accepted into the College of Graduate Studies, students interested in the Master of Science in Professional Science program may enroll for one semester before being fully admitted to the program.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts from all collegiate institutions attended;
3. submit three letters of reference;
4. submit an official Graduate Record Examination (GRE) report. A composite GRE score of 286 (current scale) or 900 (former scale) is expected for consideration for unconditional admission.

Degree Requirements

Once admitted to the program, each candidate must complete a minimum of 36 semester hours of graduate credit (see specifics in Curriculum section, below).

Curriculum: Professional Science, Biostatistics

Candidate must complete 36 hours in the following course of study:

Core Courses (15 hours)

- BCEN 6820 - Managerial Communication **3 credit hours**
- BCEN 6910 - Internship Program **3 credit hours**
- ACTG 6100 - Accounting and Legal Issues for Managers **3 credit hours**
- MGMT 6740 - Leadership and Motivation **3 credit hours**
- STAT 5140 - Probabilistic and Statistical Reasoning **3 credit hours**

Concentration Courses (21 hours)

- STAT 6020 - Introduction to Biostatistics **3 credit hours**
- STAT 6160 - Advanced Mathematical Statistics I **3 credit hours**
- STAT 6180 - Advanced Mathematical Statistics II **3 credit hours**

- STAT 6510 - Biostatistical Methods **3 credit hours**
- STAT 6520 - Advanced Biostatistical Methods **3 credit hours**

Six hours from the following:

- STAT 6602 - Problems in Statistics-Regression Analysis **3 credit hours**
- STAT 6603 - Problems in Statistics-Nonparametric Statistics **3 credit hours**
- STAT 6604 - Problems in Statistics-Experimental Design **3 credit hours**
- STAT 6605 - Problems in Statistics-SAS Programming **1-9 credit hours**

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Professional Science, Biotechnology Concentration, M.S.

Saeed Foroudastan, Program Director

(615) 494-7618

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The College of Basic and Applied Sciences offers the Master of Science with a major in Professional Science (M.S.) with six concentrations: Actuarial Sciences, Biostatistics, Biotechnology, Engineering Management, Geosciences, and Health Care Informatics.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Master in Science in Professional Science with a concentration in Biotechnology requires

1. an earned bachelor's degree from an accredited university or college with a major in biology or chemistry or another major. Student must have taken organic chemistry and at least three undergraduate courses related to biotechnology, including genetics;
2. basic competency in word processing, electronic mail, library retrieval systems, presentation graphics, spreadsheets, and databases;
3. the appropriate undergraduate preparation for advanced study of Biotechnology.

Once accepted into the College of Graduate Studies, students interested in the Master of Science in Professional Science program may enroll for one semester before being fully admitted to the program.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts from all collegiate institutions attended;
3. submit three letters of reference;
4. submit an official Graduate Record Examination (GRE) report. A composite GRE score of 286 (current scale) or 900 (former scale) is expected for consideration for unconditional admission.

Degree Requirements

Once admitted to the program, each candidate must complete a minimum of 36 semester hours of graduate credit (see specifics in Curriculum section below).

Curriculum: Professional Science, Biotechnology

Candidate must complete 36 hours in the following course of study:

Core Courses (15 hours)

- ACTG 6100 - Accounting and Legal Issues for Managers **3 credit hours**
- BCEN 6820 - Managerial Communication **3 credit hours**
- BCEN 6910 - Internship Program **3 credit hours**
- MGMT 6740 - Leadership and Motivation **3 credit hours**
- STAT 5140 - Probabilistic and Statistical Reasoning **3 credit hours**

Concentration Courses (21 hours)

Required (5 hours)

- BIOL 5550 - Biotechnology **3 credit hours**
- BIOL 6770 - Issues in Biotechnology **2 credit hours**

16 hours from the following:

- BIOL 5460 - Human Genetics **3 credit hours** AND
- BIOL 5461 - Human Genetics Lab **0 credit hours**
- BIOL 5510 - Food and Industrial Microbiology **4 credit hours**
- BIOL 6350 - Biostatistical Analysis **4 credit hours** AND
- BIOL 6351 - Biostatistical Analysis Lab **0 credit hours**
- BIOL 6380 - Experimental Immunology **4 credit hours** AND
- BIOL 6381 - Experimental Immunology Lab **0 credit hours**
- BIOL 6390 - Advanced Cell and Molecular Biology **4 credit hours** AND
- BIOL 6391 - Advanced Cell and Molecular Biology Lab **0 credit hours**
- BIOL 6410 - Advanced Transmitting Electron Microscopy **4 credit hours**
- BIOL 6430 - Clinical and Pathogenic Microbiology **4 credit hours**
- BIOL 6440 - Advanced Virology **4 credit hours**
- BIOL 6450 - Advancements in Molecular Genetics **4 credit hours**
- BIOL 6500 - Special Problems in Biology **4 credit hours**
- BIOL 6590 - Environmental Toxicology **4 credit hours**
- BIOL 6650 - Seminar **1 credit hours**
- BIOL 6660 - Seminar **2 credit hours**
- BIOL 6720 - Advanced Animal Development **4 credit hours** AND
- BIOL 6721 - Advanced Animal Development Lab **0 credit hours**
- BIOL 6730 - Advanced Microbial Physiology and Biochemistry **4 credit hours**
- BIOL 6750 - Advanced Plant Biotechnology **4 credit hours**
- BIOL 6760 - Bioinformatics **4 credit hours**
- CHEM 6510 - Biochemistry II **3 credit hours**
- CHEM 6530 - Biochemical Techniques **2 credit hours**

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Professional Science, Engineering Management Concentration, M.S.

Saeed Foroudastan, Program Director

(615) 494-7618

Saeed.Foroudastan@mtsu.edu

The College of Basic and Applied Sciences offers the Masters of Science with a major in Professional Science (M.S.) with six concentrations: Actuarial Sciences, Biostatistics, Biotechnology, Engineering Management, Geosciences, and Health Care Informatics.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admissions to the Master of Science in Professional Science with a concentration in Engineering Management requires

1. an earned bachelor's degree from an accredited university or college with a major in Engineering or related areas;
2. basic competency in word processing, electronic mail, library retrieval systems, presentation graphics, spreadsheets, and databases.

Once accepted into the College of Graduate Studies, students in the Master of Science in Professional Science program may enroll for one semester before fully admitted to the program.

Admission Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts from all collegiate institutions attended;
3. submit three letters of reference;
4. submit an official Graduate Record Examination (GRE) report. A composite GRE of 286 (current scale) or 900 (former scale) is expected for consideration for unconditional admission.

Degree Requirements

Once admitted to the program, each candidate must complete a minimum of 36 semester hours of graduate credit.

Curriculum: Professional Science, Engineering Management

Candidates must complete 36 hours in the following course of study.

Core Courses (15 hours)

- ACTG 6100 - Accounting and Legal Issues for Managers **3 credit hours**
- STAT 5140 - Probabilistic and Statistical Reasoning **3 credit hours**
- BCEN 6820 - Managerial Communication **3 credit hours**
- BCEN 6910 - Internship Program **3 credit hours**
- MGMT 6740 - Leadership and Motivation **3 credit hours**

Concentration Courses (21 hours)

- ET 6010 - Safety Planning **3 credit hours**
- ET 6190 - Six Sigma **3 credit hours**
- ET 6300 - PMI Project Management **3 credit hours**
- ET 6390 - Productivity Strategies/Lean Systems **3 credit hours**
- ET 6510 - Advanced Topics in Technology **3 credit hours** OR

- ET 6520 - Advanced Topics in Technology **3 credit hours**
- ET 6620 - Methods of Research **3 credit hours**
- ET 6710 - Current and Future Trends in Engineering and Technology **3 credit hours**

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the candidate intends to graduate.

Professional Science, Geosciences Concentration, M.S.

Saeed Foroudastan, Program Director
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The College of Basic and Applied Sciences offers the Masters of Science with a major in Professional Science (M.S.) with six concentrations: Actuarial Sciences, Biostatistics, Biotechnology, Engineering Management, Geosciences, and Health Care Informatics.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Master of Science in Professional Science with a concentration in Geosciences requires

1. an earned bachelor's degree from an accredited university or college with a major in geosciences, anthropology, or related areas;
2. basic competency in word processing, electronic mail, library retrieval systems, presentation graphics, spreadsheets, and databases.

Once accepted into the College of Graduate Studies, students in the Master of Science in Professional Science program may enroll for one semester before fully admitted to the program.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts from all collegiate institutions attended;
3. submit three letters of reference;
4. submit an official Graduate Record Examination (GRE) report. A composite GRE score of 286 (current scale) or 900 (former scale) is expected for consideration for unconditional admission.

Degree Requirements

Once admitted to the program, each candidate must complete a minimum of 36 semester hours of graduate credit.

Curriculum: Professional Science, Geosciences

Candidates must complete 36 hours in the following course of study:

Core Courses (15 hours)

- ACTG 6100 - Accounting and Legal Issues for Managers **3 credit hours**
- BCEN 6820 - Managerial Communication **3 credit hours**
- BCEN 6910 - Internship Program **3 credit hours**
- MGMT 6740 - Leadership and Motivation **3 credit hours**
- STAT 5140 - Probabilistic and Statistical Reasoning **3 credit hours**

Track: Geographic Information Systems

Concentration Courses (21 hours)

- Geoscience Colloquium **2 credit hours** (*required for all emphases*)
- Geospatial Systems and Applications **4 credit hours**
- PGEO 5560 - Intermediate Geographic Information Systems **3 credit hours**

- PGEO 5570 - Advanced Geographic Information Systems **3 credit hours**
- PGEO 6050 - Programming for Geospatial Database Applications **3 credit hours**
- INFS 6710 - IT Systems Development Project Management **3 credit hours**
- **One of the following:**
- INFS 6500 - IT Project Management Planning and Implementation **3 credit hours**
- INFS 6510 - IT Project Risk Assessment and Control **3 credit hours**
- INFS 6520 - IT Project Management Case Studies **3 credit hours**

Track: Environmental Geosystems

Concentration Courses (21 hours)

- Geoscience Colloquium **2 credit hours** (*required for all emphases*)
- Geospatial Systems and Applications **4 credit hours**
- GEOL 5040 - Engineering Geology **3 credit hours**
- GEOL 6000 - Environmental Geosystems **3 credit hours**
- GEOL 6010 - Case Studies in Environmental Geosystems **3 credit hours**
- GEOL 6020 - Advanced Hydrogeology **3 credit hours**
- **One of the following:**
- ABAS 5340 - Soil Formation and Remediation **3 credit hours**
- ABAS 5350 - Soil Survey and Land Use **3 credit hours**
- GEOL 5150 - Environmental Applications of Hydrogeology **3 credit hours**

Track: General Geosciences

Concentration Courses (21 hours)

- Geoscience Colloquium **2 credit hours** (*required for all emphases*)
- **At least 12 hours from the following:**
- Geospatial Systems and Applications **4 credit hours**
- PGEO 6050 - Programming for Geospatial Database Applications **3 credit hours**
- GEOL 6000 - Environmental Geosystems **3 credit hours**
- GEOL 6010 - Case Studies in Environmental Geosystems **3 credit hours**
- GEOL 6020 - Advanced Hydrogeology **3 credit hours**
- **No more than 7 hours from the following:**
- PGEO 5310 - Resource Management and Conservation **3 credit hours**
- GEOG 5320 - Economic Geography **3 credit hours**
- GEOG 5330 - Political Geography **3 credit hours**
- GEOG 5340 - Historical Geography **3 credit hours**
- GEOG 5370 - Urban Geography **3 credit hours**
- PGEO 5380 - Cartography **4 credit hours**
- GEOG 5402 - Field Course **4 credit hours**
- PGEO 5401 - Field Studies in Physical Geography **4 credit hours**
- GEOG 5410 - Geography of the United States and Canada **3 credit hours**
- GEOG 5420 - Geography of Latin America **3 credit hours**
- GEOG 5430 - Geography of Europe **3 credit hours**
- GEOG 5460 - Geography of the Former Soviet Union **3 credit hours**
- GEOG 5470 - Rural Settlement **3 credit hours**
- PGEO 5490 - Remote Sensing **4 credit hours**
- GEOG 5500 - Geography of the Middle East **3 credit hours**

- PGEO 5510 - Laboratory Problems in Remote Sensing **4 credit hours**
- PGEO 5520 - Image Interpretation **4 credit hours**
- PGEO 5560 - Intermediate Geographic Information Systems **3 credit hours**
- PGEO 5570 - Advanced Geographic Information Systems **3 credit hours**
- GEOL 5000 - Petrology and Petrography **4 credit hours**
- GEOL 5020 - Geomorphic Regions of the United States **4 credit hours**
- GEOL 5030 - Invertebrate Micropaleontology **4 credit hours**
- GEOL 5040 - Engineering Geology **3 credit hours**
- GEOL 5050 - Meteorology **3 credit hours**
- GEOL 5060 - Principles of Geoscience **4 credit hours**
- GEOL 5070 - Sedimentation and Stratigraphy **4 credit hours**
- GEOL 5080 - Structural Geology **3 credit hours**
- GEOL 5100 - Geophysical Prospecting **4 credit hours**
- GEOL 5130 - Hydrogeology **4 credit hours**
- GEOL 5140 - Inorganic Geochemistry **3 credit hours**
- GEOL 5150 - Environmental Applications of Hydrogeology **3 credit hours**
- GEOL 5401 - Field Course **4 credit hours**
- GEOL 5402 - Field Course **4 credit hours**
- INFS 6500 - IT Project Management Planning and Implementation **3 credit hours**
- INFS 6510 - IT Project Risk Assessment and Control **3 credit hours**
- INFS 6520 - IT Project Management Case Studies **3 credit hours**
- INFS 6710 - IT Systems Development Project Management **3 credit hours**

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the candidate intends to graduate.

Professional Science, Health Care Informatics Concentration, M.S.

Saeed Foroudastan, Program Director

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The College of Basic and Applied Sciences offers the Master of Science with a major in Professional Science (M.S.) with six concentrations: Actuarial Sciences, Biostatistics, Biotechnology, Engineering Management, Geosciences, and Health Care Informatics.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Master of Science in Professional Science with a concentration in Health Care Informatics requires

1. an earned bachelor's degree from an accredited university or college with a major in health care or work experience in a health-related field. Applicants without a relevant degree or work experience may be admitted but may be required to complete appropriate prerequisite assignments;
2. basic competency in word processing, electronic mail, library retrieval systems, presentation graphics, spreadsheets, and databases.

Once accepted into the College of Graduate Studies, students interested in the Master of Science in Professional Science program may enroll for one semester before being fully admitted to the program.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts from all collegiate institutions attended;
3. submit three letters of reference.

Degree Requirements

Once admitted to the program, each candidate must complete a minimum of 36 semester hours of graduate credit (see specifics in Curriculum section below).

Curriculum: Professional Science, Health Care Informatics

Candidate must complete 36 hours in the following course of study:

Core Courses (15 hours)

- ACTG 6100 - Accounting and Legal Issues for Managers **3 credit hours**
- BCEN 6820 - Managerial Communication **3 credit hours**
- BCEN 6910 - Internship Program **3 credit hours**
- MGMT 6740 - Leadership and Motivation **3 credit hours**
- STAT 5140 - Probabilistic and Statistical Reasoning **3 credit hours**

Concentration Courses (21 hours)

- NURS 6400 - Introduction to the Clinical Healthcare Environment **2 credit hours**
- NURS 6401 - Introduction to Healthcare Informatics **3 credit hours**
- NURS 6402 - Health Care Information Systems and Technology Integration **3 credit hours**
- NURS 6403 - Project Management in the Design and Analysis of Health Care Information Systems **3 credit hours**

- NURS 6404 - Project Management in the Implementation and Evaluation of Health Care Information Systems **3 credit hours**
- NURS 6406 - Health Care Data Analysis and Evidence Based Practice **3 credit hours**
- NURS 6407 - Informatics Application I **2 credit hours**
- NURS 6409 - Informatics Application II **2 credit hours**

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Aerospace

Ron Ferrara, Chair
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mtsu.edu/aerospace

The Department of Aerospace offers the Master of Science (M.S.) in Aviation Administration with concentrations in Aviation Management, Aerospace Education, and Aviation Safety and Security Management. A minor in Aerospace is also offered.

Aviation Administration, Aviation Education Concentration, M.S.

Wendy Beckman, Program Director
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The Department of Aerospace offers the Master of Science (M.S.) in Aviation Administration with concentrations in Aviation Education, Aviation Management, and Aviation Safety and Security Management.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission decisions are based on a holistic assessment of an applicant's credentials. Applicants must have graduated from an accredited four-year college or university with a minimum 3.00 GPA. Completion of the Graduate Record Exam (GRE), Miller Analogies Test (MAT), or Graduate Management Admissions Test (GMAT) with an acceptable score (typically in the 50th percentile for the test selected) is required. Three letters of recommendation from academic or professional acquaintances and a personal statement are also required. The personal statement should be approximately 400 words and should outline the student's academic interests, potential area(s) of research interest, and professional goals. Undergraduate transcripts must reflect 15 semester hours of aviation coursework. Applicants with undergraduate majors in fields other than aviation will be required to complete AERO 1010 and AERO 1020 during their first semester in the M.S. program and 9 additional hours of undergraduate aviation courses prior to the completion of 21 hours of graduate credit. Applicants holding Federal Aviation Administration certificates may receive credit for AERO 1010 and AERO 1020.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit three letters of recommendation from professors or professionals that address the applicant's potential to successfully complete an M.S. program in Aviation Administration;
3. submit official scores on the Graduate Record Examination (GRE), Miller Analogies Test (MAT), or Graduate Management Admissions Test (GMAT).
4. submit official transcripts of all previous college work.

Degree Requirements

The Master of Science in Aviation Administration with a concentration in Aviation Education requires completion of 36 semester hours consisting of an 18-hour core, 12 hours in the chosen concentration, and 6 hours of electives with a cumulative GPA of 3.00 or greater. If necessary, an additional 3 hours may be taken to complete the thesis; however, these hours may not be applied toward elective requirements.

Candidate must

1. successfully complete a written comprehensive examination (may be taken no more than twice) the semester in which the candidate intends to graduate;
2. successfully complete a thesis defense or applied research capstone project.

Curriculum: Aviation Administration, Aviation Education

Candidate must complete 36 hours in the following course of study:

Core Courses (18 hours)

- AERO 6120 - Aviation History **3 credit hours**
- AERO 6130 - Aviation Safety Management **3 credit hours**
- AERO 6150 - Aviation Industries **3 credit hours**
- AERO 6610 - Introduction to Aerospace Research **3 credit hours**
- AERO 6611 - Applied Statistics in Aerospace Research **3 credit hours** OR
- QM 6000 - Quantitative Methods Survey **3 credit hours**
- AERO 6640 - Thesis Research **1 to 6 credit hours** (3 credit hours) OR
- AERO 6441 - Applied Research Capstone Project **1 to 3 credit hours** (3 credit hours)

Required Courses (12 hours)

- SPSE 6430 - Introduction to Curriculum Development **3 credit hours**
- FOED 6020 - Educational Foundations **3 credit hours**
- SPSE 6040 - Supervision of Instruction **3 credit hours**
- SPSE 6050 - Instructional Leadership **3 credit hours**

Electives (6 hours)

- AERO 6050 - Aerospace Internship I **3 credit hours**
- AERO 6076 - Selected Readings in Aerospace **3 credit hours**
- AERO 6100 - Aviation Workshop **4 credit hours**
- AERO 6170 - Scheduled Air Carrier Operations **3 credit hours**
- AERO 6190 - Airport Organizational Structures and Operational Activities **3 credit hours**
- AERO 6220 - Environmental Policy **3 credit hours**
- AERO 6250 - Airport Policy and Planning **3 credit hours**
- AERO 6270 - Airport Design **3 credit hours**
- AERO 6330 - International Aviation Systems **3 credit hours**
- AERO 6350 - General Aviation **3 credit hours**
- AERO 6370 - Aviation Contracts and Leases **3 credit hours**
- AERO 6450 - Airport Funding Policy **3 credit hours**

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Aviation Administration, Aviation Management Concentration, M.S.

Wendy Beckman, Program Director

(615) 494-8755

Wendy.Beckman@mtsu.edu

The Department of Aerospace offers the Master of Science (M.S.) in Aviation Administration with concentrations in Aviation Education, Aviation Management, and Aviation Safety and Security Management.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission decisions are based on a holistic assessment of an applicant's credentials. Applicants must have graduated from an accredited four-year college or university with a minimum 3.00 GPA. Completion of the Graduate Record Exam (GRE), Miller Analogies Test (MAT), or Graduate Management Admissions Test (GMAT) with an acceptable score (typically in the 50th percentile for the test selected) is required. Three letters of recommendation from academic or professional acquaintances and a personal statement are also required. The personal statement should be approximately 400 words and should outline the student's academic interests, potential area(s) of research interest, and professional goals. Undergraduate transcripts must reflect 15 semester hours of aviation coursework. Applicants with undergraduate majors in fields other than aviation will be required to complete AERO 1010 and AERO 1020 during their first semester in the M.S. program and 9 additional hours of undergraduate aviation courses prior to the completion of 21 hours of graduate credit. Applicants holding Federal Aviation Administration certificates may receive credit for AERO 1010 and AERO 1020.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit three letters of recommendation from professors or professionals that address the applicant's potential to successfully complete an M.S. program in Aviation Administration;
3. submit official scores on the Graduate Record Examination (GRE), Miller Analogies Test (MAT), or Graduate Management Admissions Test (GMAT).
4. submit official transcripts of all previous college work.

Degree Requirements

The Master of Science in Aviation Administration with a concentration in Aviation Management requires completion of 36 semester hours consisting of an 18-hour core, 9 hours in the chosen concentration, and 9 hours of electives with a cumulative GPA of 3.00 or greater. If necessary, an additional 3 hours may be taken to complete the thesis; however, these hours may not be applied toward elective requirements.

Candidate must

1. successfully complete a written comprehensive examination (may be taken no more than twice) the semester in which the candidate intends to graduate;
2. successfully complete a thesis or applied research capstone project.

Curriculum: Aviation Administration, Aviation Management

Candidate must complete 36 hours in the following course of study:

Core Courses (18 hours)

- AERO 6120 - Aviation History **3 credit hours**
- AERO 6130 - Aviation Safety Management **3 credit hours**
- AERO 6150 - Aviation Industries **3 credit hours**
- AERO 6610 - Introduction to Aerospace Research **3 credit hours**
- AERO 6611 - Applied Statistics in Aerospace Research **3 credit hours** OR
- QM 6000 - Quantitative Methods Survey **3 credit hours**
- AERO 6640 - Thesis Research **1 to 6 credit hours** OR
- AERO 6441 - Applied Research Capstone Project **1 to 3 credit hours**

Required Courses (9 hours)

- AERO 6170 - Scheduled Air Carrier Operations **3 credit hours**
- AERO 6330 - International Aviation Systems **3 credit hours**
- AERO 6350 - General Aviation **3 credit hours**

Electives (9 hours)

- AERO 6076 - Selected Readings in Aerospace **3 credit hours**
- AERO 6190 - Airport Organizational Structures and Operational Activities **3 credit hours**
- AERO 6220 - Environmental Policy **3 credit hours**
- AERO 6250 - Airport Policy and Planning **3 credit hours**
- AERO 6270 - Airport Design **3 credit hours**
- AERO 6370 - Aviation Contracts and Leases **3 credit hours**
- AERO 6450 - Airport Funding Policy **3 credit hours**
- INFS 6610 - Information Systems Management and Applications **3 credit hours**

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Aviation Administration, Aviation Safety and Security Management Concentration, M.S.

Wendy Beckman, Program Director
(615) 494-8755

Wendy.Beckman@mtsu.edu

The Department of Aerospace offers the Master of Science (M.S.) in Aviation Administration with concentrations in Aviation Education, Aviation Management, and Aviation Safety and Security Management. Please see the undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission decisions are based on a holistic assessment of an applicant's credentials. Applicants must have graduated from an accredited four-year college or university with a minimum 3.00 GPA. Completion of the Graduate Record Exam (GRE), Miller Analogies Test (MAT), or Graduate Management Admissions Test (GMAT) with an acceptable score (typically in the 50th percentile for the test selected) is required. Three letters of recommendation from academic or professional acquaintances and a personal statement are also required. The personal statement should be approximately 400 words and should outline the student's academic interests, potential area(s) of research interest, and professional goals. Undergraduate transcripts must reflect 15 semester hours of aviation coursework. Applicants with undergraduate majors in fields other than aviation will be required to complete AERO 1010 and AERO 1020 during their first semester in the M.S. program and 9 additional hours of undergraduate aviation courses prior to the completion of 21 hours of graduate credit. Applicants holding Federal Aviation Administration certificates may receive credit for AERO 1010 and AERO 1020.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit three letters of recommendation from professors or professionals that address the applicant's potential to successfully complete an M.S. program in Aviation Administration;
3. submit official scores on the Graduate Record Examination (GRE), Miller Analogies Test (MAT), or Graduate Management Admissions Test (GMAT).
4. submit official transcripts of all previous college work.

Degree Requirements

The Master of Science in Aviation Administration with a concentration in Aviation Safety and Security Management requires completion of 36 semester hours consisting of an 18-hour core, 9 hours in the chosen concentration, and 9 hours of electives with a cumulative GPA of 3.00 or greater. If necessary, an additional 3 hours may be taken to complete the thesis; however, these hours may not be applied toward elective requirements.

Candidate must

1. successfully complete a written comprehensive examination (may be taken no more than twice) usually taken in the semester in which the candidate intends to graduate;
2. successfully complete a thesis or applied research capstone project.

Curriculum: Aviation Administration, Aviation Safety and Security Management

Candidate must complete 36 hours in the following course of study:

Core Courses (18 hours)

- AERO 6120 - Aviation History **3 credit hours**
- AERO 6130 - Aviation Safety Management **3 credit hours**
- AERO 6150 - Aviation Industries **3 credit hours**
- AERO 6610 - Introduction to Aerospace Research **3 credit hours**
- AERO 6611 - Applied Statistics in Aerospace Research **3 credit hours** OR
- QM 6000 - Quantitative Methods Survey **3 credit hours**
- AERO 6640 - Thesis Research **1 to 6 credit hours (3 credit hours)** OR
- AERO 6441 - Applied Research Capstone Project **1 to 3 credit hours (3 credit hours)**

Required Courses (9 hours)

- AERO 6310 - Introduction to Aviation Security **3 credit hours**
- AERO 6430 - Human Factors in Aviation **3 credit hours**
- AERO 6420 - Aviation Safety Investigation **3 credit hours** OR
- AERO 6320 - Aviation Security II **3 credit hours**

Electives (9 hours)

- AERO 6076 - Selected Readings in Aerospace **3 credit hours**
- AERO 6170 - Scheduled Air Carrier Operations **3 credit hours**
- AERO 6190 - Airport Organizational Structures and Operational Activities **3 credit hours**
- AERO 6220 - Environmental Policy **3 credit hours**
- AERO 6250 - Airport Policy and Planning **3 credit hours**
- AERO 6350 - General Aviation **3 credit hours**
- ET 6010 - Safety Planning **3 credit hours**
- ET 6020 - Safety Technology and Engineering **3 credit hours**
- ET 6070 - Anthropometric Factors in Accident Prevention **3 credit hours**
- INFS 6610 - Information Systems Management and Applications **3 credit hours** OR
- INFS 6720 - Knowledge Management **3 credit hours**

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Aerospace Minor

There are two patterns of minors from which a candidate may choose:

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

Aerospace

AERO 5400 - Space

3 credit hours

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

AERO 5490 - Aerospace Science for Teachers

3 credit hours

For teachers who desire an introduction to the total aviation and space effort.

AERO 6050 - Aerospace Internship I

3 credit hours

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

AERO 6076 - Selected Readings in Aerospace

3 credit hours

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

AERO 6100 - Aviation Workshop

4 credit hours

(Same as YOED 6100.) A first course in aerospace education; provides an overview of aerospace historically and in the future. A workshop course that meets eight hours per day and includes an aircraft flight, field trips, and an overnight stay.

AERO 6120 - Aviation History

3 credit hours

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

AERO 6130 - Aviation Safety Management

3 credit hours

An examination of the various programs which airport operators employ in operating and maintaining airport safety and security services. Special emphasis on

federal guidelines and their applications at commercial service airports.

AERO 6150 - Aviation Industries

3 credit hours

An overview of domestic and international air transportation businesses. Includes an analysis of extant and forecast labor requirements.

AERO 6170 - Scheduled Air Carrier Operations

3 credit hours

An examination of contemporary problems and issues confronting airline industry policy makers, government regulators, managers, and the traveling public.

AERO 6190 - Airport Organizational Structures and Operational Activities

3 credit hours

Prerequisite: AERO 5110 or AERO 5170 or consent of instructor. A critical analysis of airport organizational structures, functions, and constraints affecting the airport. A detailed view of operational activities and methods to improve airport efficiency.

AERO 6220 - Environmental Policy

3 credit hours

Airport planning and land use programs and procedures as they are currently used within the industry.

AERO 6250 - Airport Policy and Planning

3 credit hours

The regulatory agencies of the aviation industry and their functions. Special emphasis on current problems and issues affecting the industry.

AERO 6270 - Airport Design

3 credit hours

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

AERO 6310 - Introduction to Aviation Security

3 credit hours

An overview of the aviation security system in the United States, including airport, aircraft operator, and general aviation perspectives. History and development of aviation security along with the role of government in aviation security discussed.

AERO 6320 - Aviation Security II**3 credit hours**

Prerequisite: AERO 6310. Provides an in-depth analysis of aviation security including U.S. policy and strategy, passenger and baggage screening, in-flight security, and airport security.

AERO 6330 - International Aviation Systems**3 credit hours**

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

AERO 6350 - General Aviation**3 credit hours**

Operations, supervision, and the role of administration.

AERO 6370 - Aviation Contracts and Leases**3 credit hours**

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

AERO 6420 - Aviation Safety Investigation**3 credit hours**

Prerequisite: Graduate standing in Aerospace or permission of department. Acquaints students with skills and procedures used in aviation accident and incident investigation. Exposure to accident investigation management techniques, the information collection process, interviewing procedures, human factors, safety analysis, and investigation reporting. Emphasis placed on using safety investigation data to develop safety improvements.

AERO 6430 - Human Factors in Aviation**3 credit hours**

Prerequisite: Graduate standing in Aerospace or permission of department. Comprehensive look at how human physiology and psychology affect aviation operations. Emphasis placed on how these factors can lead to aviation accidents and the development of safety systems to mitigate human error.

AERO 6441 - Applied Research Capstone Project**1 to 3 credit hours**

Prerequisites: AERO 6610 and AERO 6611. Culminating experiences for M.S. in Aviation Administration candidates desiring professional careers in the aviation industry. Involves an independently designed investigation of contemporary issues within the aviation industry. Appropriate research methodologies as well as completion of a final project report and presentation required. Pass/Fail.

AERO 6450 - Airport Funding Policy**3 credit hours**

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

AERO 6540 - Topics in Aerospace Education**1 to 3 credit hours**

(Same as YOED 6540.) Content varies with needs of individual students who are interested in making a specialized study of current problems in the field of aerospace education.

AERO 6610 - Introduction to Aerospace Research**3 credit hours**

Emphasis on research as a significant component of graduate study to include methods, procedures, style, and form.

AERO 6611 - Applied Statistics in Aerospace Research**3 credit hours**

Prerequisite: AERO 6610 with minimum grade of C. Designed to integrate statistics and complement AERO 6610. Introduction to inferential statistics, including parametric and nonparametric, and descriptive statistics using specific examples from research in aerospace. Only statistics most commonly used in aerospace/aviation will be covered. General objective is to help students understand applied statistics; specific objective is to show students how to apply statistics specific for research designs used in aerospace/aviation.

AERO 6640 - Thesis Research**1 to 6 credit hours**

Prerequisite: AERO 6610. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once

enrolled, student should register for at least one credit hour of master's research each semester until completion. S/U grading.

**AERO 6700 - Advanced Aviation Workshop
4 credit hours**

(Same as YOED 6700.) Builds on prior experiences in aviation/aerospace. Essential for the prospective teacher or aerospace education courses at any level. A workshop that meets eight hours per day and includes an aircraft flight, field trips, and overnight stay.

AERO 6999 - Comprehensive Examination and Preparation

1 credit hours

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

Agribusiness and Agriscience

Warren Gill, Director

(615) 898-2523

www.mtsu.edu/abas/

The School of Agribusiness and Agriscience offers the Master of Science (M.S.) in Horse Science with concentrations in Equine Education, Equine Physiology, and Industry Management and a minor in Agriculture.

Horse Science, Equine Education Concentration, M.S.

Holly Spooner, Program Director

(615) 494-8849

Holly.Spooner@mtsu.edu

The School of Agribusiness and Agriscience offers the Master of Science (M.S.) in Horse Science, designed to prepare graduates for the multifaceted equine industry. Students may choose one of three concentrations: Equine Education, Equine Physiology, or Industry Management.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admissions are based on a comprehensive assessment of a candidate's qualifications including Graduate Record Examination (GRE) scores or scores on the Miller Analogies Test (MAT), undergraduate and graduate grade point average, and letters of recommendation.

Applicants who do not meet admission requirements but whose overall record indicates the potential for success may be considered for conditional admission. Students admitted conditionally must meet all conditions established by the Horse Science Graduate Committee in order to remain in the program.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

The application deadline is April 15 for those wishing to be considered for graduate assistantships and admission in the Summer or Fall. October 1 is the application deadline for admission in the Spring. Applications will be accepted after these dates, but admission consideration is not guaranteed.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit three letters of recommendation from professors or professionals that address the applicant's potential to successfully complete an M.S. program in Horse Science;
3. submit official scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT). Successful applicants typically have GRE Verbal and Quantitative scores exceeding 146 and 140 respectively (current scale) or 400 each (former scale), with a total combined score that exceeds 286 (current scale) or 800 (former scale) or a score above 385 on the MAT;
4. submit official transcripts of previous college work reflecting a 3.00 GPA from a minimum of 12 credit hours of upper-division, undergraduate animal science and/or equine science courses or equivalent industry experience as approved by the Horse Science Graduate Committee;
5. after application review, participate in an invited interview with the Horse Science Graduate Committee at the applicant's expense before final acceptance into the program.

Degree Requirements

The Master of Science in Horse Science with a concentration in Equine Education requires completion of a 15-credit-hour core and 21 credit hours in a concentration.

Candidate must

1. successfully complete a written comprehensive examination (may be taken no more than twice) during the semester in which the candidate intends to graduate;
2. successfully complete and defend a thesis or equine experiential learning project; students have the option to conduct and complete a traditional research-based thesis project or to select a more contemporary non-thesis option.

All students in the graduate program will be expected to complete a minimum of two consecutive semesters of full-time study in residence at MTSU.

Curriculum: Horse Science, Equine Education

The Equine Education concentration offers a skill set needed to teach and provide instruction at a postsecondary equine program or leadership within the Cooperative Extension Service. Students in the Equine Education concentration have the option to conduct and complete a traditional, research-based thesis project or to select a more contemporary non-thesis option.

Candidate must complete 36 hours in the following course of study:

Core Courses (15 hours)

- STAT 5140 - Probabilistic and Statistical Reasoning **3 credit hours**
- ABAS 5420 - Genetics of Domestic Livestock **3 credit hours**
- ABAS 6000 - Research Methods in Agricultural Science **3 credit hours**
- ABAS 6100 - Graduate Seminar in Agriculture **1 credit hours**
- ABAS 6170 - Issues in the Equine Industry **2 credit hours**
- ABAS 6440 - Advanced Equine Nutrition **3 credit hours**

Required Courses (12 hours)

- ABAS 6250 - Coaching and Teaching for Equine Competitions **3 credit hours**
- LSM 6500 - Legal Issues and Risk Management in Sport and Leisure Services **3 credit hours**
- LSM 6730 - Socio-Cultural and Ethical Issues in Leisure and Sport **3 credit hours**
- ABAS 6540 - Equine Experiential Learning **1 to 6 credit hours** (3 credit hours minimum) OR
- ABAS 6640 - Thesis Research **1 to 6 credit hours** (3 credit hours minimum)

Electives (9 hours)

In consultation with their committees, students must select a minimum 9 hours from graduate-level courses within the College of Basic and Applied Sciences, the College of Behavioral and Health Sciences, and/or the Jones College of Business. Of these, a minimum of 6 hours must be taken from courses with similar content rubrics (i.e., MKT, MGMT, LSM, ABAS, etc.). Students are limited to 3 hours at the 5000 level.

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Horse Science, Equine Physiology Concentration, M.S.

Holly Spooner, Program Director

(615) 494-8849

Holly.Spooner@mtsu.edu

The School of Agribusiness and Agriscience offers the Master of Science (M.S.) in Horse Science, designed to prepare graduates for the multifaceted equine industry. Students may choose one of three concentrations: Equine Education, Equine Physiology, or Industry Management.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admissions are based on a comprehensive assessment of a candidate's qualifications including Graduate Record Examination (GRE) scores or scores on the Miller Analogies Test (MAT), undergraduate and graduate grade point average, and letters of recommendation.

Applicants who do not meet admission requirements but whose overall record indicates the potential for success may be considered for conditional admission. Students admitted conditionally must meet all conditions established by the Horse Science Graduate Committee in order to remain in the program.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

The application deadline is April 15 for those wishing to be considered for graduate assistantships and admission in the Summer or Fall. October 1 is the application deadline for admission in the Spring. Applications will be accepted after these dates, but admission consideration is not guaranteed.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit three letters of recommendation from professors or professionals that address the applicant's potential to successfully complete an M.S. program in Horse Science;
3. submit official scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT). Successful applicants typically have GRE Verbal and Quantitative scores exceeding 146 and 140 respectively (current scale) or 400 each (former scale), with a total combined score that exceeds 286 (current scale) or 800 (former scale) or a score above 385 on the MAT;
4. submit official transcripts of previous college work reflecting a 3.00 GPA from a minimum of 12 credit hours of upper-division, undergraduate animal science and/or equine science courses or equivalent industry experience as approved by the Horse Science Graduate Committee;
5. after application review, participate in an invited interview with the Horse Science Graduate Committee at the applicant's expense before final acceptance into the program.

Degree Requirements

The Master of Science in Horse Science with a concentration in Equine Physiology requires completion of a 15-credit-hour core and 21 credit hours in a concentration.

Candidate must

1. successfully complete a written comprehensive examination (may be taken no more than twice) during the semester in which the candidate intends to graduate;
2. successfully complete and defend a thesis project;
3. all students in the graduate program will be expected to complete a minimum of two consecutive semesters of full-time study in residence at MTSU.

Curriculum: Horse Science, Equine Physiology

The Equine Physiology concentration emphasizes an interdisciplinary, science-based curriculum structured to build knowledge of scientific principles and apply them to a thesis research project related to equine science.

Candidate must complete 36 hours in the following course of study:

Core Courses (15 hours)

- STAT 5140 - Probabilistic and Statistical Reasoning **3 credit hours**
- ABAS 5420 - Genetics of Domestic Livestock **3 credit hours**
- ABAS 6000 - Research Methods in Agricultural Science **3 credit hours**
- ABAS 6100 - Graduate Seminar in Agriculture **1 credit hours**
- ABAS 6170 - Issues in the Equine Industry **2 credit hours**
- ABAS 6440 - Advanced Equine Nutrition **3 credit hours**

Required Courses (21 hours)

- ABAS 6090 - Equine Reproductive Physiology **3 credit hours**
- BIOL 5170 - Endocrinology **3 credit hours**
- CHEM 6500 - Biochemistry I **3 credit hours**
- STAT 6020 - Introduction to Biostatistics **3 credit hours**
- ABAS 6640 - Thesis Research **1 to 6 credit hours** (3 credit hours minimum)
- Electives to be selected in consultation with the advisor (**6 credit hours**)

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Horse Science, Industry Management Concentration, M.S.

Holly Spooner, Program Director

(615) 494-8849

Holly.Spooner@mtsu.edu

The School of Agribusiness and Agriscience offers the Master of Science (M.S.) in Horse Science, designed to prepare graduates for the multifaceted equine industry. Students may choose one of three concentrations: Equine Education, Equine Physiology, or Industry Management.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admissions are based on a comprehensive assessment of a candidate's qualifications including Graduate Record Examination (GRE) scores or scores on the Miller Analogies Test (MAT), undergraduate and graduate grade point average, and letters of recommendation.

Applicants who do not meet admission requirements but whose overall record indicates the potential for success may be considered for conditional admission. Students admitted conditionally must meet all conditions established by the Horse Science Graduate Committee in order to remain in the program.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

The application deadline is April 15 for those wishing to be considered for graduate assistantships and admission in the Summer or Fall. October 1 is the application deadline for admission in the Spring. Applications will be accepted after these dates, but admission consideration is not guaranteed.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit three letters of recommendation from professors or professionals that address the applicant's potential to successfully complete an M.S. program in Horse Science;
3. submit official scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT). Successful applicants typically have GRE Verbal and Quantitative scores exceeding 146 and 140 respectively (current scale) or 400 each (former scale), with a total combined score that exceeds 286 (current scale) or 800 (former scale) or a score above 385 on the MAT;
4. submit official transcripts of previous college work reflecting a 3.00 GPA from a minimum of 12 credit hours of upper-division, undergraduate animal science and/or equine science courses or equivalent industry experience as approved by the Horse Science Graduate Committee;
5. after application review, participate in an invited interview with the Horse Science Graduate Committee at the applicant's expense before final acceptance into the program.

Degree Requirements

The Master of Science in Horse Science with a concentration in Industry Management requires completion of a 15-credit-hour core and 21 credit hours in a concentration.

Candidate must

1. successfully complete a written comprehensive examination (may be taken no more than twice) during the semester in which the candidate intends to graduate;
2. successfully complete and defend a thesis project OR equine experiential learning project.

All students in the graduate program will be expected to complete a minimum of two consecutive semesters of full-time study in residence at MTSU.

Curriculum: Horse Science, Industry Management

The curriculum is structured for a specific industry-related career in the Industry Management concentration. Students have the option to conduct and complete a traditional, research-based thesis project or to select a more contemporary non-thesis option.

Candidate must complete 36 hours in the following course of study:

Core Courses (15 hours)

- STAT 5140 - Probabilistic and Statistical Reasoning **3 credit hours**
- ABAS 5420 - Genetics of Domestic Livestock **3 credit hours**
- ABAS 6000 - Research Methods in Agricultural Science **3 credit hours**
- ABAS 6100 - Graduate Seminar in Agriculture **1 credit hours**
- ABAS 6170 - Issues in the Equine Industry **2 credit hours**
- ABAS 6440 - Advanced Equine Nutrition **3 credit hours**

Required Courses (12 hours)

- ABAS 6040 - Management of Equine Events and Facilities **3 credit hours**
- MKT 6000 - Marketing Concepts **3 credit hours** **
- MGMT 6000 - Management and Operations Concepts **3 credit hours** **
- LSM 6510 - Financial Management and Marketing of Leisure and Sport Services **3 credit hours** **
- LSM 6520 - Management Practices in Recreation and Leisure Services **3 credit hours** **
- ****Students must choose two of the four courses as part of the Industry Management core.**
- ABAS 6540 - Equine Experiential Learning **1 to 6 credit hours** (3 credit hours minimum) OR
- ABAS 6640 - Thesis Research **1 to 6 credit hours** (3 credit hours minimum)

Electives (9 hours)

In consultation with their committees, students must select a minimum of 9 hours from graduate-level courses in the College of Basic and Applied Sciences, the College of Education, and/or the Jones College of Business. Of these, a minimum of 6 hours must be taken from courses with similar content rubrics (i.e., MKT, MGMT, LSM, ABAS, etc.). Students may take a maximum of 12 hours of electives selected from the MGMT, MKT, and or MC rubrics. Students are limited to 6 hours at the 5000 level.

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Agriculture Minor

There are two patterns of minors from which a candidate may choose:

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

Agribusiness and Agriscience

ABAS 5100 - Microcomputer Applications in Agriculture

3 credit hours

Prerequisite: CSCI 1150 or INFS 2200. Includes use of agricultural software, agricultural communications network, computer daily feeding machines, and farm records.

ABAS 5130 - Agricultural Marketing and Price Analysis

3 credit hours

Prerequisite: ABAS 3130 or approval of instructor. Agricultural prices and their relationship to production and marketing. Agricultural marketing systems, functions, institutions, and structural changes.

ABAS 5140 - Economics of Agribusiness Management

3 credit hours

Prerequisite: ABAS 3130 or approval of instructor. The application of economic concepts to agribusiness firms.

ABAS 5150 - Agricultural Policy

3 credit hours

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

ABAS 5200 - Fruit and Vegetable Marketing

3 credit hours

Prerequisites: PSCI 1030/1031 and BIOL 1030/1031 or approval of instructor. Basic biochemistry of respiration, handling techniques and practices, quality assessment, and marketing of fruit and vegetable crops. Both domestic and international marketing of fruit and vegetable products discussed. Examines economic impact of improper handling on both the local producer and the end user.

ABAS 5210 - Farm Power and Equipment

3 credit hours

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

ABAS 5220 - Methods of Teaching Agriscience and Agricultural Mechanics

3 credit hours

Emphasis on performing shop skills such as welding, brazing, electrical wiring, etc.

ABAS 5230 - Adult Education in Vocational-Education and Program Development

3 credit hours

How to teach adults and administer adult programs. Emphasis on planning, organizing, and arranging courses for adults in agriculture.

ABAS 5260 - Behavior of Domestic Animals

3 credit hours

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

ABAS 5310 - Forage Crops

3 credit hours

Adaptation, distribution, establishment, management, cultivation, and utilization of forage legumes and grasses.

ABAS 5330 - Turf Management

3 credit hours

Prerequisite: ABAS 1610 or BIOL 1120/1121. Establishment and management of turf grasses for lawns, golf courses, and parks.

ABAS 5340 - Soil Formation and Remediation

3 credit hours

Prerequisite: ABAS 3340. Environmental factors affecting soil formation and utilization.

ABAS 5350 - Soil Survey and Land Use

3 credit hours

Prerequisite: ABAS 3340 or approval of instructor. Soil properties used to determine suitability for land use. Lecture/lab.

ABAS 5400 - Horsemanship-Equitation

3 credit hours

Prerequisite: ABAS 2400 or approval of instructor. Understanding, recognizing, and producing lateral control in the horse. Lateral exercises; lateral movements; developing lateral balance and control, track, gait, pace, impulsion, and rhythm. Two-hour lecture and two-hour laboratory each week.

ABAS 5410 - Animal Nutrition and Feeding**3 credit hours**

Gastrointestinal tract, process of digestion, and nutrient utilization. Application of principles of animal nutrition to formulation of supplements and complete rations for livestock.

ABAS 5420 - Genetics of Domestic Livestock**3 credit hours**

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

ABAS 5430 - Horse Production**3 credit hours**

Prerequisites: ABAS 2400, 3040, and one of the following: ABAS 3300, 4090, or 4440 or consent of instructor. Scientific principles relevant to production requirements of horses as related to exercise physiology and performance, growth, reproductive physiology and state, age, and clinical support. Facilities management, marketing, legal aspects of horse ownership and career opportunities covered.

ABAS 5450 - Coaching and Teaching for Equine Competition**3 credit hours**

Principles of coaching and teaching individuals for equestrian and horse judging team competitions. Topics include skill development within each discipline, philosophy, and psychology of teaching and coaching. Experiential learning offered through practice teaching and coaching of intercollegiate equestrian and judging teams.

ABAS 5460 - Behavior and Training of Horses**3 credit hours**

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

ABAS 5470 - Advanced Beef Production**3 credit hours**

Prerequisite: ABAS 3470 or approval of instructor. In-depth look at various systems of beef production from standpoint of function, economics, and suitability to locale. Extensive field trips to commercial cow-calf,

feedlot, performance testing, stocker, and purebred operations.

ABAS 5510 - Domestic Animal Reproductive Physiology**3 credit hours**

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

ABAS 5620 - Greenhouse Management**3 credit hours**

Prerequisite: ABAS 1610 or BIOL 1120/1121. Analysis of soils, fertilizers, irrigation techniques, container preparation, ventilation, growth regulation, and carbon dioxide enrichment for greenhouse operation. Two hours lecture and one two-hour lab.

ABAS 5630 - Floriculture**3 credit hours**

Prerequisite: ABAS 1610 or BIOL 1120/1121. Propagation and other cultural practices for the production and maintenance of plants and flowers in the home. Two hours lecture and one two-hour lab.

ABAS 5640 - Landscaping**3 credit hours**

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

ABAS 5670 - Plant Propagation**3 credit hours**

Prerequisite: ABAS 1610 or BIOL 1120/1121. Anatomical features and physiological principles involved in propagating plants from seed and by division, cutting, budding, and grafting. Use of growth regulators and environmental factors. Two hours lecture and one two-hour lab.

ABAS 5700 - Agriculture in Our Lives**3 credit hours**

The national and international importance of U.S. agriculture. Emphasis on food production and marketing, land conservation, and agriculture related recreation. Accepted as a natural science elective for education majors. NO CREDIT GIVEN TOWARD A

MAJOR IN THE SCHOOL OF AGRIBUSINESS AND AGRISCIENCE.

ABAS 5830 - Food Quality Control
3 credit hours

Prerequisites: PSCI 1030/1031 and BIOL 1030/1031 or approval of instructor. Quality control and sensory evaluation techniques utilized in food processing. Instrumental and physical methods of quality determination of raw and processed food products, hazard analysis and critical control point (HACCP), and quality philosophies employed in the industry. Sensory evaluation techniques and statistical analysis of evaluation results covered.

ABAS 5910 - Problems in Agriculture
1 to 6 credit hours

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

ABAS 5980 - Seminar in Horse Science
1 credit hours

Familiarizes horse science majors with important current scientific investigation in horse science.

ABAS 5990 - Seminar
1 credit hours

Students required to research and make an oral report on a current agricultural topic.

ABAS 6000 - Research Methods in Agricultural Science
3 credit hours

A review of current scientific methods related to experiments in agriculture. Topics include research ethics, welfare of research subjects, literature resources, critical review of scientific literature, experimental design, scientific writing, interpreting data, and data presentation.

ABAS 6040 - Management of Equine Events and Facilities
3 credit hours

Fundamentals of managing equine and other livestock events and facilities. Emphasis placed on active participation in management of equine events held at MTSU facilities.

ABAS 6090 - Equine Reproductive Physiology
3 credit hours

Prerequisite: Undergraduate animal reproduction course or permission of instructor. Principles of equine reproductive physiology related to management of the stallion, mare, and foal. Topics covered include reproductive anatomy, endocrine regulation of reproduction, molecular mechanisms of hormone action, manipulation of reproductive function, and understanding and implementation of assisted reproductive technology in breeding farm management. Two hours lecture and two-hour laboratory.

ABAS 6100 - Graduate Seminar in Agriculture
1 credit hours

Seminar presentations target current issues and research advances in agricultural science and production. Presenters include faculty, graduate students, and outside speakers. Active participation in topic discussions emphasized. May be repeated. S/U grading.

ABAS 6170 - Issues in the Equine Industry
2 credit hours

In-depth look at relevant events affecting the equine industry. Interaction with industry leaders provides a unique window to examine the issues affecting the horse industry. Oral and written reports on specific problems presented. Topics will vary depending upon the current issues important to the equine industry.

ABAS 6250 - Coaching and Teaching for Equine Competitions
3 credit hours

Teaching and coaching successful teams for college or youth equestrian and judging competitions. Utilizes current philosophies of teaching and coaching based on fundamental psychology of personalities and learning. Practice and assisting with teaching and coaching of youth and college teams will be required.

ABAS 6440 - Advanced Equine Nutrition
3 credit hours

A class in organic chemistry or biochemistry recommended. A biochemical approach to understanding the nutritional requirements for horses at various life stages, including maintenance, growth, reproduction, performance, age, and clinical support. Feeding management related to nutrient digestion, absorption, and metabolism. Current equine nutrition research and its applications to practical equine management emphasized.

ABAS 6450 - Problems in Agriscience Technologies

3 credit hours

Prerequisite: Teaching experience or approval of instructor. Provides agricultural education teachers with intensive training advanced technologies. A MAXIMUM OF SIX CREDIT HOURS IN EACH DIVISION.

ABAS 6451 - Problems in Agriscience Technology-Animal Science

3 credit hours

Prerequisite: Teaching experience or approval of instructor. Provides agricultural education teachers with intensive training in advanced technologies. A MAXIMUM OF SIX CREDIT HOURS IN EACH DIVISION. Animal Science.

ABAS 6452 - Problems in Agriscience Technologies-Plant Science

3 credit hours

Prerequisite: Teaching experience or approval of instructor. Provides agricultural education teachers with intensive training in advanced technologies. A MAXIMUM OF SIX CREDIT HOURS IN EACH DIVISION. Plant Science.

ABAS 6453 - Problems in Agriscience Technologies-Agricultural Mechanics

3 credit hours

Prerequisite: Teaching experience or approval of instructor. Provides agricultural education teachers with intensive training in advanced technologies. A MAXIMUM OF SIX CREDIT HOURS IN EACH DIVISION. Agricultural Mechanics.

ABAS 6454 - Problems in Agriscience Technologies-Agribusiness

3 credit hours

Prerequisite: Teaching experience or approval of instructor. Provides agricultural education teachers with intensive training in advanced technologies. A MAXIMUM OF SIX CREDIT HOURS IN EACH DIVISION. Agribusiness.

ABAS 6455 - Problems in Agriscience Technologies-Forestry and Agricultural Products

3 credit hours

Prerequisite: Teaching experience or approval of instructor. Provides agricultural education teachers with intensive training in advanced technologies. A MAXIMUM OF SIX CREDIT HOURS IN EACH DIVISION. Forestry and Agricultural Products.

ABAS 6540 - Equine Experiential Learning

1 to 6 credit hours

Prerequisite: Completion of 24 semester hours at the master's level. Practical experience gained while working with an equine-related program emphasizing hands-on involvement. Students will develop, implement, and conclude an applied project in consultation with a faculty member and approved by their committee. S/U grading.

ABAS 6640 - Thesis Research

1 to 6 credit hours

Prerequisite: Completion of 24 hours of graduate-level course work. The completion of selected research problem, review of pertinent literature, collection and analysis of data, and preparation of the thesis. S/U grading.

Biology

Lynn Boyd, Chair

(615) 898-2847

www.mtsu.edu/biology/

The Department of Biology offers the Master of Science as well as a minor at the graduate level. The department offers courses in three interdisciplinary Ph.D. programs: Molecular Biosciences, Computational Sciences, and Mathematics and Science Education and its concentrations in Biological Education, Chemical Education, Mathematics Education, and Interdisciplinary Science Education. The department also offers courses in the Master of Science in Professional Science.

Field Station Affiliation

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

Biology, M.S.

Dr. Gore Ervin, Program Director

(615) 898-2045

Max.Ervin@mtsu.edu

The Department of Biology offers the Master of Science in Biology.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Required application materials include official transcripts, Graduate Record Examination (GRE) scores, three letters of recommendation, and a personal statement.

Students receiving unconditional admission typically will have a 3.40 overall (and in biology coursework) undergraduate grade point average and overall GRE scores above the fiftieth percentile.

All students in the graduate program must have an undergraduate minor (19 hours) in biology or its equivalent and 12 hours of chemistry (including one semester of organic chemistry or biochemistry).

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applications for admission are accepted year-round; preference for admission will be given to students adhering to the following deadlines: Summer/Fall enrollment, March 1; Spring enrollment, October 1.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Record Examination (GRE);
3. submit official transcripts of previous college work;
4. submit three letters of recommendation from professors or professionals that address the applicant's potential to successfully complete an M.S. in Biology;
5. submit a personal statement. The personal statement should outline the student's interest in graduate study and indicate a potential area of research interest and thesis advisor.

Degree Requirements

The Master of Science in Biology requires completion of a minimum of 30 semester hours including at least 21 hours at the 6000 level.

Candidate must

1. successfully complete both written and oral comprehensive examinations (may be taken no more than twice) the semester before graduation;
2. present and successfully defend the thesis in a public forum;
3. complete 6 semester hours of approved research tools or two semesters (6 hours) of a foreign language in addition to the 30 hours;
4. complete BIOL 6620 Biological Research and submit a Research and Thesis Approval Form and a copy of the research proposal to the graduate program director before the end of the second semester of study.

Curriculum: Biology

Candidate must complete 30 hours with at least 21 hours at the 6000 level in the following course of study:

Major Courses (16 hours)

Required Courses (9 hours)

- BIOL 6620 - Biological Research **3 credit hours**
- BIOL 6640 - Thesis Research **1 to 6 credit hours**
- BIOL 6650 - Seminar **1 credit hours**
- BIOL 6660 - Seminar **2 credit hours**

NOTE: Students are expected to complete both seminars during the first year of graduate study.

Additional Major Courses (7 hours)

Must be selected from BIOL courses in consultation with graduate advisor.

Remaining Courses (14 hours)

- Additional courses to meet the 30-hour requirement may include approved graduate courses in biology, chemistry, mathematics, physics, or other related disciplines.
- A minor is optional, but if elected, must include a minimum of 12 semester hours (these 12 hours may be included in the 30 total required hours).

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Biology Minor

There are two patterns of minors from which a candidate may choose:

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

Biology

BIOL 5030 - Non-Flowering Plants

4 credit hours

Prerequisites: BIOL 1110/1111 and 1120/1121.
Structure, physiology, methods of reproduction, and classification of the algae, fungi, liverworts, mosses, and ferns. Six hours lecture/laboratory.

BIOL 5040 - General Entomology

3 credit hours

Prerequisites: BIOL 1110 /1111 and 1120/1121.
Structure, classification, evolution, importance, and life history of insects. Five hours lecture/laboratory.

BIOL 5050 - Parasitology

3 credit hours

Prerequisites: BIOL 1110/1111 and 1120/1121.
Corequisite: BIOL 5051. Life histories, host-parasite relationships, and control measures of the more common parasites of humans and domesticated animals. Two lectures and one three-hour laboratory.

BIOL 5051 - Parasitology Lab

0 credit hours

Corequisite: BIOL 5050.

BIOL 5120 - Flowering Plants

4 credit hours

Prerequisites: BIOL 1110/1111 and 1120/1121.
Structure and classification of seed plants and a survey of local flora. Six hours lecture/laboratory.

BIOL 5130 - Histology

4 credit hours

Prerequisites: BIOL 3250/3251; CHEM 2030/2031 or 3010/3011. Corequisite: BIOL 5131. Microscopic anatomy of vertebrate cells, tissues, and organs. Three lectures and one three-hour laboratory.

BIOL 5131 - Histology Lab

0 credit hours

Corequisite: BIOL 5130.

BIOL 5140 - Invertebrate Zoology

4 credit hours

Prerequisites: BIOL 1110/1111 and 1120/1121.
Corequisite: BIOL 5141. Structure, functions, life histories, and economic importance of the invertebrate phyla. Laboratory work comprises detailed studies of representative specimens. Three lectures and one three-hour laboratory.

BIOL 5141 - Invertebrate Zoology Lab

0 credit hours

Corequisite: BIOL 5140.

BIOL 5170 - Endocrinology

3 credit hours

Prerequisites: BIOL 3250/3251, 4110/4111, or 2020/2021; CHEM 2030/2031 or 3010/3011.
Structure, function, and integrative mechanisms of vertebrate endocrine organs, with additional attention to invertebrate hormones. Three lectures.

BIOL 5180 - Vertebrate Zoology

4 credit hours

Prerequisites: BIOL 1110/1111 and 1120/1121.
Corequisite: BIOL 5181. Structure, life history, and classification of fish, amphibians, reptiles, birds, and mammals. Local representatives emphasized. Three lectures and one three-hour laboratory.

BIOL 5181 - Vertebrate Zoology Lab

0 credit hours

Corequisite: BIOL 5180.

BIOL 5220 - Ichthyology

4 credit hours

Prerequisites: BIOL 1110/1111 and 1120/1121.
Corequisite: BIOL 5221. The morphology, physiology, taxonomy, and ecology of fishes. Three lectures and one three-hour laboratory.

BIOL 5221 - Ichthyology Lab

0 credit hours

Corequisite: BIOL 5220.

BIOL 5250 - Limnology

4 credit hours

Prerequisites: BIOL 1110/1111, 1120/1121; CHEM 1110/1111. Corequisite: BIOL 5251. Biological, chemical, and physical aspects of lakes and streams. Three lectures and one three-hour laboratory.

BIOL 5251 - Limnology Lab

0 credit hours

Corequisite: BIOL 5250.

BIOL 5260 - Nature Study

3 credit hours

Prerequisites: BIOL 1110/1111 and 1120/1121.
Identification of local plants and animals and a consideration of the ecological principles governing them. Four hours lecture/laboratory.

BIOL 5320 - Seminar: Advancements in Biology
2 credit hours

A broad overview of biological principles and recent research developments. Two lectures.

BIOL 5330 - Biome Analysis
1 to 4 credit hours

Prerequisite: Permission of department. An intensive classroom and on-site study of a specific biome with special emphasis on data collection and analysis. Consult department head for specific credits and costs.

BIOL 5331 - Biome Analysis: Cedar Glade
1 to 4 credit hours

Prerequisite: Permission of department. An intensive classroom and on-site study of a specific biome with special emphasis on data collection and analysis. Consult department head for specific credits and costs.

BIOL 5332 - Biome Analysis: Marine
1 to 4 credit hours

Prerequisite: Permission of department. An intensive classroom and on-site study of a specific biome with special emphasis on data collection and analysis. Consult department head for specific credits and costs.

BIOL 5333 - Biome Analysis: Desert
1 to 4 credit hours

Prerequisite: Permission of department. An intensive classroom and on-site study of a specific biome with special emphasis on data collection and analysis. Consult department head for specific credits and costs.

BIOL 5390 - Ethology
4 credit hours

Prerequisite: BIOL 1110/1111. Corequisite: BIOL 5391. Innate and learned animal behavior in primitive and advanced animals including behavior associated with space, reproduction, and food getting. Three lectures and one three-hour laboratory.

BIOL 5391 - Ethology Lab
0 credit hours

Corequisite: BIOL 5390.

BIOL 5460 - Human Genetics
3 credit hours

Prerequisite: BIOL 3250/3251. Corequisite: BIOL 5461. Application of the fundamental laws of

inheritance to humans. Two lectures and one two-hour laboratory.

BIOL 5461 - Human Genetics Lab
0 credit hours

Corequisite: BIOL 5460.

BIOL 5500 - Plant Physiology
4 credit hours

Prerequisites: BIOL 3250/3251; CHEM 2030/2031 or 3010/3011. Plant growth; development and metabolism at the cellular and whole plant levels. Six hours lecture/laboratory.

BIOL 5510 - Food and Industrial Microbiology
4 credit hours

Prerequisite: BIOL 2230/2231. Corequisite: BIOL 5511. Interaction between microorganisms and food; industrial processes of human importance. Three hours lecture and two 1.5 hour laboratory meetings per week.

BIOL 5511 - Food and Industrial Microbiology Lab
0 credit hours

Corequisite: BIOL 5510

BIOL 5520 - Plant Anatomy
4 credit hours

Prerequisite: BIOL 1120/1121. Plant cells, tissues, and organs. Emphasis on the survival value of the plant's various structural features. Six hours lecture/laboratory.

BIOL 5540 - Topics in Environmental Education
1 to 4 credit hours

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

BIOL 5550 - Biotechnology
3 credit hours

Prerequisites: BIOL 2230/2231 and senior/graduate level. Instruction in both theory and application of current research methodologies in biology and molecular biology. Topics include immunochemistry, polymerase chain reaction, restriction enzyme

analysis, and electrophoresis. Five hours lecture/laboratory.

BIOL 5560 - Neurobiology

4 credit hours

Prerequisites: BIOL 1110/1111 and 1120/1121.
Corequisite: BIOL 5561. Introduces comparative neurobiology. Topics include the basic structure and function of the nerve cell and organization of nervous systems of representative species of invertebrate and vertebrate animals. Three hours lecture and one three-hour laboratory.

BIOL 5561 - Neurobiology Lab

0 credit hours

Corequisite: BIOL 5560.

BIOL 5570 - Principles of Toxicology

3 credit hours

Prerequisites: BIOL 1110/1111, 1120/1121; CHEM 1110/1111, 1120/1121, 3010/3011. Corequisite: BIOL 5571. Adverse effects of chemical agents on living organisms; current toxicological techniques in laboratory portion of course. Two hours lecture and one three-hour laboratory.

BIOL 5571 - Principles of Toxicology Lab

0 credit hours

Corequisite: BIOL 5570.

BIOL 5580 - Marine Biology

4 credit hours

Prerequisites: BIOL 1110/1111, 1120/1121; CHEM 1110/1111, 1120/1121. Corequisite: BIOL 5581. Biological, chemical, and physical characteristics of major marine environments and their associated flora and fauna. Three lectures and one three-hour laboratory.

BIOL 5581 - Marine Biology Lab

0 credit hours

Corequisite: BIOL 5580.

BIOL 6060 - Advanced Dendrology

3 credit hours

Prerequisite: BIOL 1120/1121. Woody plants with special emphasis on classification, identification, and literature of important timber trees of North America. Five hours lecture/laboratory.

BIOL 6070 - Plants and Man

3 credit hours

Prerequisite: BIOL 1120/1121. Human dependence

on plants emphasized. Topics include origin of agriculture, fruits and nuts, grains and legumes, vegetables, spices and herbs, oils and waxes, medicinal plants, psychoactive plants, beverages, fibers and dyes, tannins, wood and ornamental plants. Three lectures.

BIOL 6080 - Advanced Mycology

4 credit hours

Prerequisites: Graduate standing plus BIOL 1120/1121. Corequisite: BIOL 6081. Fungi, with emphasis on taxonomy, morphology, culture, and importance to humans. Three lectures and one three-hour laboratory.

BIOL 6081 - Advanced Mycology Lab

0 credit hours

Corequisite: BIOL 6080.

BIOL 6120 - Aquatic Ecology

3 credit hours

Physical, chemical, and biotic conditions of freshwater lakes and streams and of population structure and dynamics in these environments. Five hours lecture/laboratory.

BIOL 6130 - Ornithology

3 credit hours

Corequisite: BIOL 6131. Structure, taxonomy, natural history, and identification of birds. Emphasizes field work. Two lectures and one three-hour laboratory.

BIOL 6131 - Ornithology Lab

0 credit hours

Corequisite: BIOL 6130.

BIOL 6180 - Mammalogy

3 credit hours

Corequisite: BIOL 6181. Morphology, physiology, systematics, and the development of mammals. Two lectures and one three-hour laboratory.

BIOL 6181 - Mammalogy Lab

0 credit hours

Corequisite: BIOL 6180.

BIOL 6200 - Speciation

3 credit hours

Prerequisite: BIOL 3250/3251. Mutation, natural selection, adaptation, isolating mechanisms, genetic drift, hybridization, ploidy in the process of species formation, and a history of the development and ideas of evolution. Two lectures.

BIOL 6210 - Protozoology**3 credit hours**

Corequisite: BIOL 6211. Morphology, physiology, reproduction, ecology, taxonomy, and life cycles of the protozoa. Two lectures and one three-hour laboratory.

BIOL 6211 - Protozoology Lab**0 credit hours**

Corequisite: BIOL 6210.

BIOL 6220 - Herpetology**3 credit hours**

Prerequisite: BIOL 3400/3401. Corequisite: BIOL 6221. Morphology, natural history, and identification of amphibians and reptiles. Local representatives emphasized. Two lectures and one three-hour laboratory.

BIOL 6221 - Herpetology Lab**0 credit hours**

Corequisite: BIOL 6220.

BIOL 6270 - Cell Metabolism and Human Disease
3 credit hours

Prerequisites: BIOL 4110/4111 or BIOL 6330 /BIOL 6331 ; CHEM 3010/3011, 3530/3531. Metabolic pathways of mammalian cells and the diseases that result from genetic defects that disrupt their normal function.

**BIOL 6290 - Advanced Scanning Electron
Microscopy****4 credit hours**

Prerequisite: Permission of instructor. Application of scanning electron microscopy to study materials with emphasis on theory of scanning electron microscopy and preparation of biological specimens for microscopy. Seven hours lecture/laboratory.

BIOL 6350 - Biostatistical Analysis**4 credit hours**

Prerequisites: BIOL 3250/3251; MATH 1910. Corequisite: BIOL 6351. Intermediate-level introduction to biostatistical procedures used in research. Three lectures and one three-hour laboratory.

BIOL 6351 - Biostatistical Analysis Lab**0 credit hours**

Corequisite: BIOL 6350.

**BIOL 6360 - Energy Dispersive X-Ray Theory and
Analysis****1 credit hours**

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

BIOL 6380 - Experimental Immunology**4 credit hours**

Prerequisite: BIOL 2230/2231. Corequisite: BIOL 6381. Mechanisms of immunity including the more recent developments in immunology. Three lectures and one three-hour laboratory.

BIOL 6381 - Experimental Immunology Lab**0 credit hours**

Corequisite: BIOL 6380.

BIOL 6390 - Advanced Cell and Molecular Biology**4 credit hours**

Prerequisites: BIOL 2230/2231, 3250/3251; CHEM 2030/2031 or 3010/3011. Corequisite: BIOL 6391. Molecular biology of the cell with emphasis on current experimental techniques. Three lectures and one three-hour laboratory.

**BIOL 6391 - Advanced Cell and Molecular Biology
Lab****0 credit hours**

Corequisite: BIOL 6390.

BIOL 6400 - Medicinal Plants**3 credit hours**

Prerequisite: BIOL 1120/1121. Plants affecting human health, including poisonous, psychoactive, and remedial plants. Ethnobotanical and modern medicinal uses considered. Three lectures.

**BIOL 6410 - Advanced Transmitting Electron
Microscopy****4 credit hours**

Prerequisite: Permission of instructor. Ultrastructure of the cell using basic and specialized techniques. Seven hours lecture/laboratory.

BIOL 6430 - Clinical and Pathogenic Microbiology
4 credit hours

Prerequisite: BIOL 2230/2231. Comprehensive coverage of the most recent discoveries and techniques used for the identification of pathogenic organisms and their relationships to disease processes. Six hours lecture/laboratory.

BIOL 6440 - Advanced Virology**4 credit hours**

Prerequisites: BIOL 2230/2231; CHEM 1110/1111 and 1120/1121. Emphasizes the main virus families and their biochemical composition. Experimental approaches and techniques will be developed in order to identify and manipulate viruses. Six hours lecture/laboratory.

BIOL 6450 - Advancements in Molecular Genetics**4 credit hours**

Prerequisites: BIOL 2230/2231 and 3250/3251; CHEM 1110/1111 and 1120/1121. Recent advancements in microbial genetics and gene manipulation with emphasis on applications of molecular genetics, including gene regulation and recombinant DNA technology. Six hours lecture/laboratory.

BIOL 6460 - Conservation Biology**4 credit hours**

Prerequisite: BIOL 3400/3401. Measuring biodiversity: species, ecosystem, and genetic diversity. Topics include conservation ethics, extinctions, habitat degradation, exotic species, and management of populations and ecosystems. Six hours lecture/laboratory.

BIOL 6500 - Special Problems in Biology**4 credit hours**

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

BIOL 6590 - Environmental Toxicology**4 credit hours**

Prerequisites: BIOL 1110/1111, 1120/1121; CHEM 1110/1111, 1120/1121, and 3010/3011. Ecological effects of chemicals in the environment and techniques currently utilized to assess these effects. Current environmental assessment techniques, including biomonitoring, will be covered in the laboratory. Six hours lecture/laboratory.

BIOL 6620 - Biological Research**3 credit hours**

Prerequisite: Permission of department. Selection of a research problem, review of pertinent literature, and execution of the research.

BIOL 6640 - Thesis Research**1 to 6 credit hours**

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

BIOL 6650 - Seminar**1 credit hours**

Discussion and critical evaluation of the primary scientific literature. Responsible conduct of research topics including data management, publication practices, peer review, and collaborative science emphasized. One two-hour session.

BIOL 6660 - Seminar**2 credit hours**

Development of written and oral communication skills relevant to obtaining research funding and presenting research results. Responsible conduct of research topics including mentor/trainee relationships, human subjects, animal research, research misconduct, and conflicts of interest emphasized. Two one-hour sessions.

BIOL 6700 - Plant-Animal Interactions**3 credit hours**

Prerequisite: BIOL 1110/1111, 1120/1121. Corequisite: BIOL 6701. Evolutionary and ecological perspectives on how plants attract and repel symbionts and how those symbionts influence plant fitness. Topics include angiosperm evolution, the coevolution of plants with pollinators, herbivores, mycorrhizae, and N-fixing bacteria, and how plant secondary metabolites facilitate or mitigate these interactions. Two hours lecture and three hours lab.

BIOL 6701 - Plant-Animal Interactions Lab**0 credit hours**

Corequisite: BIOL 6700.

BIOL 6720 - Advanced Animal Development**4 credit hours**

Prerequisites: BIOL 3250/3251; BIOL 4210/4211 or BIOL 6390/BIOL 6391 recommended. Corequisite: BIOL 6721. Processes and underlying molecular mechanisms by which a single fertilized egg develops into an adult organism. Focuses on vertebrate development, including insights gained from other

model organisms. Three hours lecture and two hours lab.

BIOL 6721 - Advanced Animal Development Lab
0 credit hours

Corequisite: BIOL 6720.

BIOL 6730 - Advanced Microbial Physiology and Biochemistry
4 credit hours

Prerequisites: BIOL 2230/2231; CHEM 1110/1111, 1120/1121, and 2030/2031 or 3010/3011 or consent of instructor. Survey of the physiology and biochemistry of prokaryotic and eukaryotic microorganisms. Six hours lecture/laboratory.

BIOL 6740 - Brain Development and Learning Disabilities
1 credit hours

Prerequisite: Permission of department. Biology and psychology underlying dyslexia and other common learning disabilities encountered in the school setting. Addresses practical classroom applications utilizing this background information. Five three-hour class meetings.

BIOL 6750 - Advanced Plant Biotechnology
4 credit hours

Prerequisites: BIOL 1110/1111, 1120/1121, 3250/3251. Processes and reasoning behind the human manipulation of plant species for agricultural and technological purposes. Topics include traditional breeding techniques, tissue culture, plant cell transformation, and general plant molecular biology techniques as well as current debate over genetically modified organisms. Six hours lecture/laboratory.

BIOL 6760 - Bioinformatics
4 credit hours

Prerequisites: BIOL 1110/1111 and 1120/1121 and CSCI 1170 or consent of instructor. Explores the emerging field of bioinformatics which involves the application of computer science to biological questions. Bioinformatics applies to the computational aspects of data gathering, processing, storage, analysis, and visualization methods used in revising and testing biological hypotheses. Student should have a strong background in either computer science or biology, be willing to learn about the other field in an accelerated fashion, and be willing to work cooperatively as part of an interdisciplinary team. Four hours of lecture/problem solving per week.

BIOL 6770 - Issues in Biotechnology
2 credit hours

Prerequisite: BIOL 4550/4551, BIOL 5550/5551, or 4750/BIOL 6750. Explores current and emerging issues in biotechnology. Students will be asked to solve problems drawn from biotechnology industry. Seminars, field trips, and case study work.

BIOL 6780 - Principles of Systematics
4 credit hours

Prerequisites: BIOL 3250/3251 and 3500. Theory and practice of biological systematics. Concepts of characters and taxa, methods of phylogenetic inference, and applications of systematic data addressed. Five hours lecture, discussion, and laboratory exercises.

BIOL 6850 - Intermediate Life Science
3 credit hours

Prerequisite: Permission of instructor and one undergraduate biology course. Uses a process-oriented approach to the study of life science with emphasis on execution and analysis of content-based activities and experiments suited to actual classroom situations. (May not be used for biology majors or minors.)

BIOL 6999 - Comprehensive Examination and Preparation
1 credit hours

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

BIOL 7010 - Analysis of Genetic Markers
4 credit hours

Prerequisites: BIOL 3500 and BIOL 6350/BIOL 6351 or STAT 6020. Overview of the use of genetic markers to answer ecological and evolutionary questions. Applications of phylogenetics, population genetics, and identification of individuals. Labs integrated with lectures to cover major algorithms and software. Four hours of lecture/problem solving per week.

BIOL 7800 - Teaching Internship

3 credit hours

Prerequisite: Permission of department. Admission based on recommendations and performance in teaching.

BIOL 7810 - Teaching Internship (Same as CHEM 7810)

3 credit hours

Prerequisite: Permission of department. Admission based on recommendations and performance in teaching.

BIOL 7850 - Intermediate Life Science

3 credit hours

Prerequisite: Permission of instructor and one undergraduate biology course. Uses a process-oriented approach to the study of life science with emphasis on execution and analysis of content-based activities and experiments suited to actual classroom situations. (May not be used for biology majors or minors.)

BIOL 7900 - Teaching and Learning Biology

3 credit hours

Prerequisite: Permission of instructor. Overview of biology education with an emphasis on how students learn biology and current best practices for teaching biological concepts. Primary literature of the field featured as course emerges through lectures, discussion, small group activities, and group/individual presentations. Capstone experience will be student's development of an instructional unit of study including the formal teaching of selected biological concepts. Three hours lecture/discussion.

Chemistry

Greg Van Patten, Chair

(615) 898-2956

www.mtsu.edu/chemistry/

The Department of Chemistry offers a Master of Science degree with a major in Chemistry. The department also participates in the interdisciplinary Ph.D. programs in Computational Science, Molecular Biosciences, and Mathematics and Science Education and its concentrations in Biological Education, Chemical Education, Mathematics Education, and Interdisciplinary Science Education. Also offered is a minor in Chemistry at the graduate level.

Chemistry, M.S.

Scott Handy, Program Director

(615) 904-8114

shandy@mtsu.edu

The Department of Chemistry offers a Master of Science degree with a major in Chemistry. The department also participates in the interdisciplinary Ph.D. programs in Computational Science, Molecular Biosciences, and Mathematics and Science Education and its concentrations in Biological Education, Chemical Education, Mathematics Education Interdisciplinary Science Education. Also offered is a minor in Chemistry at the graduate level.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admissions are based on a comprehensive assessment of a candidate's qualifications including a satisfactory score on the Graduate Record Examination (GRE) and undergraduate and graduate grade point average.

An applicant must have an undergraduate minor in chemistry or its equivalent at time of admission.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Record Examination (GRE);
3. submit official transcripts of all previous college work.

Degree Requirements

The Master of Science in Chemistry requires a minimum of 30 semester hours with no more than 30 percent of the total degree hours dually listed as undergraduate/graduate.

Candidate must

1. prepare an annual plan of study for the following twelve months with the academic advisor;
2. successfully complete a comprehensive examination in conjunction with the defense of the thesis (may be taken no more than twice);
3. successfully complete and present an original thesis approved by the student's advisory committee.

Curriculum: Chemistry

Candidate must complete 30 hours in the following course of study:

Required Core Courses (25 hours)

- CHEM 6100 - Intermediate Organic Chemistry **3 credit hours**
- CHEM 6230 - Intermediate Analytical Chemistry **4 credit hours** * AND
- CHEM 6231 - Intermediate Analytical Chemistry Lab **0 credit hours**
- CHEM 6300 - Intermediate Physical Chemistry **3 credit hours**
- CHEM 6400 - Intermediate Inorganic Chemistry **3 credit hours**
- CHEM 6640 - Thesis Research **1 to 6 credit hours (3-8 credit hours count toward 30 degree hours)**
- CHEM 6800 - Chemistry Seminar **1 credit hours**

- CHEM 6870 - Chemistry Research **3 credit hours**
** Quantitative Analysis is a prerequisite for this course; can be taken for undergraduate credit after admission.*
NOTE: Exceptionally well-prepared students may substitute another approved graduate chemistry course in the same area for the core course by successful performance on a proficiency examination in that core curriculum area.

Electives (5 hours)

Complete a minimum of 5 credit hours of additional approved chemistry graduate courses or approved cognate courses in biology, mathematics, computer science, or physics.

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Chemistry Minor

There are two patterns of minors from which a candidate may choose:

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

Chemistry

CHEM 5100 - Organic Spectroscopy 3 credit hours

Prerequisite: CHEM 3020 or equivalent. Theory of and practice in the interpretation of mass, infrared, Raman, ultraviolet-visible, and nuclear magnetic resonance spectra. Offered every other spring.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 5330 - Physical Chemistry Fundamentals 4 credit hours

Modern physical chemistry including current theories of atomic and molecular structures, chemical thermodynamics, electrochemistry, chemical kinetics, and related theoretical topics. Three lectures and one three-hour laboratory period. Offered every year.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 5331 - Physical Chemistry Fundamentals Lab

0 credit hours

Offered every year.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 5340 - Physical Chemistry Fundamentals 4 credit hours

Modern physical chemistry including current theories of atomic and molecular structures, chemical thermodynamics, electrochemistry, chemical kinetics, and related theoretical topics. Three lectures and one three-hour laboratory period. Offered every year.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 5341 - Physical Chemistry Fundamentals Lab

0 credit hours

Offered every year.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 5350 - Physical Chemistry 4 credit hours

Quantitative principles of chemistry involving extensive use of calculus. Major topics include thermodynamics, phase changes, chemical equilibria, electrochemistry, reaction kinetics, quantum chemistry, molecular structure, and statistical mechanics. Three lectures and one three-hour laboratory period. Offered every year.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 5351 - Physical Chemistry Lab

0 credit hours

Offered every year.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 5360 - Physical Chemistry 4 credit hours

Quantitative principles of chemistry involving extensive use of calculus. Major topics include thermodynamics, phase changes, chemical equilibria, electrochemistry, reaction kinetics, quantum chemistry, molecular structure, and statistical mechanics. Three lectures and one three-hour laboratory period. Offered every year.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 5361 - Physical Chemistry Lab**0 credit hours**

Offered every year.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 5400 - Inorganic Chemistry**3 credit hours**

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

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 5600 - Introduction to Environmental Chemistry**3 credit hours**

Introduces major environmental issues including climate change, water quality, air pollution, landfills, hazardous wastes, fossil fuels, and alternative energy. Explores the quality of the environment and the changes in the environment due to contamination. Offered every fall.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 5630 - Detection of Chemical Pollutants**4 credit hours**

Theory and practice of analytical chemistry methods used in pollution measurement. Three lectures and one three-hour laboratory period. Offered every other spring.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 5631 - Detection of Chemical Pollutants Lab**0 credit hours**

Offered every other spring.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 5700 - Polymers, an Introduction**3 credit hours**

Structure, properties, and applications of polymers. Offered every other spring.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 5730 - Advanced Physical Chemistry**4 credit hours**

Modern chemical concepts and computations applied to quantum chemistry, molecular spectroscopy, and statistical thermodynamics. Three lectures and one three-hour calculation laboratory period. Offered on sufficient demand.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 5731 - Advanced Physical Chemistry Lab**0 credit hours**

Offered on sufficient demand.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 6100 - Intermediate Organic Chemistry**3 credit hours**

Prerequisite: CHEM 3020/3021 or 2030/2031 or equivalent. Concepts and modern theories of organic chemistry: stereochemistry of reactions, mechanistic interpretation of organic reactions, and multistep synthesis. Offered every fall.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as

listed for the corresponding 4000-level courses in the undergraduate catalog.

**CHEM 6110 - Topics in Organic Chemistry
3 to 6 credit hours**

Prerequisite: CHEM 6100. A selection of modern topics. Offered every other spring.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

**CHEM 6200 - Topics in Analytical Chemistry
3 to 6 credit hours**

Prerequisite: CHEM 4230/4231 or CHEM 6230/CHEM 6231. Selected topics of major interest in chemical analysis. Offered every other fall.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

**CHEM 6230 - Intermediate Analytical Chemistry
4 credit hours**

Prerequisite: CHEM 2230/2231 or equivalent. Selected instrumental methods of analysis including but not limited to gas and liquid chromatography methods; ultraviolet, visible, and infrared spectroscopic methods; and flame emission and atomic absorption spectrometry. Three lectures and one three-hour laboratory period. Offered every spring.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

**CHEM 6231 - Intermediate Analytical Chemistry
Lab**

0 credit hours

Offered every spring.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

**CHEM 6300 - Intermediate Physical Chemistry
3 credit hours**

Key concepts from classical thermodynamics,

quantum theory, and chemically relevant spectroscopies. Statistical thermodynamics introduced. Offered every spring.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

**CHEM 6400 - Intermediate Inorganic Chemistry
3 credit hours**

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

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

**CHEM 6410 - Transition Metal and Theoretical
Inorganic Chemistry**

3 credit hours

Prerequisite: CHEM 5400 or consent of instructor. The chemistry of transition metal complexes, organometallic compounds, and of related compounds, their practical applications, and modern theoretical treatments of this chemistry. Offered on sufficient demand.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

**CHEM 6420 - Topics in Inorganic Chemistry
3 to 6 credit hours**

Prerequisite: CHEM 6400. Selected topics of current interest in inorganic chemistry such as organometallic chemistry, inorganic materials science, and kinetics and mechanisms of inorganic reactions. Offered every other spring.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

**CHEM 6480 - Laboratory in Inorganic Chemistry-
Inorganic Synthetic Methods**

1 credit hours

Prerequisite or corequisite: CHEM 6400 (for 6480), CHEM 6420 or CHEM 5700 (for CHEM 6490), or consent of instructor. Offered every other fall.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

**CHEM 6490 - Laboratory in Inorganic Chemistry-
Physical Methods in Inorganic Chemistry**

1 credit hours

Prerequisite or corequisite: CHEM 6400 (for CHEM 6480), CHEM 6420 or CHEM 5700 (for 6490), or consent of instructor. Offered every other fall.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 6500 - Biochemistry I

3 credit hours

Chemical properties of biological molecules such as proteins, lipids, nucleotides, and carbohydrates. Chemical basis of enzyme catalysis. Structure of biological membranes. Offered every fall.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 6510 - Biochemistry II

3 credit hours

Prerequisite: CHEM 6500. The structure of lipids, amino acids, nucleotides, and nucleic acids and their metabolism at a molecular level. Emphasis on understanding the chemical basis of biological phenomena. Three hours lecture per week. Offered every spring.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 6520 - Topics in Biochemistry

3 to 6 credit hours

Prerequisite: CHEM 6500 or CHEM 6510 or consent

of instructor. Selected topics of particular interest in biochemistry. Offered every spring.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 6530 - Biochemical Techniques

2 credit hours

Prerequisite/corequisite: CHEM 6500 or CHEM 6510 or consent of instructor. Laboratory in biochemical techniques with emphasis on protein purification, enzyme kinetics, carbohydrate and lipid analysis, and manipulation of DNA. Offered every spring.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 6610 - Environmental Chemistry

3 credit hours

Fundamental chemical principles applied to the fate and behavior of contaminants in soil-water environments. Explores important toxins and explains their movement and occurrence in ecosystems based on chemical and physical parameters. Topics will include pesticides, dioxin, mercury, and bioaccumulation.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 6640 - Thesis Research

1 to 6 credit hours

Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. S/U grading. Offered every term.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 6720 - Topics in Physical Chemistry

3 to 6 credit hours

Prerequisite: CHEM 6300 or permission of

department. Advanced theories of, latest literature in, and unsolved problems of a particular research area in physical chemistry selected by the professor. Offered every other fall.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 6780 - Polymer and Materials Chemistry Laboratory
2 credit hours

Prerequisite: CHEM 6100 or previous undergraduate organic chemistry knowledge; corequisite: CHEM 5700; CHEM 5330/CHEM 5331 strongly recommended. Laboratory experiments introduce synthesis techniques, kinetics, characterization, engineering, and application of polymers and other modern materials. Six hours of laboratory.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 6800 - Chemistry Seminar
1 credit hours

Required of graduate students specializing in chemistry. Scientific articles reviewed and reports on individual research projects presented. Offered every term.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 6870 - Chemistry Research
3 credit hours

Original laboratory problem that will furnish material for a thesis. Offered every fall.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 7110 - Advanced Topics in Organic Chemistry
3 credit hours

Prerequisite: CHEM 6110. Applications and advanced concepts in physical organic chemistry, including

those used in teaching organic chemistry. Topics include classical and modern approaches in physical organic chemistry including MO theory, conformational analysis, stereochemistry, reaction mechanisms, structure and solvent effects, pericyclic reactions, and theories of acidity/basicity. Offered every other spring.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 7200 - Advanced Chemical Separations and Chemical Equilibrium
3 credit hours

Prerequisite: CHEM 6230/CHEM 6231 or equivalent including a course in quantitative chemical analysis. Advances in theories and applications of analytical chemistry for students familiar with laboratory techniques and chemical instrumentation. Special attention given to chemical equilibrium as it applies to the practice and teaching of chemical separations. Offered every other fall.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 7210 - Problems in Modern Chemical Laboratory Procedures
3 credit hours

Newly developed laboratory techniques and procedures which the student had not previously had the opportunity to learn. Offered on sufficient demand.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 7220 - Independent Study of Instrumental Analysis
3 credit hours

Developing skill in using selected sophisticated instruments. Offered on sufficient demand.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 7400 - Computational Chemistry I**4 credit hours**

Prerequisite: Foundation courses of the Computational Science Ph.D. program (COMS 6100, COMS 6500, and CSCI 6020) or consent of instructor. Fundamental concepts and practical aspects of various electronic-structure models used in modern computational chemistry. Molecular orbital theory, ab initio and density functional methods, wave-function analyses, and geometry optimization techniques. Offered every fall. Three lectures and one three-hour computer lab.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 7410 - Computational Chemistry II**4 credit hours**

Prerequisites: CHEM 7400 and consent of instructor. Practical applications of quantum chemistry models. Calculation of molecular properties with high accuracy, computational techniques for large systems, structure prediction and structure-activity relationships. Offered every spring. Three lectures and one three-hour lab.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 7420 - Advanced Topics in Inorganic Chemistry**3 credit hours**

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

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 7510 - Advanced Biochemistry**3 credit hours**

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

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 7640 - Dissertation Research**1 to 6 credit hours**

Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of dissertation. Once enrolled, student should register for at least one credit hour of doctoral research each semester until completion. S/U grading. Offered every term.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 7700 - Topics in Theoretical Chemistry**3 to 6 credit hours**

Bonding, stereochemistry, empirical and semi-empirical parameters, state functions, spectroscopic interpretation, and reaction mechanisms. Offered on sufficient demand.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 7710 - Topics in Applied Chemistry**3 to 6 credit hours**

Some important and current practical applications. Offered every other spring.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 7720 - Advanced Topics in Physical Chemistry

3 credit hours

Prerequisite: CHEM 6300. Theoretical basis and application of the principal methods used for experimental molecular structure determination. Computational methods of structure prediction and interpretation of data. Searching and retrieving structural information from structural databases. Offered every other fall.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 7800 - Chemistry Internship

3 credit hours

Prerequisite: Permission of department. Admission based on recommendations and performance in teaching. Offered every term.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 7810 - Chemistry Internship

3 credit hours

Prerequisite: Permission of department. Admission based on recommendations and performance in teaching. Offered every term.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 7820 - Seminar in Chemical Education

1 credit hours

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

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 7900 - Teaching and Learning in Chemistry
3 credit hours

Areas and ideas associated with chemical education. Readings from the current literature or seminal texts on misconceptions in chemistry, theories of learning, and theories of teaching. Offered summer only.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

CHEM 7910 - Instructional Technology in the Science Classroom

3 credit hours

Explores concepts and applications associated with the use of computer- and other technology-based instructional materials in the science classroom. Readings from current literature or seminal texts on theoretical issues; practical applications associated with the use of technology in teaching scientific concepts. Offered summer only.

NOTE: Graduate standing is the prerequisite for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

Physical Science

PSCI 5030 - Experimental Physical Science

4 credit hours

Basic concepts, laws, and principles of astronomy, chemistry, geology, and physics with particular emphasis on the utilization of equipment available or easily improvised in actual school situations to illustrate these concepts, laws, and principles. Offered every term.

PSCI 5080 - Problems in Physical Science

4 credit hours

A problem from chemistry, physics, or other physical science appropriate to the student's background and interest. Offered on sufficient demand. May be repeated for a total of eight credits with departmental approval.

PSCI 6020 - Investigations in Physical Science

1 to 3 credit hours

Prerequisite: Graduate standing or consent of instructor. Topics from astronomy to chemistry and physics, with special emphasis on the development of hands-on activities, determination of content cognitive

demand, development of appropriate assessment instruments/implementation plans, and implementation of these across the pre-college curriculum. For practicing pre-college science teachers and school administrators. Consult the listed instructor for costs and specific credits. Does not apply toward chemistry graduate degrees. Offered on sufficient demand. May be repeated for a total of six credits with departmental approval. Repeatable for up to six credit hours.

**PSCI 6800 - Intermediate Physical Science
3 credit hours**

Selected concepts and theories within the physical sciences of astronomy, chemistry, geology, and physics such as the solar system and the Earth, physical and chemical changes, chemical bonding, acids and bases, rocks and minerals, density, kinematics, electricity, and magnetism. Particular emphasis placed on developing strong content and pedagogical content knowledge in these areas.

**PSCI 7800 - Intermediate Physical Science
3 credit hours**

Selected concepts and theories within the physical sciences of astronomy, chemistry, geology, and physics such as the solar system and the Earth, physical and chemical changes, chemical bonding, acids and bases, rocks and minerals, density, kinematics, electricity, and magnetism. Particular emphasis placed on developing strong content and pedagogical content knowledge in these areas.

Computer Science

Chrisila Pettey, Chair

(615) 898-2397

www.mtsu.edu/csc/

The Department of Computer Science offers the Master of Science with a major in Computer Science and a minor at the graduate level. The department also offers courses and participates in the Ph.D. in Computational Science.

Computer Science, M.S.

Dr. Chrisila Pettey, Program Director

(615) 898-2397

Chrisila.Pettey@mtsu.edu

The Department of Computer Science offers the Master of Science with a major in Computer Science and a minor at the graduate level. The department also offers courses and participates in the Ph.D. in Computational Science. Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Master of Science in Computer Science program requires a satisfactory Graduate Record Examination score. Applicants with a 3.3 or higher undergraduate GPA for all computer science courses taken at MTSU (which must include at least 15 upper-division CSCI hours), are not required to submit a GRE score for admission to the graduate program.

Applicant must also meet the following requirements:

1. have completed CSCI 1170, 2170, 3080, 3110, 3130, 3160, and 3250 or equivalent of each course;
2. have completed MATH 1910 and 2050 or equivalent of each course.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores from the Graduate Record Examination (GRE);
3. submit official transcripts showing an acceptable GPA in previous academic work.

Degree Requirements

The Master of Science in Computer Science offers two options: the Thesis Option and the Non-Thesis Option.

Students pursuing either option must meet the following requirements:

1. complete CSCI 5700 if he or she did not complete CSCI 4700 or an equivalent course as an undergraduate;
2. complete CSCI 5560 if he or she did not complete CSCI 4560 or an equivalent course as an undergraduate;
3. complete CSCI 6620 as part of their required 30 hours (Thesis option) or 36 hours (Non-Thesis option).

Curriculum: Computer Science

Candidate must complete 30 (thesis option) or 36 (non-thesis option) hours in the following curriculum:

Thesis Option (30 hours)

The Master of Science in Computer Science requires a completion of 30 hours of graduate coursework in the thesis option. Up to 3 hours in CSCI 6640 may be included in the 30 hours. Students must present an oral defense of the thesis. A minimum of 21 hours must be at the 6000 level.

Non-thesis Option (36 hours)

The Master of Science in Computer Science requires completion of 36 hours of graduate coursework in the non-thesis option. Candidates must successfully complete a comprehensive examination. Credit for CSCI 6640 may not be included in the 36 hours. A minimum of 24 hours must be at the 6000 level.

Notes

A student already holding a master's degree from MTSU may complete a second master's degree in Computer Science by satisfying either of the above options with a minimum of 27 semester hours. A minimum of 18 hours must be at the 6000 level.

With the approval of the Computer Science graduate faculty, a maximum of 12 semester hours of residence credit (maximum of 6 in Computer Science) may be transferred from another institution and applied to the master's degree.

Program Notes

Candidate must

1. complete at least 24 semester hours of graduate computer science courses at MTSU;
2. file a degree plan with the College of Graduate Studies prior to the completion of 21 graduate credit hours;
3. take all courses in the Computer Science Department with the following possible exceptions:
 - a. with the prior approval of the Computer Science graduate faculty, a maximum of 6 hours of cognate courses may come from departments other than Computer Science;
 - b. with the approval of the candidate's graduate advisor, a single minor up to 12 semester hours may be included. Such a minor must also be approved by the department offering the minor.
4. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Computer Science Minor

There are two patterns of minors from which a candidate may choose:

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

Computer Science

CSCI 5130 - Microprocessor Operation and Control

3 credit hours

Prerequisite: CSCI 2170 and CSCI 3160. Digital systems based around microcomputers, microcomputer architecture, logic replacement, memory design, timing considerations, input/output design, interfacing, robotics, and total system design.

CSCI 5160 - Compiler Design and Software Development

3 credit hours

Prerequisites: CSCI 3080, CSCI 3110, and CSCI 3160. The various phases of a compiler along with grammars, finite automata, regular expressions, LR parsing, error recovery, backward and forward flow analysis, and code optimization. A term project consisting of the design and construction of a functional compiler required.

CSCI 5250 - Computer Graphics

3 credit hours

Prerequisites: CSCI 2170 and CSCI 3080 or consent of instructor. Topics include vector drawing displays, raster scan displays, input devices and techniques, graphics software, transformations, projections, interpolation, and approximation.

CSCI 5300 - Data Communication and Networks

3 credit hours

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

CSCI 5350 - Introduction to Artificial Intelligence

3 credit hours

Prerequisites: CSCI 3110 and CSCI 3080 or equivalent. Principles and applications of artificial intelligence. Principles include search strategies, knowledge representation, reasoning, and machine learning. Applications include expert systems and natural language understanding.

CSCI 5360 - Intelligent Robot Systems

3 credit hours

Prerequisites: CSCI 2170 and CSCI 3080. Principles and applications of intelligent mobile robotics. Various architectures used in the basic AI robotics development paradigms and basic techniques used

for robot navigation. Strong emphasis on hands-on mobile robot design, construction, programming, and experimentation using a variety of robot building platforms.

CSCI 5410 - Web Technologies

3 credit hours

Prerequisites: CSCI 3080 and CSCI 3110. An intensive introduction into current Web technologies including basic HTML, tools for Web page design, XML, client-side methods, and server-side methods. Students will be required to implement several Web-based projects.

CSCI 5560 - Database Management Systems

3 credit hours

Prerequisites: CSCI 3080 and CSCI 3110. The relational and object models of database design along with relational algebras, data independence, functional dependencies, inference rules, normal forms, schema design, modeling languages, query languages, and current literature.

CSCI 5600 - Independent Study in Computer Science

1 to 6 credit hours

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

CSCI 5700 - Software Engineering

3 credit hours

Prerequisites: CSCI 3080 and CSCI 3110. Consists of a theoretical component and a practical component. Topics include the history of software engineering, software development paradigms and life cycles, and computer-aided software engineering (CASE). A team project will be developed in parallel with the theory.

CSCI 5800 - Software Testing

3 credit hours

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

CSCI 5850 - Neural Nets

3 credit hours

Prerequisite: CSCI 3080. Various neural net

architectures, theory, and applications, including models such as Perceptron, back propagation, Kohonen, ART, and associative memory. Learning and conditioning methods also studied.

CSCI 5900 - Selected Topics in Computer Science
3 credit hours

Prerequisite: CSCI 2170. Advanced topics in computer science to be selected and announced at time of class scheduling. May be repeated for up to six credits total.

CSCI 6020 - Data Abstraction and Programming Fundamentals

4 credit hours

Prerequisites: Previous programming experience in a high-level language and consent of instructor. Advanced introduction to data abstraction, problem solving, and programming. Programming language concepts, recursion, program development, algorithm design and analysis, data abstraction, objects and fundamental data structures such as stacks, queues, and trees. Three hours lecture and two hours lab.

CSCI 6050 - Computer Systems Fundamentals
4 credit hours

Prerequisite: CSCI 6020 or COMS 6100 with minimum grade of B or equivalent. Advanced introduction to computer systems. Data representations, computer arithmetic, machine-level representations of programs, program optimization, memory hierarchy, linking, exceptional control flow, virtual memory and memory management, basic network concepts, and basic concurrent concepts and programming. Three hours lecture and two hours lab.

CSCI 6100 - Analysis of Algorithms
3 credit hours

Prerequisites: CSCI 3080 and CSCI 3110 or consent of instructor. Topics include the analysis and design of algorithms; efficiency of algorithms; design approaches including divide and conquer, dynamic programming, the greedy approach, and backtracking; P and NP; and algorithms in many areas of computing.

CSCI 6180 - Software Design and Development
3 credit hours

Prerequisite: CSCI 3110. State-of-the-art techniques in software design and development; provides a means for students to apply the techniques.

CSCI 6190 - Theory of Compilers
3 credit hours

Prerequisite: CSCI 4160 or CSCI 5160. Theory of parsing methods as well as symbol table construction, code optimization, run time storage management, and implementation of recursion.

CSCI 6250 - Advanced Operating Systems
3 credit hours

Prerequisite: CSCI 3250. Topics include concurrent processes, name management, resource allocation, protection, advanced computer architecture, and operating systems implementation.

CSCI 6260 - Advanced Computer Graphics
3 credit hours

Prerequisite: CSCI 4250 or CSCI 5250. Topics include three-dimensional curves and surfaces, projections, hidden line and surface elimination, raster graphics systems, and shading techniques.

CSCI 6300 - Networks
3 credit hours

Prerequisite: CSCI 4300 or CSCI 5300. Computer communications, network architectures, protocol hierarchies, and the open systems interconnection model. Modeling, analysis, and specification of hardware and software on a computer network. Wide area networks and local area networks including rings, buses, and contention networks.

CSCI 6330 - Parallel Processing Concepts
3 credit hours

Prerequisites: CSCI 3250 or CSCI 6050 and a working knowledge of either C or C++. Parallel processing and programming in a parallel environment. Topics include classification of parallel architectures, actual parallel architectures, design and implementation of parallel programs, and parallel software engineering.

CSCI 6350 - Selected Topics in Artificial Intelligence

3 credit hours

Prerequisites: CSCI 3110 and CSCI 4350 or CSCI 5350. In-depth study of the principal areas of the field: artificial intelligence programming, problem-solving methods, knowledge representation methods, deduction and reasoning, and applications such as natural language processing and expert systems. Repeatable up to 6 hours.

CSCI 6430 - Selected Topics in Parallel Processing

3 credit hours

Prerequisite: CSCI 4330 or CSCI 6330. An in-depth investigation or one or more topics in parallel processing. Topic(s) to be selected by the professor. Possible topics include parallel algorithms, parallel programming languages, parallel programming tools, parallel software engineering, parallel architectures, parallel applications, and parallel VLSI. Repeatable up to 6 hours.

CSCI 6450 - Operating System Design

3 credit hours

Prerequisite: CSCI 6250. Definition, design, and implementation of a significant operating system examining such areas as file systems, process management, memory management, input/output device management, and user interface.

CSCI 6550 - Introduction to Symbolic and Algebraic Manipulation

3 credit hours

Prerequisites: CSCI 3110 and CSCI 4350 or CSCI 5350. Techniques for algebraic manipulation on the computer. Includes symbolic differentiation and integration, extended precision arithmetic, polynomial manipulation; introduces one or more symbolic manipulation systems. Automatic theorem provers considered.

CSCI 6560 - Selected Topics in Database

3 credit hours

Prerequisite: CSCI 4560 or CSCI 5560. An in-depth investigation of one or more topics in database. Topic(s) to be selected by the professor. Possible topics include object-oriented database systems, distributed database systems, client-server database systems, deductive databases, multimedia databases, and database theory (concurrency, query optimization, recovery, security). Repeatable up to 6 hours.

CSCI 6600 - Selected Topics in Computer Science

3 credit hours

May be repeated for up to six credits total. Prerequisites: A solid foundation in undergraduate computer science and any prerequisites determined by the instructor. An in-depth investigation of one or more topics in computer science. Topic(s) to be selected by the professor. Possible topics include search techniques, for example genetic algorithms, soft computing, object-oriented software engineering,

expert systems, program verification, software quality, knowledge discovery in databases, and design of embedded software systems.

CSCI 6620 - Research Methods in Computer Science

3 credit hours

Corequisite: Three hours of CSCI 6000-level graduate work (other than CSCI 6640) with minimum grade of B. Emphasizes communication skills, creative thinking, problem solving, and integration of knowledge from prior computer science courses. Includes a study of computer science research tools. Students will select a research problem with approval of the instructor, review pertinent literature, and produce a report using the manual of thesis writing currently approved by the College of Graduate Studies.

CSCI 6640 - Thesis Research

1 to 6 credit hours

Prerequisite: CSCI 6620. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. S/U grading.

CSCI 6700 - Selected Topics in Software Engineering

3 credit hours

Prerequisite: CSCI 4700 or CSCI 5700 or equivalent. In-depth investigation of one or more topics in software engineering selected by the professor. Possible topics include rewriting system, graph grammar, formal method, source transformation, software architecture, and reverse engineering. Repeatable up to 6 hours.

CSCI 7300 - Scientific Visualization and Databases

3 credit hours

Prerequisites: CSCI 6020, COMS 6100, and COMS 6500 with minimum grade of B or equivalent or consent of instructor. Introduction to the concepts, theories, and applications of database and visualization methodologies for scientific data. Relational database design along with relational algebras, data independent, functional dependencies, inference rules, normal forms, schema design, modeling language, and query languages discussed. Methods corresponding to the visualization of scalar, vector, and tensor fields as well as multifield problem

discussed. Database and visualization discussed in the context of scientific applications.

CSCI 7350 - Data Mining

3 credit hours

Prerequisite: Fundamental courses in the Computational Science Ph.D. program and CSCI 6020 or equivalent or consent of instructor.

Introduction to concepts, theories, techniques, issues, and applications of data mining. Data preprocessing, association rule analysis, classification analysis, cluster and outlier analysis, deviation detection, statistical modeling, consideration of emergent technologies.

Engineering Technology

Walter Boles, Chair

(615) 898-2776

www.mtsu.edu/et/

The Department of Engineering Technology offers the Master of Science degree in Engineering Technology and concentrations in Engineering Technology as well as Occupational Health and Safety with thesis and non-thesis options.

The department also offers courses in the Master of Science in Professional Science concentration in Engineering Management. Students interested in the Engineering Management program should refer to the Master of Science in Professional Science.

Engineering Technology, Engineering Technology Concentration, M.S.

Carol Boraiko, Program Director
(615) 898-2106

Carol.Boraiko@mtsu.edu

The Department of Engineering Technology offers the Master of Science degree in Engineering Technology with concentrations in Engineering Technology as well as Occupational Health and Safety and thesis and non-thesis options. The department also offers courses in the Master of Science in Professional Science concentration in Engineering Management.

Under the Engineering Technology concentration, the degree requires the student to select courses, as approved by the graduate advisor, that provide the student with a technical area of specialty. Currently, typical technical areas include manufacturing, environmental safety, computer integrated manufacturing, electronics, drafting and design, and quality control. Other technical areas can be designed to meet the student's individual needs if approved by the graduate advisor.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Successful applicants typically have a GRE quantitative score of 148 or higher and a verbal score of 143 or higher.

NOTE: *The GRE may be waived for those students who have a GPA of at least 3.00 from the MTSU Engineering Technology undergraduate program.*

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

The application deadline is April 15 for those wishing to be considered for graduate assistantships and admission in the Summer or Fall. October 1 is the application deadline for admission in the Spring. Applications will be accepted after these dates, but admission consideration is not guaranteed.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Record Examination (GRE);
3. submit official transcripts of all previous college work.

Degree Requirements

The Master of Science in Engineering Technology with a concentration in Engineering Technology requires 30 hours (thesis option), with at least 21 hours at the 6000 level. The non-thesis option requires 36 hours, with at least 26 hours at the 6000 level.

Students are expected to have completed 3 semester hours of an approved research tool on the undergraduate or graduate level. Students not meeting this requirement will be expected to complete it as part of their program of study.

Students in the thesis option must complete and successfully defend a thesis (3 hours).

Students following the non-thesis option must successfully complete a comprehensive examination.

Curriculum: Engineering Technology, Engineering Technology

Candidate must complete 30 (thesis option) or 36 (non-thesis option) hours in the following course of study:

Thesis Option (30 hours)

Core Courses (18 hours)

- ET 6010 - Safety Planning **3 credit hours**
- ET 6190 - Six Sigma **3 credit hours**
- ET 6300 - PMI Project Management **3 credit hours**
- ET 6390 - Productivity Strategies/Lean Systems **3 credit hours**
- ET 6620 - Methods of Research **3 credit hours**
- ET 6710 - Current and Future Trends in Engineering and Technology **3 credit hours**

Concentration Courses (9 hours)

- ET 6700 - Analytical Methods in Engineering Technology **3 credit hours**
- ET 6720 - Innovative and Renewable Energy Sources and Technologies **3 credit hours**
- ET 6730 - Process Control **3 credit hours**

Thesis Course (3 hours)

- ET 6640 - Thesis Research **1 to 6 credit hours**

Non-thesis Option (36 hours)

Core Courses (18 hours)

- ET 6010 - Safety Planning **3 credit hours**
- ET 6190 - Six Sigma **3 credit hours**
- ET 6300 - PMI Project Management **3 credit hours**
- ET 6390 - Productivity Strategies/Lean Systems **3 credit hours**
- ET 6620 - Methods of Research **3 credit hours**
- ET 6710 - Current and Future Trends in Engineering and Technology **3 credit hours**

Concentration Courses (9 hours)

- ET 6700 - Analytical Methods in Engineering Technology **3 credit hours**
- ET 6720 - Innovative and Renewable Energy Sources and Technologies **3 credit hours**
- ET 6730 - Process Control **3 credit hours**

Individualized Study Course (3 hours)

- ET 6510 - Advanced Topics in Technology **3 credit hours** OR
- ET 6910 - Problems in Engineering Technology **3 credit hours**

Electives (6 hours)*

Complete 6 semester hours from approved courses.

**** The program may include a cognate of 6 hours in management and marketing, computer science, economics, or psychology.***

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

Engineering Technology, Occupational Health and Safety Concentration, M.S.

Carol Boraiko, Program Director
(615) 898-2106

Carol.Boraiko@mtsu.edu

The Department of Engineering Technology offers the Master of Science degree in Engineering Technology with concentrations in Engineering Technology as well as Occupational Health and Safety and thesis and non-thesis options. The department also offers courses in the Master of Science in Professional Science concentration in Engineering Management.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Successful applicants typically have a GRE quantitative score of 148 or higher and a verbal score of 143 or higher.

NOTE: *The GRE may be waived for those students who have a GPA of at least 3.00 from the MTSU Engineering Technology undergraduate program.*

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Record Examination (GRE);
3. submit official transcripts of all previous college work.

Degree Requirements

The Master of Science in Engineering Technology with a concentration in Occupational Health and Safety requires 30 hours (thesis option), with at least 21 hours at the 6000 level. The non-thesis option requires 36 hours, with at least 26 hours at the 6000 level.

Students are expected to have completed 3 semester hours of an approved research tool on the undergraduate or graduate level. Students not meeting this requirement will be expected to complete it as part of their program of study.

Students in the thesis option must complete and successfully defend a thesis (3 hours).

Students following the non-thesis option must successfully complete a comprehensive examination.

Curriculum: Engineering Technology, Occupational Health and Safety

Candidate must complete 30 (thesis option) or 36 (non-thesis option) hours in the following course of study:

Thesis Option (30 hours)

Core Courses (18 hours)

- ET 6010 - Safety Planning **3 credit hours**
- ET 6190 - Six Sigma **3 credit hours**
- ET 6300 - PMI Project Management **3 credit hours**
- ET 6390 - Productivity Strategies/Lean Systems **3 credit hours**

- ET 6620 - Methods of Research **3 credit hours**
- ET 6710 - Current and Future Trends in Engineering and Technology **3 credit hours**

Concentration Courses (9 hours)

- ET 6020 - Safety Technology and Engineering **3 credit hours**
- ET 6040 - Occupational and Environmental Hygiene **3 credit hours**
- ET 6070 - Anthropometric Factors in Accident Prevention **3 credit hours**

Thesis Course (3 hours)

- ET 6640 - Thesis Research **1 to 6 credit hours**

Non-thesis Option (36 hours)

Core Courses (18 hours)

- ET 6010 - Safety Planning **3 credit hours**
- ET 6190 - Six Sigma **3 credit hours**
- ET 6300 - PMI Project Management **3 credit hours**
- ET 6390 - Productivity Strategies/Lean Systems **3 credit hours**
- ET 6620 - Methods of Research **3 credit hours**
- ET 6710 - Current and Future Trends in Engineering and Technology **3 credit hours**

Concentration Courses (9 hours)

- ET 6020 - Safety Technology and Engineering **3 credit hours**
- ET 6040 - Occupational and Environmental Hygiene **3 credit hours**
- ET 6070 - Anthropometric Factors in Accident Prevention **3 credit hours**

Individualized Study Course (3 hours)

- ET 6510 - Advanced Topics in Technology **3 credit hours** OR
- ET 6910 - Problems in Engineering Technology **3 credit hours**

Electives (6 hours)*

Complete 6 semester hours from approved courses.

** The program may include a cognate of 6 hours in management and marketing, computer science, economics, or psychology.*

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Construction Management Technology

CM 5320 - Architectural Computer-Aided Drafting and Design

3 credit hours

Using computers to draw and design residential architectural plans. Specifically geared toward the construction area of concentration. Three hours lecture and three hours laboratory.

Engineering Technology

ET 5220 - Advanced Metalwork

3 credit hours

Techniques, equipment and procedures, advantages and disadvantages of current metal-casting processes used in industry. Laboratory exercises in sand molding and casting, the full mold process, investment casting, and permanent mold casting including pattern design and construction, mold making, metal melting and handling. Guest lecturer(s). Plant tour(s). Two hours lecture and three hours laboratory.

ET 5230 - Advanced Machine Tool Technology

3 credit hours

Taper turning, boring and thread chasing, and calculations of screw threads and other operations. Gear terminology and calculations, practice gear cutting on the milling machine, use of index head. Two hours lecture and three hours laboratory.

ET 5280 - Computer-Aided Manufacturing: Numerical Control (NC)

3 credit hours

Role of NC in today's manufacturing environment; machines and machine control systems of a typical installation; justification. Emphasis on writing and debugging programs for a three-axis milling machine and a two-axis turning machine utilizing CNC and computer-aided part programming. For those with little or no experience with NC or those seeking to broaden their knowledge of NC. Two hours lecture and three hours laboratory.

ET 5330 - Advanced Computer-Aided Drafting

2 credit hours

Prerequisite: ET 3360 or CMT 3320. Interactive computer drafting and design using advanced AutoCAD software and add-ons. Primarily for students who want to increase their capabilities using

CAD software and hardware. One hour lecture and three hours laboratory.

ET 5340 - Design of Machine Elements

3 credit hours

Analytical design methods of machine elements. Stress analysis, working stress, combined stresses, failure theories, fatigue failure. Design techniques for shafts, fasteners, gears, bearings, and belt and chain drives. Includes a design project. Lecture.

ET 5360 - Computer-Assisted Drafting and Design II

3 credit hours

Prerequisites: ET 2310 or CMT 3320. Utilizes AutoCAD software to develop skills in the creation and analysis of mechanical and architectural solid models for design and production purposes. Includes the use of shading and rendering to enhance three-dimensional model display and the extraction of two-dimensional engineering drawings. Two hours lecture and three hours laboratory.

ET 5440 - Fire Safety

3 credit hours

Possible prevention activities, fire hazards and their causes, and fire inspection techniques.

ET 5590 - Manufacturing Automation Systems

3 credit hours

Provides technical, human, and business aspects of modern automation systems. Includes automation controls, levels of control and major components/subsystems, object-based software components, intelligent actuators and sensors, emerging trends, flexible manufacturing systems (FMS), computer integrated manufacturing (CIM), industrial systems and supply chain applications, organizational approaches, and automation justification.

ET 5600 - Programmable Logic Controllers

2 credit hours

Introduces programmable logic controllers (PLCs). Selection, operation, and troubleshooting. Ladder diagrams and programming of PLCs emphasized. One hour lecture and three hours laboratory.

ET 5610 - Instrumentation and Controls

3 credit hours

Devices and techniques used in the measurement of physical parameters. Consideration of accuracies and sources of error, identification of typical

measurements, sensors and transducers, control stability, and response. Two hours lecture and three hours laboratory.

ET 5630 - Local Area Networks

3 credit hours

Foundation and experience to understand the design, implementation, and management strategies of local area networks (LAN). Data communications standards and protocol fundamentals included. Lecture, laboratory activities, and a LAN design requirement. Two hours lecture and three hours laboratory.

ET 5640 - Industrial Electricity

3 credit hours

AC power theory and circuits for industrial applications, polyphase systems, power factor correction, and transformers. Theory, applications, and selection of motors and generators. Control subsystems with emphasis on power electronics. Two hours lecture and three hours laboratory.

ET 5650 - Introduction to Microprocessors

3 credit hours

Prerequisite: ET 3620. Introductory course in microprocessor-based systems and their related components. Machine language programming extensively used to solve problems and to demonstrate the relationship of the microprocessor to its supporting peripherals. Basic microcomputer architecture also emphasized. Two hours lecture and three hours laboratory.

ET 5660 - Microprocessor Interfacing

3 credit hours

Analog and digital conversion devices and their related systems. Introduction to individual subsystems; A/D and D/A data conversion. Organization and design of individual digital systems emphasized. Includes data transfer, conversion, storage, input and output with principal focus on systems external to computer systems. Two hours lecture and three hours laboratory.

ET 5670 - Microprocessor Design

3 credit hours

Advanced course in design and application of microprocessor-based microcomputers for measurement and control systems. In-depth analysis of software and hardware in the design process. Design, develop, and test an operating system for a

microprocessor-based computer. Two hours lecture and three hours laboratory.

ET 5700 - Transform Circuit Analysis

3 credit hours

Prerequisites: ET 3601 and MATH 1910 or permission of instructor. An advanced course in network analysis that stresses network theorems and solutions of time and frequency-domain problems with the use of Laplace Transforms.

ET 5710 - Industrial Seminar

1 credit hours

Orientation to industrial job opportunities, placement practices, interview techniques, and preparation of application materials (resume, cover letter). Guest lectures, films, and student and faculty presentations.

ET 5850 - Fluid Power

3 credit hours

Systems and the basic components that make up these systems, including hydraulic, pneumatic, and fluidic. Emphasis on understanding the language and graphic symbols associated with fluid power and the performance characteristics of system components. Two hours lecture and three hours laboratory.

ET 5860 - Robotics

3 credit hours

Introduces the fundamentals of robots. Types of robots and controls, the prime movers, and the application of robots in the industrial environment. Two hours lecture and three hours laboratory.

ET 5900 - Productivity Strategies

3 credit hours

Analysis, design, and implementation of productivity strategies and improvement programs for a wide variety of organizations. Touches a wide spectrum of disciplines such as work design, quality, design engineering, and employee involvement.

ET 5915 - Technical Project Management and Soft Skills

3 credit hours

Prerequisite: Graduate standing. Project management as sanctioned by the International Project Management Institute and how to assess and boost emotional intelligence or soft skills. Student successfully completing course will earn 20 Professional Development Units (PDUs) issued by the International Project Management Institute.

ET 5920 - Plant Layout and Materials Handling
3 credit hours

An overview of facility planning including equipment selection, work flow analysis, activity relationship analysis, and plant layout for product, process, and JIT requirements. Teams assigned actual projects in industry. CAD layout presentations to industry management required.

ET 5970 - Engineering Economy
3 credit hours

Development of capital budgets; justification of capital projects using time value of money concepts; replacement analysis. Review of justification of actual capital projects and computer applications.

ET 5990 - Industrial Engineering Systems
3 credit hours

System design of work tasks including establishing time standards by time and motion study and work sampling; ergonomic design for integration of the human into the work task environment. Scientific methods supplemented by quality considerations with emphasis on statistical quality control (SQC). Computer software used for design and analyses. Graduate students will lead an industry design project team of students.

ET 6010 - Safety Planning
3 credit hours

Advanced study of planning in occupational safety and health management, including program planning and development methods and techniques as well as various systems approaches to hazard control.

ET 6020 - Safety Technology and Engineering
3 credit hours

Advanced study of the technical components of occupational workplace hazards, hazards analysis, workplace design, current regulatory requirements, engineering techniques for hazard control, personal protective systems, equipment and techniques. Includes a practical application problem of hazard analysis and control.

ET 6040 - Occupational and Environmental Hygiene
3 credit hours

An advanced quantitative study of occupational and environmental health principles, practices, and sampling techniques as required by either consensus or regulatory standards and their specific protocols to protect both workers and the public.

ET 6070 - Anthropometric Factors in Accident Prevention
3 credit hours

The necessity and desirability of a thorough consideration of anthropometric factors when designing facilities and equipment and recognition of those factors most prevalent in accidents.

ET 6190 - Six Sigma
3 credit hours

Prerequisite: MATH 1530 or equivalent or consent of instructor. The Six Sigma methodology is defined as a comprehensive and flexible system for achieving, sustaining, and maximizing business success. Through class instruction, simulations, and hands-on projects, students will be able to identify and focus on customers' critical-to-quality (CTQ) characteristics and solve problems using the define, measure, analyze, improve, and control (DMAIC) process and its associated tools. A Green Belt certification will be awarded upon successful completion of an industry/business Green Belt project.

ET 6230 - Advanced Technical Drafting
3 credit hours

Current trends and techniques such as using computers to solve design problems and the use of group suggestions (brainstorming) in solving design problems.

ET 6240 - Advanced Technical Problems in Metal
3 credit hours

In-depth insight into the use of metal in industry. Emphasis on industrial research and development techniques and their application in industry.

ET 6260 - Advanced Technical Problems in Electricity and Electronics
3 credit hours

In-depth insight into the practical applications of electronic theory. Students required to design and develop electrical/electronic applications of an advanced nature.

ET 6300 - PMI Project Management
3 credit hours

Prerequisite: Graduate standing. Project management processes and knowledge areas as sanctioned by the International Project Management Institute (PMI). Successful completion of the course will earn 23 contact hours/professional development units (PDUs) issued by PMI.

ET 6390 - Productivity Strategies/Lean Systems
3 credit hours

Prerequisites: Graduate standing and ET 3910 or consent of instructor. Topics include the human element (supervisory and teamwork skills), the theoretical aspect (laws and science covering service and production systems), and the practical aspect (tools for lean operational systems implementation). Theoretical and practical methods needed to complete a required industry/business project and obtain a certification in Lean Manufacturing.

ET 6510 - Advanced Topics in Technology
3 credit hours

Independent investigation and report of current problems of particular interest to individual students directed by department faculty members.

ET 6520 - Advanced Topics in Technology
3 credit hours

Independent investigation and report of current problems of particular interest to individual students directed by department faculty members.

ET 6620 - Methods of Research
3 credit hours

Introduces Master of Science students to scholarly research principles and to thesis formats for research reporting. A problem is researched and written up in thesis proposal format.

ET 6640 - Thesis Research
1 to 6 credit hours

Prerequisite: ET 6620. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. S/U grading.

ET 6650 - Embedded Microprocessor Design
3 credit hours

Prerequisite ET 4660 or consent of instructor. Topics include basics of embedded microprocessor systems, introduction to field programmable gate arrays (FPGA), integrated software environment (ISE), embedded development kit (EDK) CAD software, and the architecture and features of the MicroBlaze soft-core. Two hours lecture and three hours laboratory.

ET 6700 - Analytical Methods in Engineering Technology
3 credit hours

Prerequisites: MATH 1530, 1910, and 1920; graduate standing. Survey of essential mathematical skills and their applications in engineering technology. Applications of algebra, calculus, differential equations, linear algebra, numerical analysis, data analysis, statistics, vector analysis, and other topics with specific reference to concepts in an engineering technology curriculum. Symbolic mathematical computer software will be used throughout the course.

ET 6710 - Current and Future Trends in Engineering and Technology
3 credit hours

Prerequisite: Graduate standing. The latest advancements and practices in various engineering and technology fields. Selected topics may include computers and electronics, networking and telecommunication, instrumentation, lasers, automation and robotics, manufacturing and rapid prototyping, bioengineering and biotechnology, and renewable energy sources. Takes a student-centered, hands-on learning approach and focuses on understanding new technologies and how technology is used in the industry. Research projects will provide appropriate experience and accommodate individual's interest.

ET 6720 - Innovative and Renewable Energy Sources and Technologies
3 credit hours

Prerequisite: Graduate standing. In-depth coverage of current and future renewable energy sources and energy conversion technologies and efficiency and storage technologies. Environmental, economic, and security impacts are covered.

ET 6730 - Process Control
3 credit hours

Prerequisites: MATH 1910 and ET 3602 or equivalent. Basic process control concepts and theory. Analog and digital signal conditioning. Sensors and controllers. Controller principles and control-loop characteristics. Process control applications.

ET 6740 - Engineering Technology Internship
3 credit hours

Opportunity for students to gain practical experience in their particular field of interest within the

engineering technology or occupational health and safety industries. Student will be evaluated by graduate faculty (with input from his/her supervisor) and a final report will be submitted by the student detailing the internship experience.

ET 6910 - Problems in Engineering Technology
3 credit hours

Independent investigation and report of a problem in engineering technology. Designed to meet the particular needs of the students; pursued under the direction of a department faculty member.

ET 6920 - Problems in Engineering Technology
3 credit hours

Independent investigation and report of a problem in engineering technology. Designed to meet the particular needs of the students; pursued under the direction of a department faculty member.

ET 6999 - Comprehensive Examination and Preparation
1 credit hours

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

Environmental Science and Technology

EST 5770 - Pollution Control Technology
3 credit hours

Introduces air, noise, solid waste, and water pollution control technology. Legislative regulations and equality standards, pollution types and sources, detection and analysis instruments, and treatment principles and practices.

EST 5780 - Air, Solids, and Noise Pollution Technology
3 credit hours

Prerequisites: 8 hours each chemistry, biology, and physics or permission of instructor. Introduces air, noise, solid, and hazardous waste pollution technology, including legislative regulations and quality standards: sources, detection, and analysis instrumentation and practices, and treatment and abatement principles, equipment, and practices.

EST 5810 - Energy and the Environment
3 credit hours

Introduces sources and methods of energy production and classifications of energy usages with emphasis on usage trends, energy conservation strategies, and alternate energy utilization.

EST 5820 - Solar Building Design
3 credit hours

Introduces environmental and economic impact of solar energy for residential and light industrial construction including topics such as day lighting, passive solar design, and hot water heating.

EST 5840 - Energy Auditing
3 credit hours

Introduces types of energy consumption and classifications of energy usages. Emphasis on conservation strategies and total management for residential and industrial plants.

EST 5870 - Passive Solar Design
3 credit hours

Introduces passive solar techniques in the construction of residential and light industrial structures. Includes day lighting, passive solar design, methods, and system integration.

Geosciences

Warner Cribb, Chair

(615) 898-2726

www.mtsu.edu/geosciences/

The Department of Geosciences offers a concentration in Geosciences within the Master of Science in Professional Science and minors in Geography and Earth Science/Geology at the graduate level.

NOTE: Some geography and/or geology courses may be accepted as either geography or geology; others are accepted only in one discipline. Substitutions are made at the discretion of department chair in consultation with the academic minor advisor.

Earth Science/Geology Minor

There are two patterns of minors from which a candidate may choose:

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

Geography Minor

There are two patterns of minors from which a candidate may choose:

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

Geology

GEOL 5000 - Petrology and Petrography 4 credit hours

Prerequisite: GEOL 3000. Igneous, sedimentary, and metamorphic rocks. Theories of formation and evolution based upon mineralogical and geochemical evidence. Examination and classification of rocks in hand sample and thin section. Additional assignments involving data analysis and interpretation and completion of a research paper required for graduate credit.

GEOL 5020 - Geomorphic Regions of the United States 4 credit hours

Prerequisite: GEOL 1030/1031 or 1040/1041. The origin, regional distribution, and geomorphic features and history of the landforms of the United States. Students required to analyze maps, structure sections, and aerial photography to determine geomorphic form and the forces and processes that produced these forms plus research a geomorphical problem resulting in a thesis-type paper. Three hours lecture and two hours laboratory per week.

GEOL 5030 - Invertebrate Micropaleontology 4 credit hours

Prerequisite: GEOL 1050. Invertebrate and microscopic animal life of the past including recent preserved representatives and their ancient fossilized ancestors. Numerous field trips to local fossil-collecting sites. Designed to aid in the preparation of earth science teachers, geologists, and biologists. Research paper on a topic approved by instructor. An oral presentation of this material may be required. Three hours lecture and two hours laboratory per week.

GEOL 5040 - Engineering Geology 3 credit hours

Prerequisites: GEOL 1030/1031 or GEOL 1040/1041 or equivalent; MATH 1720 and MATH 1710 or MATH 1730. Principles and applications of geology in engineering practice. Engineering geology exploration, behavior of soils and rocks for engineering projects, application of engineering geology to the solution of construction and environmental problems. Three hours lecture per week.

GEOL 5050 - Meteorology 3 credit hours

Physical laws as they relate to the atmosphere, atmospheric processes and their effects on air masses, fronts, and atmospheric circulation, the dynamics of the atmosphere and its relationship to the hydrosphere. Special problem to be assigned by the instructor.

GEOL 5060 - Principles of Geoscience 4 credit hours

Includes topics from geology, astronomy, meteorology, and oceanography. Specifically designed to aid in the preparation of earth science teachers in the public schools. Term paper on topic approved by the instructor. Three hours lecture and two hours laboratory per week.

GEOL 5070 - Sedimentation and Stratigraphy 4 credit hours

Prerequisites: GEOL 1050 and 3000 or consent of instructor. Sedimentary rocks; the processes of sedimentation, the alteration of sediments through time, and an examination of the resulting stratigraphic units. For geoscience majors and those with interests in soil mechanics and civil engineering. Research paper on a topic approved by the instructor. An oral presentation may also be required. Three hours lecture and two hours laboratory per week.

GEOL 5080 - Structural Geology 3 credit hours

Prerequisites: MATH 1720 or MATH 1730; GEOL 1030/1031 or 1040/1041; GEOL 3040. Orientation and deformation of rock. Geometric, analytical, and statistical solutions to structural problems. Emphasis on three-dimensional visualization, problem solving, geological map interpretation, and the mechanics of deformation. Case analyzing, research, and interpretation required. Lecture and laboratory.

GEOL 5090 - Problems in Geology 1 to 6 credit hours

Prerequisite: A minimum of 12 semester hours of geology, at least 6 hours of which must be upper division and excluding GEOL 1030/1031 or by consent of instructor. An independent research-oriented project commensurate with the student's interests and qualifications. In-depth research requiring extensive and intensive search of applicable literature and large study area. An oral examination and discussion required. May be repeated up to a maximum of six hours.

GEOL 5100 - Geophysical Prospecting**4 credit hours**

Prerequisites: MATH 1910, PHYS 2010/2011 or 2110/2111, or consent of instructor. PHYS 2020/2021 or 2120/2121, GEOL 1030/1031 or 1040/1041, and MATH 1920 also recommended. Survey of seismic, gravimetric, and magnetic/electrical exploration methods. Applied course covering some elementary theory, basic field practice, computation fundamentals, interpretation techniques. Case analysis, research, and interpretation required. Two-hour lecture and two hours laboratory per week.

GEOL 5120 - Environmental Geology**4 credit hours**

Prerequisite: GEOL 1030/1031 or 1040/1041 or consent of instructor. Application of geologic information to minimize possible environmental degradation and maximize utilization of resources in the natural and modified environment, local examples and field trips. Topics include engineering properties of earth materials, natural hazard prediction and reduction, water supply, solid and hazardous wastes, mineral resources, global change, land-use planning, environmental impact analysis. Three hours lecture and two hours laboratory per week. An in-depth research project and paper required.

GEOL 5130 - Hydrogeology**4 credit hours**

Prerequisites: MATH 1720 or MATH 1730; GEOL 1030/1031 or 1040/1041; GEOL 1050; or consent of instructor. Basic processes and measurement of the hydrologic cycle, including precipitation, evaporation, surface runoff, stream flow, soil moisture, and ground water. Emphasis placed on ground water, including geology of occurrence, principles of flow, conceptual models of regional flow, chemistry and quality, well hydraulics, aquifer characteristics, resource development, detection of pollutants, and contaminant transport. Additional individual research project required, including a written and classroom report. Lecture and laboratory.

GEOL 5140 - Inorganic Geochemistry**3 credit hours**

Prerequisite: GEOL 3000. Principles of inorganic geochemistry. Geochemistry of the earth and solar system, isotope geochronometers, thermodynamics of geochemical processes, mineral stability diagrams, isotope fractionation, rates of geochemical processes, chemical weathering, chemical compositions of surface and groundwater, geochemical exploration, geochemical cycles, environmental geochemistry.

Additional assignments involving data analysis and interpretation and completion of a research paper required for graduate credit. Three-hour lecture per week.

GEOL 5150 - Environmental Applications of Hydrogeology**3 credit hours**

Prerequisite: GEOL 4130 or GEOL 5130. Advanced course that emphasizes applied methods for assessing hazardous and solid waste facilities and contaminated ground water remediation techniques. Included will be site characterization methods, ground water sampling procedures, and monitoring well installation techniques. Additional assignments involving case history analysis with an oral presentation will be required of graduate students. Three hours lecture per week.

GEOL 5401 - Field Course**4 credit hours**

Supervised study in some geological area preceded by classroom preview and concluded by a time of evaluation. Emphasis on the natural and physical elements of the environment, with special attention directed toward the geomorphology and geology of scientific areas. An intensive period of study and research on a full-time basis. Work required will depend on area researched and time involved. Consult department chair for specific fees.

GEOL 5402 - Field Course**4 credit hours**

Supervised study in some geological area preceded by classroom preview and concluded by a time of evaluation. Emphasis on the natural and physical elements of the environment, with special attention directed toward the geomorphology and geology of scientific areas. An intensive period of study and research on a full-time basis. Work required will depend on area researched and time involved. Consult department chair for specific fees.

GEOL 6000 - Environmental Geosystems**3 credit hours**

Corequisite: Graduate standing in Geosciences or permission of department. Principles of environmental geosystems. The role of geologic processes in natural and human-induced distribution of contaminants in minerals, rocks, soils, surface water, and groundwater. Detection, measurement, and remediation of human impacts on geologic environments. Three hours lecture per week.

GEOL 6010 - Case Studies in Environmental Geosystems

3 credit hours

Prerequisite: GEOL 6000. Environmental geosystem case studies involving natural and human-induced distribution of contaminants in minerals, rocks, soils, surface water, and groundwater and the detection, measurement, and remediation of contaminants in geologic environments. Three hours lecture per week.

GEOL 6020 - Advanced Hydrogeology

3 credit hours

Prerequisite: GEOL 4130 or GEOL 5130. Advanced principles and the applications of hydrogeologic modeling techniques used to investigate and remediate contaminated groundwater. Three hours lecture per week.

GEOL 6030 - Geosciences Colloquium

2 credit hours

Prerequisite: GEOL 1030/1031 or GEOL 1040/1041, or equivalent. A discussion of current issues in geosciences led by guest speakers, MTSU faculty members, and graduate students.

Physical Geography

PGEO 5280 - Special Problems and Topics in Physical Geography

1 to 6 credit hours

Research participation or guided readings in a particular area or topic appropriate to the student's interests and professional objectives. The type and amount of additional work will be decided upon when student registers for the course.

PGEO 5380 - Cartography

4 credit hours

General knowledge of the field including familiarity with the techniques and tools of professional cartography and graphics. Selected lectures and class discussions. A series of map construction assignments; a specialized map assignment supported by written analysis. Three hours lecture and one two-hour laboratory per week.

PGEO 5401 - Field Studies in Physical Geography

4 credit hours

Supervised study in some geographical area, preceded by classroom preview and concluded by a time of evaluation. Emphasis on the natural and cultural elements of the environment, with special attention directed toward the pattern of human

occupancy. An intensive period of study and research on a full-time basis. Work required will depend on area researched and time involved. Consult department chair for specific fees.

PGEO 5490 - Remote Sensing

4 credit hours

Various vehicles of remote sensing such as radar, satellite imagery, and infrared data. Use of data in preparation of maps and applications to land use and environmental problems examined. Selection of data from either a numeric or image remote sensing system, interpreting, and developing a report from the interpretations. Three hours lecture and one two-hour laboratory per week.

PGEO 5510 - Laboratory Problems in Remote Sensing

4 credit hours

Prerequisite: GEOG 4490 or PGEO 5490. Computer processing of selected satellite imagery. Laboratory will provide practical experience through design, execution, and completion of applied remote sensing projects, one of which will be the effects of an environmental impact.

PGEO 5520 - Image Interpretation

4 credit hours

Principles, methods, and techniques of image interpretation including maps, satellite data, and aerial photos. Environmental impact of a special project. Three hours lecture and one two-hour laboratory per week.

PGEO 5530 - Geographic Information Systems

4 credit hours

Lecture and laboratory work relative to computer-manipulated geographic data base. Laboratory work will involve experience in practical application of a geographic information system (GIS) to problem-solving. Student will take appropriate data and compile an environmental impact statement (EIS). Three hours lecture and two hours laboratory per week.

PGEO 5560 - Intermediate Geographic Information Systems

3 credit hours

Prerequisite: GEOG 4530 or PGEO 5530. Lecture and laboratory work related to the principles and applications of geographic information systems (GIS). Continued training in GIS analysis including raster analysis, spatial analysis, network analysis, and

geocoding. Data management including data editing, geodatabase design, and creation also examined. Other topics include resource management, demographic, and civic application. Three hours lecture per week.

PGEO 5570 - Advanced Geographic Information Systems

3 credit hours

Prerequisite: GEOG 4560 or PGEO 5560. Use of geographic information systems, computer programming, and database operations to analyze geodata. Study of geographic areas recently modified by natural or human phenomena to acquire relevant data, use appropriate spatial statistics, and make inferences about the transformative process and/or the future state of the study area. Presentation of findings in both map and report form. Three hours lecture per week.

PGEO 6040 - Geospatial Systems and Applications

4 credit hours

Evaluate integrated environmental systems and physical processes in landscapes through application of GIS technology. Make spatial inferences about transformative processes and past/future state of the study area. Describe techniques required to complete environmental studies at multiple scales involving geospatial datasets.

PGEO 6050 - Programming for Geospatial Database Applications

3 credit hours

Development of custom/tailored GIS-based computer programming to analyze geospatial datasets for making inferences about the Earth's natural and human systems. Extend commercially available geographic information systems software packages through the development of novel computer programs to perform GIS tasks such as spatial analysis, data transformation, map generation, and geospatial database integration.

Mathematical Sciences

Donald A. Nelson, Chair

(615) 898-2669

www.mtsu.edu/math/

The Department of Mathematical Sciences offers the Master of Science with a major in Mathematics, the Master of Science in Teaching with a major in Mathematics, and a minor in Mathematics at the graduate level.

Three concentrations are offered under the Master of Science: General Mathematics (students desiring a broad background in mathematics should pursue this concentration); Industrial Mathematics (students interested in positions in industry or further graduate work in applied mathematics should pursue this concentration), and Research Preparation (students wishing to pursue the Ph.D. in Mathematics should choose this concentration).

Two concentrations are offered under the Master of Science in Teaching: Middle Grade Mathematics and Secondary Mathematics.

The department also offers courses in the Master of Science in Professional Science degree. Students interested in a concentration in Biostatistics or Actuarial Sciences should refer to the Master's of Science in Professional Science program.

The department also offers an Accelerated Bachelor's/Master's (ABM) program. Students in the Mathematics ABM are able to earn a bachelor's degree and a master's degree in five (5) years. Students interested in this program should contact the Mathematical Sciences Department for additional information.

Mathematics, General Mathematics Concentration, M.S.

James Hart, Program Director

(615) 898-2402

James.Hart@mtsu.edu

The Department of Mathematical Sciences offers the Master of Science with a major in Mathematics, the Master of Science in Teaching with a major in Mathematics, and a minor in Mathematics at the graduate level.

Three concentrations are offered under the Master of Science: General Mathematics (students desiring a broad background in mathematics should pursue this concentration); Industrial Mathematics (students interested in positions in industry or further graduate work in applied mathematics should pursue this concentration); and Research Preparation (students wishing to pursue the Ph.D. in Mathematics should choose this concentration).

Two concentrations are offered under the Master of Science in Teaching: Middle Grade Mathematics and Secondary Mathematics.

The department also offers courses in the Master of Science in Professional Science degree. Students interested in a concentration in Biostatistics or in Actuarial Sciences should refer to the Master's of Science in Professional Science program.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission normally requires completion of the GRE or MAT with acceptable scores. (Successful applicants typically have combined GRE scores of 291 [current scale] or 900 [former scale] or above or MAT scores of 402 or greater.)

Applicant must

1. have earned a bachelor's degree from an accredited university or college;
2. have an acceptable grade point average for all college work taken;
3. have completed 21 semester hours of college-level mathematics (including calculus), with at least 9 hours of mathematics beyond calculus.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the GRE or MAT;
3. submit official transcripts of all previous college work.
4. two letters of recommendation are also recommended, but not required.

Degree Requirements

The Master of Science in Mathematics with a concentration in General Mathematics requires completion of 36 hours consisting of a 9-hour core, 18 hours in the concentration, and a 9-hour cognate approved by the advisor.

Candidate must

1. complete at least 21 hours at the 6000 level;
2. participate in the graduate seminar and give an oral presentation of an approved topic;
3. successfully complete a written comprehensive examination (may be taken no more than twice).

Curriculum: Mathematics, General Mathematics Concentration

Candidate must complete 36 hours in the following course of study:

Core Courses (9 hours)

- MATH 6120 - Advanced Linear Algebra **3 credit hours**
- MATH 6170 - Sets and Logic **3 credit hours**
- MATH 6190 - Analysis I **3 credit hours**

Concentration Courses (18 hours)

Eighteen (18) hours from approved courses in mathematical sciences including at least one course from each of three different groups:

Actuarial and Financial Mathematics:

- ACSI 5200 - Introduction to Mathematics of Investment **3 credit hours** OR
- MATH 5200 - Introduction to Mathematics of Investment **3 credit hours**
- ACSI 5330 - Actuarial Mathematics I **3 credit hours**
- ACSI 5340 - Actuarial Mathematics II **3 credit hours**
- ACSI 5630 - Mathematics of Risk Management **3 credit hours**
- ACSI 5640 - Mathematics of Options, Futures, and Other Derivatives **3 credit hours**
- ACSI 6010 - Credibility Theory and Loss Distributions **3 credit hours**
- MATH 6603 - Problems in Mathematics-Mathematics of Finance **1 to 9 credit hours**
- MATH 6604 - Problems in Mathematics-Mathematics of Life Contingencies **1 to 9 credit hours**

Algebra/Number Theory:

- MATH 5420 - Number Theory **3 credit hours**
- MATH 5530 - Abstract Algebra II **3 credit hours**
- MATH 6140 - Selected Topics of Modern Mathematics: Algebra **3 credit hours**
- MATH 6510 - Advanced Algebra **3 credit hours**

Analysis:

- MATH 6141 - Selected Topics of Modern Mathematics: Analysis **3 credit hours**
- MATH 6200 - Analysis II **3 credit hours**
- MATH 6210 - Complex Variables **3 credit hours**
- MATH 6250 - Real Analysis **3 credit hours**

Combinatorics/Graph Theory:

- MATH 5700 - Combinatorics and Graph Theory **3 credit hours**
- MATH 6700 - Advanced Combinatorics and Graph Theory **3 credit hours**

Geometry/Topology:

- MATH 5270 - Introduction to Topology **3 credit hours**
- MATH 6142 - Selected Topics in Modern Mathematics: Topology **3 credit hours**
- MATH 6400 - Advanced Geometry **3 credit hours**

Industrial Mathematics:

- MATH 5310 - Numerical Analysis I **3 credit hours**
- MATH 5320 - Numerical Analysis II **3 credit hours**
- MATH 6260 - Advanced Differential Equations I **3 credit hours**
- MATH 6270 - Advanced Differential Equations II **3 credit hours**
- MATH 6300 - Optimization **3 credit hours**
- MATH 6310 - Control Theory **3 credit hours**

Statistics:

- STAT 5200 - Statistical Methods for Forecasting **3 credit hours**
- STAT 5320 - Probability and Stochastic Processes **3 credit hours**
- STAT 5360 - Regression Analysis **3 credit hours**
- STAT 5370 - Nonparametric Statistics **3 credit hours**
- STAT 5380 - Experimental Design **3 credit hours**
- STAT 6160 - Advanced Mathematical Statistics I **3 credit hours**
- STAT 6180 - Advanced Mathematical Statistics II **3 credit hours**
- STAT 6602 - Problems in Statistics-Regression Analysis **3 credit hours**
- STAT 6603 - Problems in Statistics-Nonparametric Statistics **3 credit hours**
- STAT 6604 - Problems in Statistics-Experimental Design **3 credit hours**

Cognate (9 hours)

Nine (9) additional hours approved by advisor. The master's thesis is an option in this concentration. See MATH 6640 Thesis Research (1 to 6 credits).

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Mathematics, Industrial Mathematics Concentration, M.S.

James Hart, Program Director

(615) 898-2402

James.Hart@mtsu.edu

The Department of Mathematical Sciences offers the Master of Science with a major in Mathematics, the Master of Science in Teaching with a major in Mathematics, and a minor in Mathematics at the graduate level.

Three concentrations are offered under the Master of Science: General Mathematics (students desiring a broad background in mathematics should pursue this concentration); Industrial Mathematics (students interested in positions in industry or further graduate work in applied mathematics should pursue this concentration); and Research Preparation (students wishing to pursue the Ph.D. in Mathematics should choose this concentration).

Two concentrations are offered under the Master of Science in Teaching: Middle Grade Mathematics and Secondary Mathematics.

The department also offers courses in the Master of Science in Professional Science degree. Students interested in a concentration in Biostatistics or in Actuarial Sciences should refer to the Master's of Science in Professional Science program.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission normally requires completion of the GRE or MAT with acceptable scores. (Successful applicants typically have combined GRE scores of 291 [current scale] or 900 [former scale] or above or MAT scores of 402 or greater.)

Applicant must

1. have earned a bachelor's degree from an accredited university or college;
2. have an acceptable grade point average for all college work taken;
3. have completed 21 semester hours of college-level mathematics (including calculus), with at least 9 hours of mathematics beyond calculus.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the GRE or MAT;
3. submit official transcripts of all previous college work;
4. two letters of recommendation are recommended, but not required

Degree Requirements

The Master of Science in Mathematics with a concentration in Industrial Mathematics requires completion of 36 hours of graduate courses consisting of a 9-hour core, 18 hours in the concentration, and a 9-hour cognate approved by the advisor.

Candidate must

1. complete at least 21 hours at the 6000 level;
2. participate in the graduate seminar and give an oral presentation of an approved topic;
3. successfully complete a written comprehensive examination (may be taken no more than twice).

Curriculum: Mathematics, Industrial Mathematics

Students interested in positions in industry or further graduate work in applied mathematics should pursue this concentration. In addition to the core, students must complete the concentration and a cognate (36 hours) as outlined below:

Core (9 hours)

- MATH 6120 - Advanced Linear Algebra **3 credit hours**
- MATH 6170 - Sets and Logic **3 credit hours**
- MATH 6190 - Analysis I **3 credit hours**

Concentration (18 hours)

Eighteen (18) hours including

- MATH 5310 - Numerical Analysis I **3 credit hours**
- MATH 5320 - Numerical Analysis II **3 credit hours**
- MATH 6260 - Advanced Differential Equations I **3 credit hours**
- MATH 6270 - Advanced Differential Equations II **3 credit hours**

plus two courses from

- MATH 6210 - Complex Variables **3 credit hours**
- MATH 6300 - Optimization **3 credit hours**
- MATH 6310 - Control Theory **3 credit hours**
- MATH 6400 - Advanced Geometry **3 credit hours**
- MATH 6410 - Computer-Aided Geometric Design **3 credit hours**
- STAT 6180 - Advanced Mathematical Statistics II **3 credit hours**
- MATH 6700 - Advanced Combinatorics and Graph Theory **3 credit hours** OR
- STAT 6160 - Advanced Mathematical Statistics I **3 credit hours**

Cognate (9 hours)

Nine (9) additional hours chosen from the above list; MATH 6640, and/or courses from relevant disciplines approved by advisor. The master's thesis is an option in this concentration. See MATH 6640 Thesis Research (1 to 6 credits).

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Mathematics, Middle Grade Mathematics Concentration, M.S.T.

Michaele Chappell, M.S.T. Program Director

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The Department of Mathematical Sciences offers the Master of Science with a major in Mathematics, the Master of Science in Teaching with a major in Mathematics, and a minor in Mathematics at the graduate level.

Three concentrations are offered under the Master of Science: General Mathematics, Industrial Mathematics, and Research Preparation. For those interested in teaching, two concentrations are offered under the Master of Science in Teaching: Middle Grade Mathematics and Secondary Mathematics.

The department also offers courses in the Master of Science in Professional Science degree. Students interested in a concentration in Biostatistics should refer to the Master's of Science in Professional Science program.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Master of Science in Teaching with a concentration in Middle Grade Mathematics program requires

1. an earned bachelor's degree from an accredited university or college;
2. an acceptable grade point average for all college work taken;
3. a valid elementary teaching certificate;
4. completion of the GRE or MAT with acceptable scores (MAT score generally expected to meet or exceed 402).

NOTE: Any candidate not meeting these requirements may petition to the Mathematics Education Graduate Admissions Committee.

NOTE: Candidates seeking initial licensure must meet the major requirements, satisfy a professional education component, and meet discipline-related requirements. The candidate should contact the chair of the Womack Educational Leadership Department for the professional education component and the chair of the Department of Mathematical Sciences for the discipline-related requirements.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the GRE or MAT;
3. submit official transcripts of all previous college work;
4. submit two letters of recommendation.

Degree Requirements

Candidate must

1. complete 36 hours of graduate courses (see Curriculum section below for specifics);
2. complete at least 21 hours at the 6000 level;
3. successfully complete a comprehensive examination (may be taken no more than twice).

Curriculum: Mathematics, Middle Grade Mathematics

Candidate must complete 36 hours in the following course of study:

Required Core Courses (9 hours)

- MATH 6320 - Mathematical Problem Solving **3 credit hours**
- MATH 6380 - Current Trends in Mathematics Education **3 credit hours**
- MATH 6900 - Research in Mathematics Education **3 credit hours**

Concentration (15 hours)

Selected from:

- MATH 5620 - History and Philosophy of Mathematics **3 credit hours**
- MATH 6100 - Mathematics for Teachers **3 credit hours**
- MATH 6330 - Algebra for Teachers **3 credit hours**
- MATH 6340 - Geometry for Teachers **3 credit hours**
- MATH 6350 - Probability and Statistics for Teachers **3 credit hours**
- other courses in the department selected in consultation with advisor.

Cognate (12 hours)

Twelve (12) hours in the College of Education (determined by the departments of Mathematical Sciences, Educational Leadership, and Elementary and Special Education).

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Mathematics, Research Preparation Concentration, M.S.

James Hart, Program Director

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The Department of Mathematical Sciences offers the Master of Science with a major in Mathematics, the Master of Science in Teaching with a major in Mathematics, and a minor in Mathematics at the graduate level.

Three concentrations are offered under the Master of Science: General Mathematics (students desiring a broad background in mathematics should pursue this concentration); Industrial Mathematics (students interested in positions in industry or further graduate work in applied mathematics should pursue this concentration); and Research Preparation (students wishing to pursue the Ph.D. in Mathematics should choose this concentration).

Two concentrations are offered under the Master of Science in Teaching: Middle Grade Mathematics and Secondary Mathematics.

The department also offers courses in the Master of Science in Professional Science degree. Students interested in a concentration in Biostatistics or in Actuarial Science should refer to the Master's of Science in Professional Science program.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission normally requires completion of the GRE or MAT with acceptable scores. (Successful applicants typically have combined GRE scores of 291 [current scale] or 900 [former scale] or above or MAT scores of 402 or greater.)

Applicant must

1. have earned a bachelor's degree from an accredited university or college;
2. have an acceptable grade point average for all college work taken;
3. have completed 21 semester hours of college-level mathematics (including calculus), with at least 9 hours of mathematics beyond calculus.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Master of Science in Mathematics applicants must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the GRE or MAT;
3. submit official transcripts of all previous college work;
4. two letters of recommendation are recommended, but not required.

Degree Requirements

The Master of Science in Mathematics with a concentration in Research Preparation requires completion of 36 hours consisting of a 9-hour core, 18 hours in the concentration, and a 9-hour cognate approved by the advisor.

Candidate must

1. complete at least 21 hours at the 6000 level;
2. participate in the graduate seminar and give an oral presentation of an approved topic;
3. successfully complete a written comprehensive examination (may be taken no more than twice);
4. complete and defend a thesis. (MATH 6640).

Curriculum: Mathematics, Research Preparation

Required Core Courses (9 hours)

- MATH 6120 - Advanced Linear Algebra **3 credit hours**
- MATH 6170 - Sets and Logic **3 credit hours**
- MATH 6190 - Analysis I **3 credit hours**

Concentration (18 hours)

- MATH 5270 - Introduction to Topology **3 credit hours**
- MATH 5530 - Abstract Algebra II **3 credit hours**
- MATH 5700 - Combinatorics and Graph Theory **3 credit hours**
- MATH 6200 - Analysis II **3 credit hours**
- MATH 6140 - Selected Topics of Modern Mathematics: Algebra **3 credit hours**
- MATH 6210 - Complex Variables **3 credit hours**

Cognate (9 hours)

Nine (9) hours including MATH 6640 and six (6) additional hours approved by advisor.

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Mathematics, Secondary Mathematics Concentration, M.S.T.

Michaele Chappell, M.S.T. Program Director

(615) 898-2393

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The Department of Mathematical Sciences offers the Master of Science with a major in Mathematics, the Master of Science in Teaching with a major in Mathematics, and a minor in Mathematics at the graduate level.

Three concentrations are offered under the Master of Science: General Mathematics, Industrial Mathematics, and Research Preparation. For those interested in teaching, two concentrations are offered under the Master of Science in Teaching: Middle Grade Mathematics and Secondary Mathematics.

The department also offers courses in the Master of Science in Professional Science degree. Students interested in a concentration in Biostatistics should refer to the Master's of Science in Professional Science program.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Master of Science in Teaching in Mathematics with a concentration in Secondary Mathematics program requires

1. an earned bachelor's degree from an accredited university or college;
2. an acceptable grade point average for all college work taken;
3. a valid secondary teaching certificate or completion of 9 hours of mathematics past the calculus sequence (I, II, III) or be seeking initial licensure to teach secondary mathematics*;
4. completion of the GRE or MAT with acceptable scores (MAT score generally expected to meet or exceed 402).

NOTE: Any candidate not meeting these requirements may petition to the Mathematics Education Graduate Admissions Committee.

NOTE: Candidates seeking initial licensure to teach secondary mathematics may be required to complete additional hours in mathematics and/or professional education. An advisor should be consulted.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the GRE or MAT;
3. submit official transcripts of all previous college work;
4. submit two letters of recommendation.

Degree Requirements

Candidate must

1. complete 36 hours of graduate courses (see Curriculum section below for specifics);
2. complete at least 21 hours at the 6000 level;
3. successfully complete a comprehensive examination (may be taken no more than twice).

Curriculum: Mathematics, Secondary Mathematic

Candidate must complete 36 hours in the following course of study:

Required Core Courses (9 hours)

- MATH 6320 - Mathematical Problem Solving **3 credit hours**
- MATH 6380 - Current Trends in Mathematics Education **3 credit hours**
- MATH 6900 - Research in Mathematics Education **3 credit hours**

Concentration Courses (15 hours)

- MATH 6170 - Sets and Logic **3 credit hours**
- Three additional courses from the department to be selected in consultation with the advisor.
plus one course from:
- STAT 6020 - Introduction to Biostatistics **3 credit hours**
- STAT 6602 - Problems in Statistics-Regression Analysis **3 credit hours**
- STAT 6603 - Problems in Statistics-Nonparametric Statistics **3 credit hours**
- STAT 6604 - Problems in Statistics-Experimental Design **3 credit hours**

Cognate (12 hours)

Twelve (12) hours in the College of Education (determined jointly by the departments of Mathematical Sciences and Educational Leadership).

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Mathematics Minor

There are two patterns of minors from which a candidate may choose:

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

Actuarial Sciences

ACSI 5140 - Mathematical Foundations of Actuarial Science

3 credit hours

Prerequisites: ACSI/MATH 3020 (or MATH 3110) and STAT 3150 or consent of instructor. A preparatory course for the Society of Actuaries/Casualty Actuarial Society Course/Exam 1. Integrates calculus, probability, and risk management topics into fundamental tools for assessing risk in an actuarial environment. Calculus and probability topics include derivatives, integrals, partials, random variables, distributions, and conditional probability. Risk topics include frequency and severity. Insurance concepts such as retention, deductible, coinsurance, and risk premium.

ACSI 5200 - Introduction to Mathematics of Investment

3 credit hours

(Same as MATH 5200.) Prerequisites: MATH 1910 and one semester of probability/statistics or consent of instructor. Calculus and probability/statistics used to model and analyze investments in bonds, treasury bills, stocks, and other derivatives. Topics include obtaining the price of a bond as a function of interest rate, developing formulas for duration and convexity to study the sensitivity of price to interest rate, and mathematical modeling of investor preference and attitude toward risk.

ACSI 5220 - Mathematics of Corporation Finance

3 credit hours

Prerequisites: ACSI/MATH 4200/ACSI 5200/MATH 5200 and ECON 2410, 2420, or consent of instructor. A preparatory course for the Society of Actuaries/Casualty Actuarial Society Course/Exam 2. Applies calculus and theory of interest tools to intermediate topics in microeconomics. Topics include the mathematics of supply, demand, and equilibrium; prices, costs, and the gains from trade; consumer behavior; elasticities; competition; monopoly; market power, collusion, and oligopoly; the mathematics of risk and uncertainty; and surplus economics.

ACSI 5230 - Mathematics of Compound Interest

3 credit hours

Prerequisite: ACSI/MATH 4200/ACSI 5200/MATH 5200 or consent of instructor. A preparatory course for the Society of Actuaries/Casualty Actuarial Society Course/Exam 2. Topics include measurement of interest (including accumulating and present value

factors), annuities certain, yield rates, amortization schedules, sinking funds, and bonds and related securities.

ACSI 5240 - Mathematics of Interest Theory, Economics, and Finance

3 credit hours

Prerequisites: ACSI 4230/ACSI 5230 or consent of instructor. A preparatory course for the Society of Actuaries/Casualty Actuarial Society Course/Exam 2. Applies calculus and theory of interest tools to intermediate topics in microeconomics and macroeconomics and topics in finance. Topics include pricing activities, the simplified Keynesian model, interest and discount rates, valuation of payment streams, yield rates, amortization, cash flows and internal rate of return, stock and bond valuation, portfolio risks, the Capital Asset Pricing Model (CAPM), efficient markets, capital structure, leverage, financial performance measurement, and basic option pricing and the Black-Scholes model.

ACSI 5330 - Actuarial Mathematics I

3 credit hours

Prerequisites: ACSI 4230/ACSI 5230 and STAT 4190 or consent of instructor. First of a two-semester sequence; a preparatory course for the Society of Actuaries/Casualty Actuarial Society Course/Exam 3. Topics include survival distributions and life tables, life insurance, life annuities, and net premiums.

ACSI 5340 - Actuarial Mathematics II

3 credit hours

Prerequisite: ACSI 4230/ACSI 5230 and STAT 4190 or consent of instructor. Second of a two-semester sequence; a preparatory course for the Society of Actuaries/Casualty Actuarial Society Course/Exam 3. Topics chosen from net premium reserves, multiple life functions, multiple decrement models, valuation theory and pension plans, and insurance models (including expenses and nonforfeiture benefits and dividends).

ACSI 5600 - Problems in Actuarial Science

1 to 6 credit hours

Prerequisite: Consent of instructor. Students wishing to enroll must submit a written course/topic proposal to the department prior to the semester in which ACSI 5600 is taken. The proposal must be approved prior to student taking the course. At the conclusion of this course, each enrollee must submit a written report to the department.

ACSI 5630 - Mathematics of Risk Management
3 credit hours

Prerequisite: ACSI/MATH 4200/ACSI 5200/MATH 5200. A preparatory course for the Society of Actuaries Course 6. Topics include mathematical modeling of volatility; pricing of bonds, stocks, and other derivatives with uncertainty; benchmark portfolios; asset/liability management for property/casualty insurers; liability associated with a financially distressed company. Heath-Jarrow-Morton and Cox-Ingersoll-Ross models studied.

ACSI 5640 - Mathematics of Options, Futures, and Other Derivatives
3 credit hours

Prerequisites: ACSI/MATH 4630/ACSI 5630/5630 and 4200/ACSI 5200/MATH 5200. A preparatory course for the Society of Actuaries Course 6. Topics include risk management using options, interest rate swaps, interest rate caps, Black-Scholes analysis, Taylor series expansion to obtain hedge parameters, portfolio insurance, numerical procedures, interest rate derivatives, and use of Black's model.

ACSI 6010 - Credibility Theory and Loss Distributions
3 credit hours

Prerequisite: STAT 5190 or consent of instructor. A preparatory course for Exam Part 4B of the Casualty Actuarial Society. Topics include Bayes Theorem and its relationship to credibility theory and analysis of statistical distributions for modeling insurance claims by size.

ACSI 6020 - Construction and Evaluation of Actuarial Models
3 credit hours

Prerequisite: STAT 5140 or permission of instructor. Introduces modeling and covers important actuarial methods useful in modeling. Assumes a thorough knowledge of calculus, probability, and mathematical statistics. Serves as a preparatory course for the Society of Actuaries/Casualty Actuarial Society Course-C/Exam 4. Topics include construction of empirical models, construction and selection of parameter models, credibility, interpolation and smoothing, and simulation.

ACSI 6030 - Actuarial Models for Life Contingencies
3 credit hours

Prerequisites: STAT 3150 and ACSI 4230 or permission of instructor. A preparatory course for

Exam-MLC (Exam-3L) for the Society of Actuaries (Casualty Actuarial Society). Topics include survival distributions, life tables, life insurance, life annuities, and pensions, premiums and reserves, multiple lives, multiple decrements, models including expenses.

ACSI 6040 - Actuarial Models for Financial Economics
3 credit hours

Prerequisite: ACSI 4200 or equivalent. A preparatory course for Exam-MFE (Exam-3F) for the Society of Actuaries (Casualty Actuarial Society). Topics include applications of stochastic processes to actuarial models, Poisson process, Markov process, interest rate models, arbitrage free models, valuation of derivative securities, financial risk management.

ACSI 6600 - Problems in Actuarial Science
1 to 6 credit hours

Prerequisites: Mathematical maturity, preparation in actuarial science (normally nine semester hours of graduate study in actuarial science), and consent of instructor. Students wishing to enroll must select a topic in actuarial science prior to the semester in which ACSI 6600 is taken. Topics include, but are not limited to, applications of principles of actuarial mathematics to group and health insurance, retirement benefits, quantitative risk management, rate making, statistical methods in actuarial data analysis, interest rate models and their applications. Students must submit a written report. Course may be taken up to two times provided that the projects are completely different. Credits may total 1-12 hours. Credit will be based on the difficulty and complexity of the project as determined by the instructor. Pass/Fail grading.

Mathematics

MATH 5010 - Concepts of Mathematics
3 credit hours

Recommended for students preparing to become elementary school teachers. Topics include complex numbers, finite mathematical systems, linear equations and inequalities, functions and their graphs, introductory matrix algebra, interest and consumer credit, and microcomputer applications in the mathematics classroom

MATH 5200 - Introduction to Mathematics of Investment
3 credit hours

(Same as ACSI 5200.) Prerequisites: MATH 1910 and

one semester of probability/statistics or consent of instructor. Calculus and probability/statistics used to model and analyze investments in bonds, treasury bills, stocks, and other derivatives. Topics include obtaining the price of a bond as a function of interest rate, developing formulas for duration and convexity to study the sensitivity of price to interest rate, and mathematical modeling of investor preference and attitude toward risk.

MATH 5270 - Introduction to Topology

3 credit hours

Prerequisites: MATH 3110 and a previous upper-division course in which the student has been required to write proofs. Fundamental concepts of topology including continuity, compactness, connectedness, separation axioms, and metric spaces.

MATH 5310 - Numerical Analysis I

3 credit hours

Prerequisite: CSCI 3180 or equivalent. Application of computer-oriented numerical algorithms to algebraic equations, differential and integral equations, and linear algebra. Rigorous mathematical treatment of error included.

MATH 5320 - Numerical Analysis II

3 credit hours

Prerequisite: CSCI 3180 or equivalent. Application of computer-oriented numerical algorithms to algebraic equations, differential and integral equations, and linear algebra. Rigorous mathematical treatment of error included.

MATH 5420 - Number Theory

3 credit hours

Divisibility congruences, quadratic residues, Diophantine equations, quadratic forms, and continued fractions.

MATH 5470 - Introduction to Modern Algebra

3 credit hours

A treatment of sets, relations, operations, and the construction of number systems in algebra.

MATH 5510 - Abstract Algebra I

3 credit hours

Groups with a brief introduction to rings, integral domains, and fields.

MATH 5530 - Abstract Algebra II

3 credit hours

Prerequisite: MATH 4510 or MATH 5510. Theory of rings, fields, integral domains, matrices, and vector spaces.

MATH 5600 - Problems in Contemporary Mathematics

1 to 6 credit hours

Pass/Fail grading in specified sections.

MATH 5620 - History and Philosophy of Mathematics

3 credit hours

Prerequisites: Background in geometry, number theory, and/or symbolic logic helpful. The character of mathematical thought by way of mathematical problems which have occupied successively the outstanding mathematicians of Babylon, Egypt, Greece, China, the Renaissance, and modern times paralleled with a study of three schools of mathematical philosophy: intuitionism, logicism, and formalism. Open only to senior and graduate mathematics majors.

MATH 5700 - Combinatorics and Graph Theory

3 credit hours

Prerequisite: MATH 2010 or 3080. Selected topics in combinatorics and graph theory emphasizing combinatorial problem solving and algorithmic proof.

MATH 6100 - Mathematics for Teachers

3 credit hours

Mathematics as problem solving, communication, and reasoning. Connecting different fields of mathematics. Topics include number and number relationships, number systems and number theory, computation and estimation, patterns and functions, statistics and probability, algebra, geometry, measurement.

MATH 6120 - Advanced Linear Algebra

3 credit hours

Prerequisite: MATH 2010. Continuation of linear algebra topics in MATH 2010 including advanced topics in inner product spaces and structure of linear operators.

MATH 6140 - Selected Topics of Modern Mathematics: Algebra

3 credit hours

Prerequisite: MATH 5530 or consent of instructor. Extension of previous work in algebra with emphasis on topics not treated in other courses.

MATH 6141 - Selected Topics of Modern Mathematics: Analysis

3 credit hours

Prerequisite: MATH 6200 or consent of instructor.
Extension of previous work in analysis with emphasis on topics not treated in other courses.

MATH 6142 - Selected Topics in Modern Mathematics: Topology

3 credit hours

Prerequisite: MATH 4270 or MATH 5270 or consent of instructor. Extension of previous work in topology with emphasis on topics not treated in other courses.

MATH 6170 - Sets and Logic

3 credit hours

Includes topics in three categories: 1) Propositions, predicates, quantifiers, truth tables, tautologies, and methods of mathematical proof including mathematical induction. 2) Sets, relations, functions, graphs, cardinality, and the Axiom of Choice. 3) Applications of these foundations to selected results in algebra and analysis as time permits. It is recommended that this course be taken early in the graduate program.

MATH 6190 - Analysis I

3 credit hours

Prerequisite: MATH 4250 or equivalent. Rigorous treatment of limits, continuity, differentiation, and integration in n -dimensional Euclidean space; infinite series; introduction to metric spaces.

MATH 6200 - Analysis II

3 credit hours

Prerequisite: MATH 6190 or equivalent. A continuation of MATH 6190. Lebesgue measure, Lebesgue integral, functions of bounded variation.

MATH 6210 - Complex Variables

3 credit hours

Prerequisite: MATH 6190. Theory of functions of complex variables and their application in mathematics and physics.

MATH 6230 - Teaching of Introductory College Mathematics

3 credit hours

Foundations and pertinent topics in college algebra, trigonometry, analytic geometry, and calculus with emphasis on techniques of presentation.

MATH 6250 - Real Analysis

3 credit hours

Prerequisite: MATH 6200. A continuation of MATH 6200. Advanced topics in real analysis. Abstract measure and integration theory. Introduction to functional analysis.

MATH 6260 - Advanced Differential Equations I

3 credit hours

Prerequisites: MATH 3120 and 4250. Qualitative and quantitative analysis of systems of differential equations. Gradient systems, Sturm-Liouville problems. Elementary techniques for boundary value problems of partial differential equations.

MATH 6270 - Advanced Differential Equations II

3 credit hours

Prerequisite: MATH 6260. Solution techniques for boundary value problems. Problems involve heat, wave, and potential equations. Topics include the method of characteristics, series solutions, integral transforms, and Green's functions.

MATH 6300 - Optimization

3 credit hours

Prerequisite: MATH 5320 or consent of instructor. Constrained and unconstrained optimization problems, including the generalized least squares problem and Eigenvalue problems. Methods include orthogonalization, conjugate gradient, and quasi-Newton algorithms.

MATH 6310 - Control Theory

3 credit hours

Prerequisite: MATH 6260 or consent of instructor. Vector space applications to system analysis; observability, controllability, and stabilization of systems; feedback systems; Lyapunov methods; optimal control, and the calculus variations.

MATH 6320 - Mathematical Problem Solving

3 credit hours

Prerequisite: Permission of instructor. A basis for reflection on teaching and learning mathematics. Problem-solving strategies and heuristics. Focuses on all branches of mathematics, providing an opportunity to synthesize mathematical knowledge.

MATH 6330 - Algebra for Teachers

3 credit hours

Prerequisite: Permission of instructor. Review and extension of algebraic skills and concepts as they

relate to the teaching and learning of algebra. Focus on algebraic thinking and problem solving, algebraic systems, functions, graphing, and linear algebra.

MATH 6340 - Geometry for Teachers

3 credit hours

Prerequisite: Permission of instructor. Investigations into the foundations of plane, solid, and coordinate geometry, motion geometry, similarities and congruencies, measurement and the application of geometry. Instruction will model the suggested pedagogy appropriate for school mathematics.

MATH 6350 - Probability and Statistics for Teachers

3 credit hours

Prerequisite: Permission of instructor. Relation to school mathematics. Development of central tendency and variation, concepts of chance including sample space, randomness, conditional probability, and independence.

MATH 6360 - Technology Tools for School Mathematics

3 credit hours

Integrates technology into the teaching and learning process for teachers of middle and secondary school mathematics. Investigates a variety of mathematical subject matter appropriate for middle and secondary school students via technology. Lessons designed for use with a variety of technologies, including graphing calculators, dynamic geometry software, spreadsheets, authoring software, presentation software, and the World Wide Web. Highly individualized due to varying backgrounds and interests of students.

MATH 6380 - Current Trends in Mathematics Education

3 credit hours

Prerequisite: Permission of instructor. Innovative topics or critical issues related to the teaching and learning of mathematics. Includes history of mathematics education, pedagogical content knowledge, assessment and evaluation, and technologies.

MATH 6400 - Advanced Geometry

3 credit hours

Prerequisite: MATH 3070 or consent of instructor. Detailed study of one or more of the various branches of geometry including non-Euclidean geometry,

projective geometry, algebraic geometry, and differential geometry.

MATH 6410 - Computer-Aided Geometric Design
3 credit hours

Prerequisites: MATH 5320 and MATH 6400 or consent of instructor. Parametric curves and surfaces; Bezier and B-spline interpolation and approximation techniques; visual smoothness and parameterization for curves; Coons, Bezier, and triangular patches; scattered data methods.

MATH 6510 - Advanced Algebra

3 credit hours

Prerequisite: MATH 5530. Polynomial rings, theory of fields, vector spaces and intermediate group theory necessary for Galois theory, and Galois theory.

MATH 6601 - Problems in Mathematics-Advanced Calculus

1 to 9 credit hours

Prerequisite: Mathematical maturity, preparation in the area, and normally nine semester hours of graduate study. Problems course dealing with theory methods and applications.

MATH 6602 - Problems in Mathematics-Number Theory

1 to 9 credit hours

Prerequisite: Mathematical maturity, preparation in the area, and normally nine semester hours of graduate study. Problems course dealing with theory methods and applications.

MATH 6603 - Problems in Mathematics-Mathematics of Finance

1 to 9 credit hours

Prerequisite: Mathematical maturity, preparation in the area, and normally nine semester hours of graduate study. Problems course dealing with theory methods and applications.

MATH 6604 - Problems in Mathematics-Mathematics of Life Contingencies

1 to 9 credit hours

Prerequisite: Mathematical maturity, preparation in the area, and normally nine semester hours of graduate study. Problems course dealing with theory methods and applications.

MATH 6605 - Problems in Mathematics-Numerical Analysis

1 to 9 credit hours

Prerequisite: Mathematical maturity, preparation in the area, and normally nine semester hours of graduate study. Problems course dealing with theory methods and applications.

MATH 6606 - Problems in Mathematics-Topology
1 to 9 credit hours

Prerequisite: Mathematical maturity, preparation in the area, and normally nine semester hours of graduate study. Problems course dealing with theory methods and applications.

MATH 6607 - Problems in Mathematics-Abstract Algebra

1 to 9 credit hours

Prerequisite: Mathematical maturity, preparation in the area, and normally nine semester hours of graduate study. Problems course dealing with theory methods and applications.

MATH 6608 - Problems in Mathematics-Combinatorics and Graph Theory

1 to 9 credit hours

Prerequisite: Mathematical maturity, preparation in the area, and normally nine semester hours of graduate study. Problems course dealing with theory methods and applications.

MATH 6610 - Introduction to Graduate Study
2 credit hours

MATH 6640 - Thesis Research
1 to 6 credit hours

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

MATH 6700 - Advanced Combinatorics and Graph Theory
3 credit hours

Prerequisite: MATH 4700/MATH 5700. Selected topics in combinatorics and graph theory extending topics studied in MATH 4700/MATH 5700.

MATH 6900 - Research in Mathematics Education
3 credit hours

Prerequisite: Permission of instructor. Examines

factors influencing research and critical analyses of selected research in mathematics education. Studies representing different methodologies critiqued.

MATH 6999 - Comprehensive Examination and Preparation

1 credit hours

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

MATH 7060 - Independent Study
1 to 9 credit hours

MATH 7320 - Mathematical Problem Solving
3 credit hours

Required of students in Mathematics Education concentration of Mathematics and Science Education Ph.D. program. Examines research on teaching and learning mathematics through problem solving as a process, problem-solving strategies and heuristics, and assessing problem solving. Focuses on all branches of mathematics providing an opportunity to synthesize mathematical knowledge.

MATH 7450 - Mathematical Modeling I
3 credit hours

Prerequisites: COMS 6100 and COMS 6500. Intense lecture and project-oriented course that covers current topics in mathematical modeling in physical and biological sciences.

MATH 7640 - Dissertation Research
1 to 6 credit hours

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

MATH 7750 - Mathematical Modeling II
3 credit hours

Prerequisite: MATH 7450. Covers mathematical models involving partial differential equations, partial differential integral equations, multiscale modeling, and simulation in physical and biological sciences.

MATH 7800 - Teaching Internship**3 credit hours**

Prerequisite: Permission of department. Admission based on recommendations and performance in teaching. Offered every term.

MATH 7810 - Teaching Internship**3 credit hours**

Prerequisite: Permission of department. Admission based on recommendations and performance in teaching. Offered every term.

MATH 7900 - Teaching and Learning Mathematics**3 credit hours**

Focus on theoretical and practical issues regarding how students learn mathematics, best practices for teaching mathematics, and issues from current literature on the teaching and learning of mathematics.

Statistics**STAT 5130 - Applied Statistics****3 credit hours**

Prerequisite: Two years of high school algebra or equivalent. Topics include descriptive statistics, probability, and statistical inference. The inference unit covers means proportions and variances for one and two samples, one-way ANOVA, regression and correlation analysis, chi-square analysis, and topics in nonparametrics.

STAT 5140 - Probabilistic and Statistical Reasoning**3 credit hours**

Focuses on probability and statistics concepts. Topics include binomial and normal probabilistic modeling; important statistical concepts such as confounding, randomization, sampling variability and significance; statistical testing of significant differences and associations; and design experiments to test research hypotheses.

STAT 5190 - Mathematical Statistics II**3 credit hours**

Prerequisite: STAT 3150 or equivalent. Theory of statistical inference. Topics include sampling distributions, decision theory, estimation, test of hypothesis, regression analysis, analysis of variance, and selected applications.

STAT 5200 - Statistical Methods for Forecasting**3 credit hours**

Prerequisite: STAT 4190. Application of the regression model in forecasting regression and exponential smoothing methods to forecast nonseasonal time-series, seasonal series and globally constant seasonal models, stochastic time series models; and forecast evaluation. (Offers preparation to actuarial science students for the Society of Actuaries Exam #120 and Exam Part 3A administered by the Casualty Actuarial Society.)

STAT 5320 - Probability and Stochastic Processes**3 credit hours**

Prerequisite: Two semesters of calculus and STAT 3150 (or MATH 2050) or consent of instructor. Theoretical basis for stochastic processes and use as models of real-world phenomena. Topics include Markov chains, Poisson processes, and Brownian motion and stationary processes. Applications include Gambler's Ruin, birth and death models, hitting times, stock option pricing, and the Black-Scholes model.

STAT 5360 - Regression Analysis**3 credit hours**

Prerequisites: MATH 2050 and STAT 3150 or equivalent. Theory and application of regression models. Approaches to model building and data analysis treated. Computation and interpretation of results facilitated through use of statistical software packages.

STAT 5370 - Nonparametric Statistics**3 credit hours**

Prerequisite: STAT 3150 or equivalent. Statistical tests that require no assertions about parameters or about the form of the population from which the samples are drawn. A wide range of practical problems.

STAT 5380 - Experimental Design**3 credit hours**

Prerequisite: STAT 3150 or equivalent. Topics include one-way analysis of variance, multiple comparison, multifactor analysis of variance, and various practical issues in experimental design. Computation and interpretation of results are facilitated through the use of statistical software packages.

STAT 5600 - Problems in Statistics**1 to 6 credit hours**

Prerequisite: Senior standing and consent of instructor. Students wishing to enroll must submit a

written course/topic proposal to the department prior to the semester in which STAT 5600 is taken. Proposal must be approved prior to student taking the course. At the conclusion of the course, each enrollee must submit a written report to the department.

STAT 6020 - Introduction to Biostatistics

3 credit hours

Prerequisite: Introductory probability/statistics course or permission of instructor. Contemporary and medical research methodology for biostatistics.

Descriptive and inferential statistics including parametric and nonparametric hypothesis testing methods, sample size, statistical significance and power, survival curve analysis, relative risk, odds ratios, chi square modeling, and analysis of variance. Data will be analyzed using statistical software.

STAT 6160 - Advanced Mathematical Statistics I

3 credit hours

Prerequisite: Two semesters of calculus or permission of instructor. Introduction to theoretical probability used in statistics with an emphasis on the mathematical theory. A rigorous treatment of random variables, their probability distributions, and mathematical exceptions in a univariate and multivariate setting. Includes conditional probabilities, stochastic independence, sampling theory, and limit laws.

STAT 6180 - Advanced Mathematical Statistics II

3 credit hours

Prerequisite: STAT 6160 or permission of instructor. Theory of estimation and hypothesis tests. Topics include minimum variance unbiased estimation, methods of estimation, most powerful tests, likelihood ratio tests, decision theory, and sequential test procedures.

STAT 6510 - Biostatistical Methods

3 credit hours

Prerequisite: STAT 6020 or permission of instructor. Biostatistical methods focusing on the design and analysis of clinical trials and sample surveys. Topics include clinical trial designs and phases, bias, random error, sample size, power, estimating clinical effects, design-based methods of data analysis from sample surveys, sampling techniques, nonresponse, and sampling frame issues.

STAT 6520 - Advanced Biostatistical Methods

3 credit hours

Prerequisites: STAT 6020 and STAT 6160 or

permission of instructor. Mathematically rigorous presentation of categorical data analysis methods for univariate and correlated multivariate responses including contingency table analysis, logistic regression, and loglinear models; survival analysis for analyzing time-to-event data including survivor functions, Kaplan-Meier curves, and Cox proportional hazards model; and other health applications of multivariate analysis methods.

STAT 6600 - Problems in Statistics

3 credit hours

Prerequisite: Mathematical maturity, preparation in the area and (normally) nine semester hours of graduate study. Problems course dealing with theory, methods, and applications.

STAT 6601 - Problems in Statistics-Mathematical Statistics

3 credit hours

Prerequisite: Mathematical maturity, preparation in the area and (normally) nine semester hours of graduate study. Problems course dealing with theory, methods, and applications.

STAT 6602 - Problems in Statistics-Regression Analysis

3 credit hours

Prerequisite: Mathematical maturity, preparation in the area and (normally) nine semester hours of graduate study. Problems course dealing with theory, methods, and applications.

STAT 6603 - Problems in Statistics-Nonparametric Statistics

3 credit hours

Prerequisite: Mathematical maturity, preparation in the area and (normally) nine semester hours of graduate study. Problems course dealing with theory, methods, and applications.

STAT 6604 - Problems in Statistics-Experimental Design

3 credit hours

Prerequisite: Mathematical maturity, preparation in the area and (normally) nine semester hours of graduate study. Problems course dealing with theory, methods, and applications.

STAT 6605 - Problems in Statistics-SAS Programming

1-9 credit hours Prerequisite: Mathematical maturity, preparation in the area and (normally) nine semester

hours of graduate study. Problems course dealing with theory, methods, and applications.

STAT 7020 - Introduction to Biostatistics
3 credit hours

Introductory probability/statistics course or permission of instructor. Contemporary and medical research methodology for biostatistics. Descriptive and inferential statistics including parametric and nonparametric hypothesis testing methods, sample size, statistical significance and power, survival curve analysis, relative risk, odds ratios, chi square modeling, and analysis of variance. Data will be analyzed using statistical software. Applied biostatistics research project required (7000) level.

STAT 7400 - Computational Statistics
3 credit hours

Prerequisites: COMS 6100 and STAT 5140 or equivalent. Statistical visualization and other computationally intensive methods. The role of computation as a fundamental tool of discovery in data analysis, statistical inference, and development of statistical theory and methods. Monte Carlo studies in statistics, computational inference, tools for identification of structure in data, numerical methods in statistics, estimation of functions (orthogonal polynomials, splines, etc.), statistical models, graphical methods, data fitting and data mining, and machine learning techniques.

STAT 7600 - Problems in Statistics
1-9 credit hours

Prerequisite: Permission of instructor, mathematical maturity, preparation in the area, and (normally) nine semester hours of graduate study. Problems course dealing with theory, methods, and applications.

STAT 7601 - Problems in Statistics-Mathematical Statistics
1-9 credit hours

Prerequisite: Permission of instructor, mathematical maturity, preparation in the area, and (normally) nine semester hours of graduate study. Problems course dealing with theory, methods, and applications.

STAT 7603 - Problems in Statistics: Nonparametric Statistics
1-9 credit hours

Prerequisite: Permission of instructor, mathematical maturity, preparation in the area, and (normally) nine semester hours of graduate study. Problems course dealing with theory, methods, and applications.

STAT 7604 - Problems in Statistics: Experimental Design
1-9 credit hours

Prerequisite: Permission of instructor, mathematical maturity, preparation in the area, and (normally) nine semester hours of graduate study. Problems course dealing with theory, methods, and applications.

STAT 7605 - Problems in Statistics: SAS Programming
1-9 credit hours

Prerequisite: Permission of instructor, mathematical maturity, preparation in the area, and (normally) nine semester hours of graduate study. Problems course dealing with theory, methods, and applications.

STAT 7800 - Teaching Internship
3 credit hours

Prerequisite: Permission of department. Admission based on recommendations and performance in teaching. Offered every term.

STAT 7810 - Teaching Internship
3 credit hours

Prerequisite: Permission of department. Admission based on recommendations and performance in teaching. Offered every term.

Physics and Astronomy

Ron Henderson, Chair

(615) 898-2130

www.mtsu.edu/physics/

The Department of Physics and Astronomy offers a minor at the graduate level. The department also offers courses in the Ph.D. in Molecular Biosciences and the Ph.D. in Computational Science.

Physics Minor

There are two patterns of minors from which a candidate may choose:

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

Physics

PHYS 5310 - Electricity and Magnetism **3 credit hours**

Topics including electric and magnetic fields, electrostatic potential, and potential energy and fields in matter discussed in a mathematically rigorous manner. A variety of good applications of mathematical methods in physics.

PHYS 5380 - Introduction to Quantum Mechanics **3 credit hours**

Origin of quantum theory; wave packets and deBroglie waves; Heisenberg uncertainty principles. Schroedinger wave equation, operators, eigenfunctions, square well potential, the harmonic oscillator, the hydrogen atom, molecular binding and molecular spectra.

PHYS 6330 - Principles of Modern Physics **3 credit hours**

Charged particles and their behaviors; electronic structures of the atoms; nuclear structures and processes; and radiation.

PHYS 6340 - Fundamentals of Physics **6 credit hours**

Basic laws and principles of classical and modern physics. Lecture topics and laboratory experiences designed to advance student's knowledge of physics.

PHYS 7010 - Principles of Molecular Biophysics **3 credit hours**

Prerequisite: PHYS 2021 or 2120 or permission of department. Reviews the structure of proteins, nucleic acids, carbohydrates, lipids, and the forces and interactions maintaining their structures in solution; thermodynamics and kinetics of protein folding; polymer chain statistics and helix-coil transitions in biopolymers; biopolymer dynamics; structural methods in biology; X-ray crystallography, NMR and fluorescence spectroscopy, electron and probe microscopy, single-molecule methods.

PHYS 7400 - Computational Physics I **3 credit hours**

Prerequisites: COMS 6500 and COMS 6100 and CSCI 6020 or consent of instructor. Expresses physical phenomena in mathematical form and then adapting these models for analysis using the techniques of computational physics. Covers a number of the computational standards of modern physics such as chaotic dynamics, spectral analysis, Monte Carlo methods, and optimization techniques such as genetic algorithms and simulated annealing.

College of Behavioral and Health Sciences

Criminal Justice Administration

Lance Selva, Interim Chair

(615) 898-2630

www.mtsu.edu/criminaljustice/

The Department of Criminal Justice Administration offers a Master of Criminal Justice (M.C.J.) degree in cooperation with Tennessee State University. A minor in Criminal Justice at the graduate level is also offered at MTSU.

Criminal Justice Administration, M.C.J.

Lance H. Selva, Program Director

(615) 898-2630

Lance.Selva@mtsu.edu

The Department of Criminal Justice Administration offers a Master of Criminal Justice (M.C.J.) degree in cooperation with Tennessee State University. A minor in Criminal Justice Administration at the graduate level is also offered at MTSU.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

The home institution is the institution to which the student applies and is admitted. Each institution will offer the entire core curriculum of the Master of Criminal Justice degree. The MCJ degree will be awarded at the student's home institution, and graduates will be considered alumni of that institution.

Normally, applicants for admission are expected to present satisfactory scores on the Graduate Record Examination (GRE) or a score of 370 or better on the Miller Analogies Test.

Applicants are expected to have an undergraduate degree in criminal justice, or to have completed a minimum of 18 credits at the undergraduate level in criminal justice or an approved equivalent.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

To be considered for Fall admission, an applicant's materials must be received by June 15; for Spring admission, November 1; and for Summer admission, April 15.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT);
3. submit official transcripts of previous college work.

Degree Requirements

The Master of Criminal Justice degree requires completion of either a thesis (33 hours) or non-thesis (36 hours) program of study with no more than 30 percent of the total degree hours dually listed as undergraduate/graduate hours.

Curriculum: Criminal Justice

Candidate must complete 33 (thesis option) or 36 (non-thesis option) hours in the following curriculum:

Core Courses (18 hours)

- CJA 6000 - Criminal Justice Administration **3 credit hours**
- CJA 6010 - Seminar in Law Enforcement **3 credit hours**
- CJA 6020 - Judicial Seminar **3 credit hours**
- CJA 6030 - Contemporary Corrections **3 credit hours**
- CJA 6900 - Research in the Criminal Justice Process **3 credit hours**

Select one of the following:

- CJA 6640 - Thesis Research **1 to 6 credit hours** (3 credit hours) OR
- CJA 6250 - Criminal Justice Internship **3 credit hours**

NOTE: Thesis-track students will be required to complete and successfully defend a research-based thesis. Non-thesis track students will be required to complete and successfully pass a written comprehensive exam in the same semester as the internship course is taken.

Electives (15-18 Hours)

- 15-18 hours selected in consultation with advisor (thesis-track-15 hours/non-thesis-track-18 hours)

Program Notes

A graduate student may not enroll in more than 12 total hours in any given semester. This limitation applies to Criminal Justice graduate students who may be simultaneously enrolled at both TSU and MTSU. Any student exceeding the hours-per-semester limit will be dropped from a course or courses to the twelve-hour level. A student may, on rare occasions, be given permission for an overload, but the proper overload form must be executed before courses begin and under no circumstances will the overload exceed three hours or a total of 15 hours.

Candidate must

1. file a degree plan in the College of Graduate Studies after having completed 10 semester hours credit and before having completed 16 semester hours credit;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Criminal Justice Administration Minor

There are two patterns of minors from which a candidate may choose:

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

Criminal Justice Administration

CJA 5220 - Community Relations and Minority Problems

3 credit hours

Analysis of public hostility toward police and current community relations projects; training and education of law enforcement officers; responsibilities of police administrators; causes of tension and conflict, positive and negative factors in the control of minority group hostilities; minority recruitment in law enforcement.

CJA 5260 - Special Issues in Law Enforcement

3 credit hours

Variety of subtopics related to law enforcement. Problems in private and public morality with regard to drug use, alcoholism, and sex offenses; analysis of current police training programs; relationship between legislation and political process which affects law enforcement.

CJA 5330 - Criminal Investigation

3 credit hours

(For CJA majors or with permission of instructor.) General investigative responsibilities and techniques, including administration preparation, investigative jurisdiction and responsibility, and the importance of substantive report writing. Includes special techniques required for specific investigative categories.

CJA 5500 - The Juvenile Justice System

3 credit hours

Juvenile delinquency and youth crime with emphasis on the history of the juvenile justice system, the court and police role within the system, rehabilitation and correction of the delinquent, and juvenile probation services. Alternatives to traditional procedures: community-based programs versus correctional institutions, nonjudicial adjustment, etc., examined.

CJA 5530 - Criminal Evidence and Procedures

3 credit hours

Types of individuals and problems of admissibility in court proceedings, proper treatment and disposition of evidence, legal procedure to be followed, and actual trial procedure.

CJA 5750 - Seminar in Corrections

3 credit hours

Each student selects a problem area of interest for an intensive research effort. The group will be presented with a contemporary corrections issue or problem and will be required to create practical and workable

strategies for coping with the issue. Where feasible, arrangements will be made to implement the program in an actual correctional setting.

CJA 5800 - Crime in America: An Assessment

3 credit hours

An in-depth survey of the impact of crime on American society: amount and trends of crime, economic impact of crime, professional and white collar crime, characteristics of offenders and victims of crime.

CJA 5900 - Readings in Criminal Justice

3 credit hours

Advanced students capable of independent study will be allowed to do in-depth readings in a particular area of criminal justice relevant to individual interests. Annotated bibliography and report required. Arrangements should be made with the instructor prior to registration.

CJA 6000 - Criminal Justice Administration

3 credit hours

Criminal justice, juvenile justice, correctional and mental health processes, and other issues including those arising out of other processes of social control and community-based treatment of offenders. Development of a critical analysis of current literature, compilation of a bibliography, and completion of an intensive research paper required.

CJA 6010 - Seminar in Law Enforcement

3 credit hours

The function of police within the community and its relationship to the criminal justice system, the effects of police actions on the community and other segments of the system, social expectations and limitations, assessment and special problems. Analysis of relevant studies, formation of annotated bibliography, and organization of research into a formal composition.

CJA 6020 - Judicial Seminar

3 credit hours

Examines the judicial system, including flow of the criminal case, personnel, court community relations, computers and the courts, and special problem areas. A research project consisting of a literature review, bibliography, and a thorough analysis required.

CJA 6030 - Contemporary Corrections

3 credit hours

Corrections programs in contemporary custodial and

juvenile institutions and community-based corrections programs; problems and prospects associated with them. Each student required to make class presentations on assigned topics, participate in class discussions and analysis of reports, develop a bibliography, and submit a research paper in a specific area of corrections.

CJA 6040 - The Concept of Justice
3 credit hours

Historical development and philosophy of law. The notion of justice in a criminal context, with emphasis on equity and ethics in law and justice. Examines the sociology of law and societal constraints on proscribed behavior.

CJA 6230 - Police Management Systems
3 credit hours

The need for awareness of police management problems, reaction of criminal justice system within P.M.S., administrative behavior toward the organizational environment, and the nature of change within P.M.S. Preparation of a research paper which consists of complete analysis of a topic within P.M.S., a review of recent literature, and an annotated bibliography required.

CJA 6250 - Criminal Justice Internship
3 credit hours

Prerequisite: Permission of instructor. Student placed for an intensive field experience in a functional criminal justice agency. The selection of the placement agency determined by student's background, academic status, and interest.

CJA 6300 - Innovations in Law Enforcement
3 credit hours

The changing role of the police function and its relationship to the criminal justice system, including evaluation of the operational line function of the 80s, technological changes in society and their effects on law enforcement, and the etiology of innovation. Evaluation of recent literature, compilation of a list of selected readings, and unification of research into a methodological exposition.

CJA 6410 - Advanced Constitutional Law
3 credit hours

Examines constitutional rights of the accused including pretrial, trial, and prisoner rights. Reading and critique of current literature and Supreme Court decisions, learning to function in a law library, and

composing a research paper with a bibliography on a chosen constitutional topic.

CJA 6430 - Criminal Law: The Defense Side
3 credit hours

Procedure of the criminal courts from the defense viewpoint. ABA standards for defense attorneys, the handling of a case by the defense from arrest to appeal, and ethical problems posed for defense attorneys. Attention given to defense by appointment and plea bargaining.

CJA 6500 - Interviewing and Counseling Juveniles
3 credit hours

Causal theories of delinquency, application of theory to treatment, caseworker attitudes, and counseling styles. Discussion of individualized models for classification and treatment as well as group and process models.

CJA 6640 - Thesis Research
1 to 6 credit hours

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

CJA 6700 - Community-Based Corrections
3 credit hours

Intensive survey of probation and parole at both the adult and juvenile levels. Halfway houses, work-release programs, and other community correctional settings. Impact of the "justice model" upon community corrections featured.

CJA 6830 - Violence and Victimology
3 credit hours

Impact of violence on victims at both the adult and juvenile levels examined. Other major topics include the right to treatment, victims as witnesses, victims in the correctional system, and societal reaction to violence.

CJA 6900 - Research in the Criminal Justice Process
3 credit hours

Introduces research methods, including the experiment and experimental methods and models, survey research, participant observation, case studies, unobtrusive measures, the use of official and unofficial statistics, validity, reliability, and data

analysis. Special emphasis on ethics in criminal justice research and on proposal writing and evaluation research.

CJA 6920 - Seminar in Criminal Justice Planning and Management

3 credit hours

Intensive introduction to principles of planning and management in the system. Students required to actively participate in planning exercises and to utilize data from actual situations for the development of appropriate management strategies.

CJA 6930 - Comparative Systems of Criminal Justice

3 credit hours

Systems in the U.S. and Great Britain, New York, and London. Crime and justice in northern and southern Europe, Russia, and Canada. Discussion of progressive criminal policy and the U.N. and the uses of comparative analysis of current literature and formal exposition on a related topic.

CJA 6940 - Crimes, Criminals, and Their Treatment

3 credit hours

Intensive exploration of the various systems of criminal typology, including a survey of the various theories of criminal behavior and a survey of institutional treatment methods currently in use. Extra-institutional treatment methods also examined.

CJA 6950 - Business and Industrial Security
3 credit hours

Examines the scope of the problem, the economic impact, major problems (security, employee theft, shoplifting, industrial espionage). Discussion of the responsibility and effectiveness of the criminal justice system, programs for prevention and training of employees, managers, and security personnel. Preparation of an extensive research paper which analyzes an assigned topic and summarizes current trends in the literature required.

CJA 6999 - Comprehensive Examination and Preparation

1 credit hours

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

Health and Human Performance

Steven G. Estes, Chair

(615) 898-2811

www.mtsu.edu/healthhumanperf/

The Department of Health and Human Performance offers three Master of Science degrees: Exercise Science; Health and Human Performance with concentrations in Health and Physical Education; and Leisure and Sport Management with concentrations in Recreation and Leisure Services and Sport Industry.

The Ph.D. in Human Performance with specializations in five areas-Exercise Science, Health, Kinesmetrics, Leisure and Sport Management, and Physical Education-is also offered.

The department offers courses in Communication Disorders (CDIS).

Exercise Science, M.S.

Don Morgan, Program Director
(615) 898-5549

Don.Morgan@mtsu.edu

The Department of Health and Human Performance offers three Master of Science degrees: one with a major in Exercise Science; one with a major in Health and Human Performance with concentrations in Health and Physical Education; and one with a major in Leisure and Sport Management with concentrations in Sport Industry and in Recreation and Leisure Services.

The department also offers the Ph.D. in Human Performance with specializations in five areas: Exercise Science, Health, Kinesmetrics, Leisure and Sport Management, and Physical Education.

Additionally, the department offers courses in Communication Disorders (CDIS).

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission decisions will be made after reviewing all materials and determining the applicant's capacity, suitability, and preparation for graduate study. Admission decisions are based upon consideration of a number of criteria which are believed to indicate a high potential in the graduate program.

Admission to the Master of Science (M.S.) program in Exercise Science requires

1. an earned bachelor's degree from an accredited university or college, including successful completion of a course in human anatomy and physiology;
2. an acceptable grade point average (GPA) in all college work taken;
3. completion of the Graduate Record Examination (GRE) with acceptable scores. Successful applicants to the M.S. in Exercise Science program typically have scores on the GRE Verbal and Quantitative measures that exceed 150 and 141 respectively (current scale) or 450 (former scale) with a combined score that exceeds 291 (current scale) or 900 (former scale). The Analytical Writing Assessment score is also considered.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Application deadline: Applications for Summer/Fall admission must be complete by March 1, and applications for Spring admission must be complete by October 1. Late applicants who meet the admission criteria may be considered on a case-by-case basis.

Applicants must

1. submit application with appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the GRE;
3. submit official transcripts of all previous college work;
4. provide three letters of recommendation from persons who can address their academic qualifications and potential for success in graduate study.

Degree Requirements

Candidate must

1. complete either the thesis or non-thesis curriculum as detailed below in the Curriculum section;
2. if choosing the thesis option, select a thesis committee composed of two members (at least one of whom must be from the Department of Health and Human Performance) and successfully complete an oral examination relating to the thesis;
3. if choosing the non-thesis option, successfully complete a written comprehensive examination during the last semester of coursework (may be taken no more than twice).

Curriculum: Exercise Science

Candidate must complete 30 hours (thesis option) or 36 hours (non-thesis option) in the following course of study:

Thesis Option (30 hours)

Required courses - preferred sequence (21 hours)

- HHP 6700 - Data Analysis and Organization for Human Performance **3 credit hours**
- EXSC 6650 - Exercise Physiology **3 credit hours**
- HHP 6610 - Research Methods in Health and Human Performance **3 credit hours**
- EXSC 6830 - Laboratory Techniques in Exercise Science **3 credit hours**
- EXSC 6840 - Advanced Principles of Exercise Prescription and Assessment **3 credit hours**
- EXSC 6880 - Internship and Special Projects **3 to 6 credit hours**
- EXSC 6640 - Thesis Research **1 to 6 credit hours**

Approved electives (9 hours)

Nine hours of electives selected in consultation with advisor. Six hours must have an EXSC prefix.

Non-thesis Option (36 semester hours)

Required courses (24 hours)

- HHP 6610 - Research Methods in Health and Human Performance **3 credit hours**
- HHP 6700 - Data Analysis and Organization for Human Performance **3 credit hours**
- EXSC 6650 - Exercise Physiology **3 credit hours**
- EXSC 6830 - Laboratory Techniques in Exercise Science **3 credit hours**
- EXSC 6840 - Advanced Principles of Exercise Prescription and Assessment **3 credit hours**
- EXSC 6870 - Cardiovascular Assessment and Rehabilitation **3 credit hours**
- EXSC 6880 - Internship and Special Projects **3 to 6 credit hours**

Approved electives (12 hours)

Twelve hours of electives selected in consultation with advisor. Six hours must have an EXSC prefix.

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Health and Human Performance, Health Concentration, M.S.

Norman Weatherby, Program Director

(615) 898-5241

Norman.Weatherby@mtsu.edu

The Department of Health and Human Performance offers three Master of Science degrees: one with a major in Exercise Science; one with a major in Health and Human Performance with concentrations in Health and in Physical Education; and one with a major in Leisure and Sport Management with concentrations in Sport Industry and in Recreation and Leisure Services.

The department also offers the Ph.D. in Human Performance with specializations in five areas: Exercise Science, Health, Kinesmetrics, Leisure and Sport Management, and Physical Education.

Additionally, the department offers courses in Communication Disorders (CDIS).

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission decisions will be made after reviewing all materials and determining the applicant's capacity, suitability, and preparation for graduate study. Admission decisions are based upon consideration of a number of criteria which are believed to indicate a high potential in the graduate program.

Admission to the Master of Science (M.S.) in Health and Human Performance program requires

1. an earned bachelor's degree from an accredited university or college. The candidate must have earned undergraduate prerequisites of at least 18 semester hours in health and human performance professional courses or have a baccalaureate degree in an area determined by the admissions committee to be related to the competencies required in the field of health;
2. an acceptable grade point average (GPA) in all college work taken;
3. completion of the Graduate Record Examination (GRE) with acceptable scores. Successful applicants to the M.S. in Health and Human Performance typically have scores on the GRE Verbal and Quantitative measures which exceed 146 and 140 respectively (current scale) or 400 (former scale) with a total combined score that exceeds 286 (current scale) or 800 (former scale). The Analytical Writing Assessment score is also considered.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Application deadline: Applications for Summer/Fall admission must be complete by March 1, and applications for Spring admission must be complete by October 1. Late applicants who meet the admission criteria may be considered on a case-by-case basis.

Applicants must

1. submit application with appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the GRE;
3. submit official transcripts of all previous college work;
4. provide three letters of recommendation from persons who can address their academic qualifications and potential for success in graduate study;
5. provide a 400-word statement of purpose giving their reasons for applying to the program, their academic interests, and their professional goals.

Degree Requirements

Candidate must

1. complete either the thesis or non-thesis curriculum as detailed below in the Curriculum section;
2. if choosing the thesis option,
 - a. select a thesis committee composed of two members (one of whom must be from the Department of Health and Human Performance);
 - b. successfully complete a written comprehensive examination during the last semester of coursework (may be taken no more than twice);
 - c. successfully complete an oral examination relating to the thesis.
3. if choosing the non-thesis option, successfully complete a written comprehensive examination during the last semester of coursework (may be taken no more than twice).

Curriculum: Health and Human Performance, Health

Candidate must complete 30 hours (thesis option) or 32 hours (non-thesis option) in the following course of study:

Thesis Option (30 hours)

All candidates for the M.S. in Health in Human Performance with a concentration in Health opting for the thesis option must complete 30 semester hours in the following course of study (no more than 30 percent of the total degree hours at the 5000 level can be counted toward the degree):

Core Requirements (6 hours)

- HHP 6610 - Research Methods in Health and Human Performance **3 credit hours**
- HHP 6700 - Data Analysis and Organization for Human Performance **3 credit hours**

Concentration Requirements (21 hours)

- HLTH 6102 - Theory of Health Education and Behavior **3 credit hours**
- HLTH 6510 - The Nation's Health **3 credit hours**
- HLTH 6850 - Methods in Epidemiology **3 credit hours**
- HLTH 6860 - Program Planning for Health Promotion **3 credit hours**
- HLTH 6910 - Special Problems **1 to 3 credit hours**
- HLTH 5600 - Technology Applications **1 credit hours**
- HLTH 5601 - Technology Applications Lab **2 credit hours**
- HLTH 6640 - Thesis Research **1 to 6 credit hours**

Guided Electives (3 hours)

- HLTH 5270 - Bioethical Issues in Health Education **3 credit hours**
- HLTH 5340 - Fitness Education for the Adult **3 credit hours**
- HLTH 5900 - Certified Health Education Specialist (CHES) Review **1 credit hours**
- HLTH 6000 - Stress Management in Health and Health Promotion **3 credit hours**
- HLTH 6010 - Holistic and Complementary Health Care **3 credit hours**
- HLTH 6020 - Somatic Therapy Techniques for Health Care Providers **3 credit hours**
- HLTH 6500 - Pathopharmacology in Health and Human Performance **3 credit hours**
- HLTH 6870 - Health Promotion **3 credit hours**
- HLTH 6930 - Principles and Philosophy of School Health Education Programs **3 credit hours**

- HLTH 6950 - Advanced Methods of Community Health Education **3 credit hours**
- HLTH 6970 - Advanced Methods in Human Sexuality Education **3 credit hours**

Note:

Candidate may incorporate 6 semester hours of designated cognate courses or a minor of 12 semester hours into the program upon approval of the graduate advisor and the dean of the College of Graduate Studies.

Non-thesis Option (32 hours)

All candidates for the M.S. in Health in Human Performance with a concentration in Health opting for the non-thesis option must complete 32 semester hours in the following course of study (no more than 30 percent of the total degree hours at the 5000 level can be counted toward the degree):

Core Requirements (6 hours)

- HHP 6610 - Research Methods in Health and Human Performance **3 credit hours**
- HHP 6700 - Data Analysis and Organization for Human Performance **3 credit hours**

Concentration Requirements (21 hours)

- HLTH 6102 - Theory of Health Education and Behavior **3 credit hours**
- HLTH 6510 - The Nation's Health **3 credit hours**
- HLTH 6850 - Methods in Epidemiology **3 credit hours**
- HLTH 6860 - Program Planning for Health Promotion **3 credit hours**
- HLTH 5600 - Technology Applications **1 credit hours**
- HLTH 5601 - Technology Applications Lab **2 credit hours**
- HLTH 6880 - Internship and Special Projects **3 to 6 credit hours**

Guided Electives (5 hours)

- HLTH 5270 - Bioethical Issues in Health Education **3 credit hours**
- HLTH 5340 - Fitness Education for the Adult **3 credit hours**
- HLTH 5900 - Certified Health Education Specialist (CHES) Review **1 credit hours**
- HLTH 6000 - Stress Management in Health and Health Promotion **3 credit hours**
- HLTH 6010 - Holistic and Complementary Health Care **3 credit hours**
- HLTH 6020 - Somatic Therapy Techniques for Health Care Providers **3 credit hours**
- HLTH 6500 - Pathopharmacology in Health and Human Performance **3 credit hours**
- HLTH 6870 - Health Promotion **3 credit hours**
- HLTH 6910 - Special Problems **1 to 3 credit hours**
- HLTH 6950 - Advanced Methods of Community Health Education **3 credit hours**
- HLTH 6970 - Advanced Methods in Human Sexuality Education **3 credit hours**

Note:

Candidate may incorporate 6 semester hours of designated cognate courses or a minor of 12 semester hours into the program upon approval of the graduate advisor and the dean of the College of Graduate Studies.

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Health and Human Performance, Physical Education Concentration, M.S.

Don Belcher, Program Director
(615) 898-2904

Don.Belcher@mtsu.edu

The Department of Health and Human Performance offers three Master of Science degrees: one with a major in Exercise Science; one with a major in Health and Human Performance with concentrations in Health and in Physical Education; and one with a major in Leisure and Sport Management with concentrations in Sport Industry and in Recreation and Leisure Services.

The department also offers the Ph.D. in Human Performance with specializations in five areas: Exercise Science, Health, Kinesmetrics, Leisure and Sport Management, and Physical Education.

Additionally, the department offers courses in Communication Disorders (CDIS).

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission decisions will be made after reviewing all materials and determining the applicant's capacity, suitability, and preparation for graduate study. Admission decisions are based upon consideration of a number of criteria which are believed to indicate a high potential in the graduate program.

Admission requires

1. an earned bachelor's degree from an accredited university or college. The candidate must have earned undergraduate prerequisites of at least 18 semester hours in health and human performance professional courses or have a baccalaureate degree in an area determined by the admissions committee to be related to the competencies required in the field of physical education;
2. an acceptable grade point average (GPA) in all college work taken;
3. completion of the Graduate Record Examination (GRE) with acceptable scores. Successful applicants to the M.S. in Health and Human Performance typically have scores on the GRE Verbal and Quantitative measures which exceed 146 and 140 respectively (current scale) or 400 (former scale) with a total combined score that exceeds 286 (current scale) or 800 (former scale). The Analytical Writing Assessment score from the GRE is also considered.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Application deadline: Applications for Summer/Fall admission must be complete by March 1, and applications for Spring admission must be complete by October 1. Late applicants who meet the admission criteria may be considered on a case-by-case basis.

Applicants must:

1. submit application with appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the GRE;
3. submit official transcripts of all previous college work;
4. provide three letters of recommendation from persons who can address their academic qualifications and potential for success in graduate study;
5. provide a 400-word statement of purpose giving their reasons for applying to the program, their academic interests, and their professional goals.

All of the above requirements must be completed.

Degree Requirements

Candidate must

1. complete either the thesis or non-thesis curriculum as detailed below in the Curriculum section.
2. if choosing the thesis option,
 - a. select a thesis committee composed of two members (at least one of whom must be from the Department of Health and Human Performance);
 - b. successfully complete a written comprehensive examination during the last semester of coursework (may be taken no more than twice);
 - c. successfully complete an oral examination relating to the thesis.
3. if choosing the non-thesis option, successfully complete a written comprehensive examination during the last semester of coursework (may be taken no more than twice).

Curriculum: Health and Human Performance, Physical Education

Thesis Option (30 hours)

All candidates for the M.S. in Health and Human Performance with a concentration in Physical Education opting for the thesis option must complete 30 semester hours in the following course of study (no more than 30 percent of the total degree hours at the 5000 level can be counted toward the degree):

Core Requirements (6 hours)

- HHP 6610 - Research Methods in Health and Human Performance **3 credit hours**
- HHP 6700 - Data Analysis and Organization for Human Performance **3 credit hours**

Concentration Requirements (12 hours)

- PHED 6680 - Current Issues in Physical Education Pedagogy **3 credit hours**
- PHED 6800 - Program Planning in Physical Education **3 credit hours**
- PHED 6920 - Analysis of Teaching Physical Education **3 credit hours**

Choose one of the following:

- PHED 6000 - Adapted Physical Activity **3 credit hours**
- PHED 6090 - Motor Learning in Physical Education **3 credit hours**

Electives (9 hours)

- PHED 5600 - Technology Applications **1 credit hours**
- PHED 5601 - Technology Applications Lab **2 credit hours**
- PHED 5910 - Applied Kinesiology and Biomechanics **3 credit hours**
- PHED 6000 - Adapted Physical Activity **3 credit hours**
- PHED 6090 - Motor Learning in Physical Education **3 credit hours**
- PHED 6801 - Advanced Sport and Exercise Psychology **3 credit hours**
- PHED 6820 - Administration and Supervision of Physical Education and Sport **3 credit hours**
- PHED 6880 - Internship and Special Projects **3 to 6 credit hours**
- PHED 6940 - Supervision of Teaching in Physical Education **3 credit hours**
- LSM 6500 - Legal Issues and Risk Management in Sport and Leisure Services **3 credit hours**

- LSM 6730 - Socio-Cultural and Ethical Issues in Leisure and Sport **3 credit hours**
- EXSC 6650 - Exercise Physiology **3 credit hours**
- FOED 6020 - Educational Foundations **3 credit hours**
- FOED 6630 - Educational Tests and Measurements **3 credit hours**
- SPSE 6140 - Teacher Leadership for School Improvement **3 credit hours**
- SPSE 6310 - Supervising Student Teachers **3 credit hours**
- SPSE 6430 - Introduction to Curriculum Development **3 credit hours**
- YOED 6680 - Issues and Trends in Teaching and Learning **3 credit hours**

Thesis Requirement (3 hours)

- PHED 6640 - Thesis Research **1 to 6 credit hours**

Note:

Candidate may incorporate 6 semester hours of designated cognate courses or a minor of 12 semester hours into the program upon approval of the graduate advisor and the dean of the College of Graduate Studies.

Non-thesis Option (33 hours)

All candidates for the M.S. in Health and Human Performance with a concentration in Physical Education opting for the non-thesis option must complete 33 semester hours in the following course of study (no more than 30 percent of the total degree hours at the 5000 level can be counted toward the degree):

Core Requirements (6 hours)

- HHP 6610 - Research Methods in Health and Human Performance **3 credit hours**
- HHP 6700 - Data Analysis and Organization for Human Performance **3 credit hours**

Concentration Requirements (12 hours)

- PHED 6680 - Current Issues in Physical Education Pedagogy **3 credit hours**
- PHED 6800 - Program Planning in Physical Education **3 credit hours**
- PHED 6920 - Analysis of Teaching Physical Education **3 credit hours**

Choose one of the following:

- PHED 6000 - Adapted Physical Activity **3 credit hours**
- PHED 6090 - Motor Learning in Physical Education **3 credit hours**

Electives (12 hours)

- PHED 5600 - Technology Applications **1 credit hours**
- PHED 5601 - Technology Applications Lab **2 credit hours**
- PHED 5910 - Applied Kinesiology and Biomechanics **3 credit hours**
- PHED 6000 - Adapted Physical Activity **3 credit hours**
- PHED 6090 - Motor Learning in Physical Education **3 credit hours**
- PHED 6801 - Advanced Sport and Exercise Psychology **3 credit hours**
- PHED 6820 - Administration and Supervision of Physical Education and Sport **3 credit hours**

- PHED 6880 - Internship and Special Projects **3 to 6 credit hours**
- PHED 6940 - Supervision of Teaching in Physical Education **3 credit hours**
- LSM 6500 - Legal Issues and Risk Management in Sport and Leisure Services **3 credit hours**
- LSM 6730 - Socio-Cultural and Ethical Issues in Leisure and Sport **3 credit hours**
- EXSC 6650 - Exercise Physiology **3 credit hours**
- FOED 6020 - Educational Foundations **3 credit hours**
- FOED 6630 - Educational Tests and Measurements **3 credit hours**
- SPSE 6140 - Teacher Leadership for School Improvement **3 credit hours**
- SPSE 6310 - Supervising Student Teachers **3 credit hours**
- SPSE 6430 - Introduction to Curriculum Development **3 credit hours**
- YOED 6680 - Issues and Trends in Teaching and Learning **3 credit hours**

Non-thesis (Project) Option Requirement (3 hours)

- PHED 6910 - Special Problems **1 to 3 credit hours**

Note:

Candidate may incorporate 6 semester hours of designated cognate courses or a minor of 12 semester hours into the program upon approval of the graduate advisor and the dean of the College of Graduate Studies.

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Leisure and Sport Management, Recreation and Leisure Services Concentration, M.S.

Rudy Dunlap, Program Director

(615) 904-8293

Rudy.Dunlap@mtsu.edu

The Department of Health and Human Performance offers three Master of Science degrees: one with a major in Exercise Science; one in Health and Human Performance with concentrations in Health and in Physical Education; and one in Leisure and Sport Management with concentrations in Recreation and Leisure Services and in Sport Industry.

The department offers the Ph.D. in Human Performance with specializations in five areas: Exercise Science, Health, Kinesmetrics, Leisure and Sport Management, and Physical Education.

The department also offers courses in Communication Disorders (CDIS).

The goal of the Master's in Leisure and Sport Management is to prepare individuals to lead leisure and sport organizations, to support the expansion of the leisure and sport industries, and to conduct research that advances the body of knowledge in these disciplines.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission decisions will be made after reviewing all materials and determining the applicant's capacity, suitability, and preparation for graduate study. Admission decisions are based upon consideration of a number of criteria which are believed to indicate a high potential in the graduate program.

Admission to the Master of Science (M.S.) program in Leisure and Sport Management requires

1. an earned bachelor's degree from an accredited university or college. Applicants must have earned at least 18 semester hours at the bachelor's or master's level in courses related to the selected concentration (e.g., foundations of leisure and sport management, management practices, financial management and marketing, program planning). Students lacking an appropriate background may be required to complete prerequisite coursework.
2. an acceptable grade point average (GPA) in all college work taken.
3. completion of the Graduate Record Examination (GRE) with acceptable scores. Successful applicants typically have scores on the GRE Verbal and Quantitative measures that exceed 146 and 140 respectively (current scale) or 400 (former scale) with a total combined score that exceeds 286 (current scale) or 800 (former scale). The Analytical Writing Assessment score is also considered.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Application deadline: Applications for Summer/Fall admission must be complete by March 1, and applications for Spring admission must be complete by October 1. Late applicants who meet the admission criteria may be considered on a case-by-case basis.

Applicants must

1. submit application with appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the GRE;
3. submit official transcripts of all previous college work;
4. provide three letters of recommendation from persons who can address their academic qualifications and potential for success in graduate study;
5. provide a 400-word statement of purpose giving their reasons for applying to the program, their academic interests, and their professional goals.

Degree Requirements

Candidate must

1. complete either the thesis or professional project/internship curriculum as detailed below in the Curriculum section;
2. if choosing the thesis option,
 - a. select a thesis committee composed of two members (one of whom must be from the Department of Health and Human Performance);
 - b. successfully complete thesis proposal;
 - c. successfully complete an oral examination relating to the thesis defense.
3. if choosing the professional project or internship option, successfully complete a written comprehensive examination prior to the completion of a professional project or internship (may be taken no more than twice).

Curriculum: Leisure and Sport Management, Recreation and Leisure Services Concentration

Thesis Option (30 hours)

All candidates for the M.S. in Leisure and Sport Management with a concentration in Recreation and Leisure Services pursuing the thesis option must complete 30 credit hours in the following course of study:

Core Requirements (18 hours)

- HHP 6610 - Research Methods in Health and Human Performance **3 credit hours**
- HHP 6700 - Data Analysis and Organization for Human Performance **3 credit hours**
- LSM 6050 - Design and Management of Leisure and Sport Facilities **3 credit hours**
- LSM 6500 - Legal Issues and Risk Management in Sport and Leisure Services **3 credit hours**
- LSM 6510 - Financial Management and Marketing of Leisure and Sport Services **3 credit hours**
- LSM 6530 - History and Philosophy of Leisure and Sport **3 credit hours**

Concentration Electives (9 hours)

LSM Electives

Choose 3-6 hours from the following list in consultation with the advisor:

- LSM 5120 - Community Development through Leisure, Sport, and Tourism **3 credit hours**
- LSM 5130 - Sport Tourism **3 credit hours**
- LSM 5340 - Fitness Education for the Adult **3 credit hours**
- LSM 5380 - Disabilities and Diversity in Leisure, Sport and Tourism **3 credit hours**
- LSM 5470 - Leisure and Aging **3 credit hours**
- LSM 5480 - Recreational Therapy Techniques **3 credit hours**
- LSM 5490 - Campus Recreation **3 credit hours**
- LSM 5499 - Therapeutic Terminology in Recreational Therapy **3 credit hours**
- LSM 5500 - Introduction to Recreational Therapy **3 credit hours**
- LSM 5510 - Recreational Therapy in Clinical Settings **3 credit hours**
- LSM 5520 - Transitional and Community Recreational Therapy **3 credit hours**
- LSM 5540 - Organization and Administration of Leisure, Sport, and Tourism **3 credit hours**
- LSM 5560 - Field Studies in Leisure, Sports, and Tourism **3 credit hours**

- LSM 5570 - Outdoor Recreation Workshop **3 credit hours**
- LSM 5580 - Seminar: Outdoor Recreation and Environmental Issues **3 credit hours**
- LSM 5590 - Readings in Leisure, Sport, and Tourism **3 credit hours**
- LSM 5660 - Evaluation of Leisure, Sport, and Tourism **3 credit hours**
- LSM 5790 - Sport and Society **3 credit hours**
- LSM 5965 - Aquatic Exercise and Therapeutic Techniques **3 credit hours**
- LSM 6550 - Outdoor Environmental Education **3 credit hours**
- LSM 6570 - Issues, Trends, and Research in Leisure and Sport **3 credit hours**
- LSM 6670 - Behavioral Concepts in Leisure and Sport **3 credit hours**
- LSM 6850 - Cross-Cultural Perspectives in Leisure and Tourism **3 credit hours** (Study Abroad)
- LSM 6910 - Special Problems **1 to 3 credit hours**
- REC 5600 - Technology Applications **1 credit hours**
- REC 5601 - Technology Applications Lab **2 credit hours**
- PHED 6820 - Administration and Supervision of Physical Education and Sport **3 credit hours**

Non-LSM Electives

- Select 3-9 hours of non-LSM courses in consultation with the advisor.

Thesis Option Requirement (3 hours)

- LSM 6640 - Thesis Research **1 to 6 credit hours** (3 hours minimum requirement; no more than 3 hours apply to degree)

Professional Project or Internship Option (36 hours)

All candidates for the M.S. in Leisure and Sport Management with a concentration in Recreation and Leisure Services pursuing the professional project or internship option must complete 36 credit hours in the following course of study:

Core Requirements (18 hours)

- LSM 6050 - Design and Management of Leisure and Sport Facilities **3 credit hours**
- LSM 6520 - Management Practices in Recreation and Leisure Services **3 credit hours**
- LSM 6530 - History and Philosophy of Leisure and Sport **3 credit hours**
- LSM 6570 - Issues, Trends, and Research in Leisure and Sport **3 credit hours**
- LSM 6670 - Behavioral Concepts in Leisure and Sport **3 credit hours**

Concentration Electives (15 hours)

LSM Electives

Choose 6-12 hours from the following list in consultation with the advisor.

- LSM 5120 - Community Development through Leisure, Sport, and Tourism **3 credit hours**
- LSM 5130 - Sport Tourism **3 credit hours**
- LSM 5340 - Fitness Education for the Adult **3 credit hours**
- LSM 5380 - Disabilities and Diversity in Leisure, Sport and Tourism **3 credit hours**
- LSM 5470 - Leisure and Aging **3 credit hours**
- LSM 5480 - Recreational Therapy Techniques **3 credit hours**
- LSM 5490 - Campus Recreation **3 credit hours**

- LSM 5499 - Therapeutic Terminology in Recreational Therapy **3 credit hours**
- LSM 5500 - Introduction to Recreational Therapy **3 credit hours**
- LSM 5510 - Recreational Therapy in Clinical Settings **3 credit hours**
- LSM 5520 - Transitional and Community Recreational Therapy **3 credit hours**
- LSM 5540 - Organization and Administration of Leisure, Sport, and Tourism **3 credit hours**
- LSM 5560 - Field Studies in Leisure, Sports, and Tourism **3 credit hours**
- LSM 5570 - Outdoor Recreation Workshop **3 credit hours**
- LSM 5580 - Seminar: Outdoor Recreation and Environmental Issues **3 credit hours**
- LSM 5590 - Readings in Leisure, Sport, and Tourism **3 credit hours**
- LSM 5660 - Evaluation of Leisure, Sport, and Tourism **3 credit hours**
- LSM 5965 - Aquatic Exercise and Therapeutic Techniques **3 credit hours**
- LSM 6550 - Outdoor Environmental Education **3 credit hours**
- LSM 6570 - Issues, Trends, and Research in Leisure and Sport **3 credit hours**
- LSM 6670 - Behavioral Concepts in Leisure and Sport **3 credit hours**
- LSM 6850 - Cross-Cultural Perspectives in Leisure and Tourism **3 credit hours** (Study Abroad)
- LSM 6910 - Special Problems **1 to 3 credit hours**
- PHED 6820 - Administration and Supervision of Physical Education and Sport **3 credit hours**
- REC 5600 - Technology Applications **1 credit hours**
- REC 5601 - Technology Applications Lab **2 credit hours**

Non-LSM Electives

- Select 3-9 hours of non-LSM courses in consultation with the advisor.

Professional Project/Internship Requirement (3 hours)

- LSM 6880 - Internship/Special Project **3 to 6 credit hours** (3 hours minimum requirement; no more than 3 hours apply to degree.)

Program Notes

HHP 6610 and HHP 6700 must be taken with the first year of study.

Students are strongly encouraged to take the non-LSM courses outside the department.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Leisure and Sport Management, Sport Industry Concentration, M.S.

Rudy Dunlap, Program Director

(615) 904-8293

Rudy.Dunlap@mtsu.edu

The Department of Health and Human Performance offers three Master of Science degrees: one with a major in Exercise Science; one in Health and Human Performance with concentrations in Health and in Physical Education; and one in Leisure and Sport Management with concentrations in Recreation and Leisure Services and in Sport Industry.

The department also offers the Ph.D. in Human Performance with specializations in five areas: Exercise Science, Health, Kinesmetrics, Leisure and Sport Management, and Physical Education.

The department offers courses in Communication Disorders (CDIS) as well.

The goal of the Master's in Leisure and Sport Management is to prepare individuals to lead leisure and sport organizations, to support the expansion of the leisure and sport industries, and to conduct research that advances the body of knowledge in these disciplines.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission decisions will be made after reviewing all materials and determining the applicant's capacity, suitability, and preparation for graduate study. Admission decisions are based upon consideration of a number of criteria which are believed to indicate a high potential in the graduate program.

Admission to the Master of Science (M.S.) program in Leisure and Sport Management requires

1. an earned bachelor's degree from an accredited university or college. Applicants must have earned at least 18 semester hours at the bachelor's or master's level in courses related to the selected concentration (e.g., foundations of leisure and sport management, management practices, financial management and marketing, program planning). Students lacking an appropriate background may be required to complete prerequisite coursework.
2. an acceptable grade point average (GPA) in all college work taken.
3. completion of the Graduate Record Examination (GRE) with acceptable scores. Successful applicants typically have scores on the GRE Verbal and Quantitative measures that exceed 146 and 140 respectively (current scale) or 400 (former scale) with a total combined score that exceeds 286 (current scale) or 800 (former scale). The Analytical Writing Assessment score is also considered.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Application deadline: Applications for Summer/Fall admission must be complete by March 1, and applications for Spring admission must be complete by October 1. Late applicants who meet the admission criteria may be considered on a case-by-case basis.

Applicants must

1. submit application with appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the GRE;
3. submit official transcripts of all previous college work;
4. provide three letters of recommendation from persons who can address their academic qualifications and potential for success in graduate study;
5. provide a 400-word statement of purpose giving their reasons for applying to the program, their academic interests, and their professional goals.

Degree Requirements

Candidates for the Master of Science in Leisure and Sport Management with a concentration in Sport Industry must

1. complete either the thesis or professional project/internship curriculum as detailed below in the Curriculum section.
2. if choosing the thesis option,
 - a. select a thesis committee composed of two members (one of whom must be from the Department of Health and Human Performance);
 - b. successfully complete thesis proposal;
 - c. successfully complete an oral examination relating to the thesis defense.
3. if choosing the professional project or internship option, successfully complete a written comprehensive examination prior to the completion of a professional project or internship (may be taken no more than twice).

Curriculum: Leisure and Sport Management, Sport Industry Concentration

Thesis Option (30 hours)

Core Requirements (18 hours)

- HHP 6610 - Research Methods in Health and Human Performance **3 credit hours**
- HHP 6700 - Data Analysis and Organization for Human Performance **3 credit hours**
- LSM 6050 - Design and Management of Leisure and Sport Facilities **3 credit hours**
- LSM 6500 - Legal Issues and Risk Management in Sport and Leisure Services **3 credit hours**
- LSM 6510 - Financial Management and Marketing of Leisure and Sport Services **3 credit hours**
- LSM 6530 - History and Philosophy of Leisure and Sport **3 credit hours**

Concentration Electives (9 hours)

LSM Electives

Select 3-6 hours from the following list in consultation with the advisor:

- LSM 5120 - Community Development through Leisure, Sport, and Tourism **3 credit hours**
- LSM 5130 - Sport Tourism **3 credit hours**
- LSM 5340 - Fitness Education for the Adult **3 credit hours**
- LSM 5380 - Disabilities and Diversity in Leisure, Sport and Tourism **3 credit hours**
- LSM 5470 - Leisure and Aging **3 credit hours**
- LSM 5480 - Recreational Therapy Techniques **3 credit hours**
- LSM 5490 - Campus Recreation **3 credit hours**
- LSM 5499 - Therapeutic Terminology in Recreational Therapy **3 credit hours**
- LSM 5500 - Introduction to Recreational Therapy **3 credit hours**
- LSM 5510 - Recreational Therapy in Clinical Settings **3 credit hours**
- LSM 5520 - Transitional and Community Recreational Therapy **3 credit hours**
- LSM 5540 - Organization and Administration of Leisure, Sport, and Tourism **3 credit hours**
- LSM 5560 - Field Studies in Leisure, Sports, and Tourism **3 credit hours**
- LSM 5570 - Outdoor Recreation Workshop **3 credit hours**
- LSM 5580 - Seminar: Outdoor Recreation and Environmental Issues **3 credit hours**

- LSM 5590 - Readings in Leisure, Sport, and Tourism **3 credit hours**
- LSM 5660 - Evaluation of Leisure, Sport, and Tourism **3 credit hours**
- LSM 5790 - Sport and Society **3 credit hours**
- LSM 5965 - Aquatic Exercise and Therapeutic Techniques **3 credit hours**
- LSM 6550 - Outdoor Environmental Education **3 credit hours**
- LSM 6710 - The Sport Industry **3 credit hours**
- LSM 6720 - Event Planning, Promotion, and Fundraising in Leisure and Sport **3 credit hours**
- LSM 6730 - Socio-Cultural and Ethical Issues in Leisure and Sport **3 credit hours**
- LSM 6850 - Cross-Cultural Perspectives in Leisure and Tourism **3 credit hours** (Study Abroad)
- LSM 6910 - Special Problems **1 to 3 credit hours**
- REC 5600 - Technology Applications **1 credit hours**
- REC 5601 - Technology Applications Lab **2 credit hours**

Non-LSM Electives

- Select 3-6 hours of non-LSM courses in consultation with the advisor.

Thesis Option Requirement (3 hours)

- LSM 6640 - Thesis Research **1 to 6 credit hours** (3 hours minimum requirement; no more than 3 hours apply to degree.)

Professional Project or Internship Option (36 hours)

All candidates for the M.S. in Leisure and Sport Management with a concentration in Sport Industry pursuing the professional project or internship option must complete 36 credit hours in the following course of study:

Core Requirements (18 hours)

- HHP 6610 - Research Methods in Health and Human Performance **3 credit hours**
- HHP 6700 - Data Analysis and Organization for Human Performance **3 credit hours**
- LSM 6050 - Design and Management of Leisure and Sport Facilities **3 credit hours**
- LSM 6500 - Legal Issues and Risk Management in Sport and Leisure Services **3 credit hours**
- LSM 6510 - Financial Management and Marketing of Leisure and Sport Services **3 credit hours**
- LSM 6530 - History and Philosophy of Leisure and Sport **3 credit hours**

Concentration Electives (15 hours)

LSM Electives

Choose 6-12 hours from the following list in consultation with the advisor:

- LSM 5120 - Community Development through Leisure, Sport, and Tourism **3 credit hours**
- LSM 5130 - Sport Tourism **3 credit hours**
- LSM 5340 - Fitness Education for the Adult **3 credit hours**
- LSM 5380 - Disabilities and Diversity in Leisure, Sport and Tourism **3 credit hours**
- LSM 5470 - Leisure and Aging **3 credit hours**
- LSM 5480 - Recreational Therapy Techniques **3 credit hours**
- LSM 5490 - Campus Recreation **3 credit hours**
- LSM 5499 - Therapeutic Terminology in Recreational Therapy **3 credit hours**

- LSM 5500 - Introduction to Recreational Therapy **3 credit hours**
- LSM 5510 - Recreational Therapy in Clinical Settings **3 credit hours**
- LSM 5520 - Transitional and Community Recreational Therapy **3 credit hours**
- LSM 5540 - Organization and Administration of Leisure, Sport, and Tourism **3 credit hours**
- LSM 5560 - Field Studies in Leisure, Sports, and Tourism **3 credit hours**
- LSM 5570 - Outdoor Recreation Workshop **3 credit hours**
- LSM 5580 - Seminar: Outdoor Recreation and Environmental Issues **3 credit hours**
- LSM 5590 - Readings in Leisure, Sport, and Tourism **3 credit hours**
- LSM 5660 - Evaluation of Leisure, Sport, and Tourism **3 credit hours**
- LSM 5790 - Sport and Society **3 credit hours**
- LSM 5965 - Aquatic Exercise and Therapeutic Techniques **3 credit hours**
- LSM 6550 - Outdoor Environmental Education **3 credit hours**
- LSM 6710 - The Sport Industry **3 credit hours**
- LSM 6720 - Event Planning, Promotion, and Fundraising in Leisure and Sport **3 credit hours**
- LSM 6730 - Socio-Cultural and Ethical Issues in Leisure and Sport **3 credit hours**
- LSM 6850 - Cross-Cultural Perspectives in Leisure and Tourism **3 credit hours** (Study Abroad)
- LSM 6910 - Special Problems **1 to 3 credit hours**
- PHED 6820 - Administration and Supervision of Physical Education and Sport **3 credit hours**
- REC 5600 - Technology Applications **1 credit hours**
- REC 5601 - Technology Applications Lab **2 credit hours**

Non-LSM Electives

- Select 3-9 hours of non-LSM electives in consultation with the advisor.

Professional Project or Internship Option Requirement (3 hours)

- LSM 6880 - Internship/Special Project **3 to 6 credit hours**

Program Notes

HHP 6610 and HHP 6700 must be taken within the first semester of study.

Students are strongly encouraged to take the non-LSM courses outside the department.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Human Performance, Ph.D.

Minsoo Kang, Graduate Director

(615) 904-8426

Minsoo.Kang@mtsu.edu

The Department of Health and Human Performance offers three Master of Science degrees: one with a major in Exercise Science; one with a major in Health and Human Performance with concentrations in Health and Physical Education; and one with a major in Leisure and Sport Management with concentrations in Sport Industry and in Recreation and Leisure Services.

The department also offers the Ph.D. in Human Performance with specializations in five areas: Exercise Science, Health, Kinesmetrics, Leisure and Sport Management, and Physical Education. The Ph.D. degree is offered for the purpose of developing doctoral level expertise in research (both applied and theoretical) and as preparation for teaching at the collegiate level.

Additionally, the department offers courses in Communication Disorders (CDIS).

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admissions decisions will be made after reviewing all materials and determining the applicant's capacity, suitability, and preparation for doctoral study. Admission decisions are based on consideration of a number of criteria that are believed to predict success in the Ph.D. program.

Admission to the Doctor of Philosophy (Ph.D.) in Human Performance program requires

1. an earned bachelor's or master's degree from an accredited university or college with an acceptable grade point average (GPA) in all college work taken. Successful applicants typically have a grade point average (GPA) on the last 60 hours of academic work of 3.00 or above on a 4.00 scale.
2. completion of the Graduate Record Examination (GRE) with acceptable scores. Successful applicants to the Ph.D. program typically have scores that exceed 297 (current scale) or 1,000 (former scale). The Analytical Writing Assessment score is also considered.
3. research skills. Successful applicants typically have statistical and research methodology skills as evidenced by coursework in both areas.
4. coursework in a related field. Applicants with a bachelor's degree will be expected to have completed at least 30 hours of coursework in a related field. Applicants with a master's degree are expected to have completed at least 20 graduate hours in a related field.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applications for Summer/Fall admission must be complete by March 1, and applications for Spring admission must be complete by October 1. Late applicants who meet the admission criteria may be considered on a case-by-case basis.

Applicants must submit

1. application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. official scores on the Graduate Record Exam (GRE);
3. official transcripts of all previous college work;
4. three letters of recommendation from persons who can address their academic qualifications and potential for success in doctoral study and teaching ability;
5. a 400-500 word statement of purpose giving their reasons for applying to the Ph.D. program, academic interests, professional goals, and area of specialization.

Degree Requirements

Candidates for the Ph.D. degree in Human Performance must

1. complete 60 credit hours past the master's degree (see Curriculum section below for specifics). A maximum of 12 hours from the master's degree may be transferred in from an accredited program. Two-thirds (40 semester hours) of the program must be at the 7000-level. Applicants holding only a bachelor's degree will complete the requirements for an M.S. (thesis option) in addition to the Ph.D. requirements.
2. complete a thesis or scholarly equivalent prior to admission to candidacy.
3. successfully complete preliminary examinations to advance to candidacy.
4. be enrolled in full-time study (9 semester hours) for at least one semester to fulfill residency requirements.
5. complete a dissertation and successfully defend it in the final oral examination.

Curriculum

All candidates for the Ph.D. in Human Performance must complete 60 hours in the following course of study:

Human Performance Core Requirements

- HHP 7060 - Research Practicum in Human Performance **1 to 6 credit hours**
- HHP 7080 - Professional Preparation in Human Performance **3 credit hours**
- HHP 7600 - Teaching Practicum in Human Performance **3-6 credit hours (3 credits)**
Select 3 hours from the following:
- FOED 7570 - Issues in Higher Education **3 credit hours**
- FOED 7580 - The College Student **3 credit hours**
- SPSE 7550 - Instructional Development in Higher Education **3 credit hours**

Research Tools (12 hours)

Choose two of the following:

- HHP 7300 - Current Measurement Issues in Health and Human Performance **3 credit hours**
- HHP 7700 - Advanced Data Analysis and Organization for Human Performance **3 credit hours**
- HHP 7720 - Advanced Research Methods in Health and Human Performance **3 credit hours**
- Choose 6 additional credit hours (two courses) from statistics, research design, and data analysis in consultation with the graduate program advisor.

Dissertation (12 hours)

- HHP 7640 - Dissertation Research **1 to 6 credit hours (12 credit hours)**

Specialization (24 hours)

A total of 24 hours coursework and independent research is to be selected in consultation with the graduate program advisor.

Program Notes

Pre-dissertation Advising - Upon admission to the Ph.D. program, the candidate will be assigned an advisor who (in cooperation with the graduate coordinator) will advise the student on an appropriate program of study and of any deficiencies to correct.

Preliminary Examinations - Upon completion of coursework, the candidate will be eligible to take preliminary exams. The written exams will be structured to test the student on the breadth of knowledge gained from statistics, research methods, and design components as well as the specialization component. All exams are to be taken within one calendar year.

Advancement to Candidacy - Upon successful completion of the preliminary exams, the student will file an "Advancement to Candidacy" form with the College of Graduate Studies. No more than six credit hours of C grade will count toward the Ph.D. degree requirements. D and F grades will not count toward degree requirements but will be computed in the GPA. The student must have a GPA of 3.25 for the program of studies to advance to candidacy.

Dissertation Committee - Upon advancement to candidacy, the student will formally construct his/her dissertation committee. The committee should include at a minimum three faculty members; two must be from the department, and one must be from outside the department. The chair of the committee must be a graduate faculty member.

Time Limit - There is a ten-year limit for completing all Ph.D. degree requirements, i.e., all doctoral coursework taken at MTSU, as well as the dissertation, must be completed within ten years of the first semester of enrollment.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 30 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the semester in which candidate intends to graduate.

Athletic Coaching

ATHC 5060 - Sport Psychology

3 credit hours

(Same as PSY 5060.) Application of the knowledge base of psychology to the human endeavors of athletics. Introduction of behavioral principles, motivational research, personality factors, social/psychological findings, cognitive processes, dysfunctional behavior knowledge, and psychometric assessment procedures for the purpose of enhancing performance.

ATHC 5180 - Coaching Speed and Strength Conditioning for Sports

3 credit hours

Organizing and developing speed and strength conditioning programs for sports. Setting up and supervising proper methods and techniques in running, weight lifting, and conditioning exercise for athletics today.

ATHC 5220 - Coaching Soccer

2 credit hours

Theory and practice of soccer fundamentals as well as introduction of offensive and defensive plays.

ATHC 5600 - Advanced Coaching of Football

2 credit hours

Philosophies of coaching football and close examination of the master plan of coaching responsibilities.

ATHC 5620 - Advanced Coaching of Basketball

2 credit hours

Philosophies of coaching basketball discussed, along with a detailed study of the master plan of coaching responsibilities.

ATHC 5640 - Coaching of Baseball

2 credit hours

Theory and practice in baseball fundamentals as well as reviewing the various systems and types of plays.

ATHC 5650 - Coaching Cross-Country, Track and Field

2 credit hours

Theory and practice in fundamentals and skills.

ATHC 5690 - Psychology of Coaching

3 credit hours

Application of basic psychological principles to

everyday coaching situations and problems. Designed to improve communication and motivation for players and coaches.

ATHC 5800 - Administration of High School and College Athletics

3 credit hours

National, state, and local policies concerning athletic eligibility, contest management, equipment, awards, finances, budgets, safety, maintenance of facilities, public relations, publicity, and current athletic trends.

Athletic Training

ATHT 5610 - Prevention and Care of Athletic Injuries

3 credit hours

Theory and practice in the prevention and care of athletic injuries including treatment, taping, and rehabilitation.

ATHT 5960 - Rehabilitation Techniques in Sports Medicine

3 credit hours

Methods and techniques in the selection and application. The N.A.T.A. Competencies in Athletic Training will be a guideline for knowledge that each student should obtain. Students will engage in the process of reviewing, analyzing, discussing, and reflecting about athletic training.

ATHT 5965 - Aquatic Exercise and Therapeutic Techniques

3 credit hours

(Same as EXSC 5965/REC 5965 .) Examines the various uses of the aquatic environment to develop, maintain, and improve physical performance with practical development of skills and techniques and aquatic exercise programming. Combines both didactic and laboratory activities in an experiential learning environment.

ATHT 5970 - Therapeutic Modalities in Sports Medicine

3 credit hours

Methods and techniques in the application of selected therapeutic modalities and the evaluation of injuries relative to modalities. The N.A.T.A. Competencies in Athletic Training will be a guideline for knowledge that each student should obtain. Reviewing, analyzing, discussing, synthesizing, and reflecting about athletic training.

ATHT 6020 - Somatic Therapy Techniques for Health Care Providers

3 credit hours

(Same as HLTH 6020.) Examines the concepts, knowledge, theories, and history of somatic therapy. Emphasis on Swedish-Esalen, sports massage, Shiatsu, and connective tissue. Includes advanced rehabilitative and therapeutic modality techniques and combines didactic and some experiential opportunities.

Communication Disorders

CDIS 5000 - Language Development, Speech, and Literacy

2 credit hours

Introduces development of language, language production, and language perception, and how these processes are related to literacy development. Stages of language development, reading acquisition, word recognition, and language and reading disorders.

CDIS 5250 - Speech and Language Development

3 credit hours

Child speech and language acquisition from birth to seven years of age. Emphasis on normal linguistic development.

CDIS 5260 - Language Acquisition and Analysis

3 credit hours

Study of language development and procedures for analyzing child language. Semantic, syntactic, and pragmatic development will be explored through examining child language transcripts.

CDIS 5800 - Speech and Language Disorders in the Adult Population

3 credit hours

Overview of the impact of age on communication. Identification and remediation of communication problems associated with the aging process.

CDIS 6000 - Speech, Language, and Literacy Development

3 credit hours

Addresses the acquisition of English as a first language. Acquisition of language and its subsystems detailed; competing theoretical explanations presented.

Exercise Science

EXSC 5000 - Strength, Conditioning, and Human Performance

3 credit hours

Prerequisites: Anatomy, physiology, kinesiology, and weight training or permission of instructor. Theories and principles of strength training and conditioning and techniques used to become a certified strength and conditioning specialist or personal trainer.

EXSC 5240 - Principles of Exercise Prescription and Assessment

3 credit hours

Prerequisites: EXSC 4810 and 4830; PHED 4910. Application of knowledge gained to practical situations; develop proficiency in using equipment and skills to evaluate an individual's health risks and fitness.

EXSC 5965 - Aquatic Exercise and Therapeutic Techniques

3 credit hours

(Same as ATHT 5965/REC 5965 .) Examines the various uses of the aquatic environment to develop, maintain, and improve physical performance with practical development of skills and techniques and aquatic exercise programming. Combines both didactic and laboratory activities in an experiential learning environment.

EXSC 6640 - Thesis Research

1 to 6 credit hours

(Same as HLTH 6640/PHED 6640/LSM 6640.) Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. S/U grading.

EXSC 6650 - Exercise Physiology

3 credit hours

Principles of exercise physiology. Acute responses and chronic adaptations of the body to physical activity, exercise, and sports participation and their impact on homeostasis examined. Physiological systems examined in detail.

EXSC 6750 - Exercise Physiology for the Child and Adolescent

3 credit hours

Prerequisite: EXSC 4830 or EXSC 6650. Review,

analysis, and synthesis of current knowledge and literature about the exercise responses of children. Emphasis on understanding the influence of physical growth and measurement on the mechanisms which underlie the developing functional capacities of the exercising child and adolescent.

EXSC 6800 - Environmental Exercise Physiology
3 credit hours

Prerequisite: EXSC 6650. Examines how the human body responds and adapts to diverse forms of environmental stress during exercise. Emphasis on delineating the mechanisms which underlie immediate responses and long-term adaptations that humans make while exercising under various environmental conditions.

EXSC 6810 - Cardiovascular Exercise Physiology
3 credit hours

Prerequisite: EXSC 6650. Overview of the physiological and biophysical mechanisms underlying cardiac function. Neurochemical properties of the myocardial cell, the physiological basis of cardiac muscle function, and the overall performance of the intact heart during exercise.

EXSC 6830 - Laboratory Techniques in Exercise Science

3 credit hours

Laboratory experiences in testing, evaluating, and reporting in exercise science. Measurement theory related to validity and reliability of assessments addressed.

EXSC 6840 - Advanced Principles of Exercise Prescription and Assessment

3 credit hours

Prerequisite: EXSC 4240 or equivalent. Provides theoretical and laboratory learning experiences for health risk appraisal, cardiovascular evaluation, and exercise prescription for healthy people and special populations.

EXSC 6850 - Physical Activity, Exercise, and Disease

3 credit hours

Prerequisite: EXSC 6650 or equivalent. In-depth survey and synthesis of the research literature examining historical and recent trends in physical activity participation and the health-related aspects of exercise, physical activity, and physical fitness. Physiological mechanisms underlying the positive effects of physical activity and exercise on risk

reduction for disease identified and explored. Behavioral and environmental determinants of physical activity and regular participation in exercise reviewed.

EXSC 6870 - Cardiovascular Assessment and Rehabilitation

3 credit hours

Prerequisite: EXSC 6650 or equivalent. Overview of the cardiopulmonary system and clinical rehabilitation. Laboratory experiences include cardiopulmonary function assessments, cardiac rhythm interpretation, and standard rehabilitation practices.

EXSC 6880 - Internship and Special Projects
3 to 6 credit hours

(Same as HLTH 6880/PHED 6880/LSM 6880.) On-site practical experience in an exercise science, health promotion, or sport management program. Those with extensive work experience will develop, implement, and conclude a project (research or applied) in consultation with the major professor.

EXSC 6890 - Seminar in Exercise Science

3 credit hours

Current issues and research in exercise science and health promotion. Written and oral presentation of a research project required. Can be repeated for maximum 6 hours credit.

EXSC 6910 - Special Problems

1 to 3 credit hours

(Same as HLTH 6910/PHED 6910/LSM 6910.) Individual study of current problems or areas of interest. S/U grading.

EXSC 7100 - Mechanical Analysis of Sports Skills

3 credit hours

A synthesis of scientific principles as they relate to teaching simple and complex motor patterns.

EXSC 7200 - Applied Human Work Physiology

3 credit hours

Prerequisite: EXSC 6650. Investigation of how the physiological response to exercise is impacted by intensity, duration, type of muscular contraction, limbs involved, and body position.

EXSC 7750 - Exercise Physiology for the Child and Adolescent

3 credit hours

Prerequisite: EXSC 4830 or EXSC 6650. Review, analysis, and synthesis of current knowledge and

literature about the exercise responses of children. Emphasis on understanding the influence of physical growth and measurement on the mechanisms which underlie the developing functional capacities of the exercising child and adolescent.

**EXSC 7800 - Environmental Exercise Physiology
3 credit hours**

Prerequisite: EXSC 6650. Examines how the human body responds and adapts to diverse forms of environmental stress during exercise. Emphasis on delineating the mechanisms which underlie immediate responses and long-term adaptations that humans make while exercising under various environmental conditions.

**EXSC 7850 - Physical Activity, Exercise, and Disease
3 credit hours**

Prerequisite: EXSC 6650 or equivalent. In-depth survey and synthesis of the research literature examining historical and recent trends in physical activity participation and the health-related aspects of exercise, physical activity, and physical fitness. Physiological mechanisms underlying the positive effects of physical activity and exercise on risk reduction for disease identified and explored. Behavioral and environmental determinants of physical activity and regular participation in exercise reviewed.

Health

**HLTH 5270 - Bioethical Issues in Health Education
3 credit hours**

Analysis of current bioethical issues, problems, needs, trends, and interests in health education.

**HLTH 5280 - Instructor Course: First Aid and CPR
2 credit hours**

Prerequisite: HLTH 3300 or current American Red Cross certification in multimedia first aid or standard first aid and CPR. Organizing, planning, and teaching American Red Cross safety courses. Red Cross instructor certification awarded for successful completion.

**HLTH 5340 - Fitness Education for the Adult
3 credit hours**

(Same as PHED 5340 and REC 5340 .) Planning, teaching, and participating in individual and group fitness programs for the adult. Administers and interprets assessments of related components with an

understanding of physiological principles related to exercise in the adult. Major lifetime wellness activities covered.

**HLTH 5600 - Technology Applications
1 credit hours**

(Same as PHED 5600 and REC 5600.) Prerequisite: Introductory course in computer literacy or equivalent with instructor permission. Corequisite: HLTH 5601. Focus on understanding of and competency in use of a variety of technology applications related to the profession. Students required to enroll in the corresponding lab during the same semester.

**HLTH 5601 - Technology Applications Lab
2 credit hours**

(Same as PHED 5601 and REC 5601.) Investigation and application of profession-specific software and hardware applications.

**HLTH 5700 - Coordinated School Health
3 credit hours**

Prerequisite: HLTH 4300 or equivalent or permission of instructor. Preparation for those who aspire to become school health coordinators. Major emphasis on comprehensive school health and how it fits into K-12 education.

**HLTH 5900 - Certified Health Education Specialist (CHES) Review
1 credit hours**

Responsibilities and competencies on the Certified Health Education Specialist examination. Pass/Fail.

**HLTH 6000 - Stress Management in Health and Health Promotion
3 credit hours**

Evaluation techniques and instruments considered. Effects of stress on physical and mental domains of health examined. Methods of conducting stress management workshops and classes emphasized.

**HLTH 6010 - Holistic and Complementary Health Care
3 credit hours**

Concepts and theories that make up the disciplines and practices constituting the holistic and complementary approach to health promotion and disease treatment and prevention.

HLTH 6020 - Somatic Therapy Techniques for Health Care Providers

3 credit hours

(Same as ATHT 6020.) Theoretical concepts, knowledge, theories, and history of somatic therapy. Emphasis on Swedish-Esalen, sports massage, Shiatsu, and connective tissue. Includes advanced rehabilitative and therapeutic modality techniques. Combines didactic and some experiential opportunities.

HLTH 6102 - Theory of Health Education and Behavior

3 credit hours

(Same as PSY 6102.) Links behavioral change theory to the research and practice of interventions in health behaviors. Application of the theoretical constructs linked to design, implementation, and evaluation of individual and group behavioral change programs.

HLTH 6320 - Global Health

3 credit hours

Explores patterns of medical care delivery and public health practices; factors that inhibit or enable the reduction of excess morbidity, mortality, and disease among the poor; threats to health resulting from economic crises, unhealthy environments, and risky behaviors; and demographic influences on the status of health around the world.

HLTH 6500 - Pathopharmacology in Health and Human Performance

3 credit hours

Etiology and pathology of disease and how functional physiological changes affect health and human performance. Involves the study of pharmacological considerations used in the treatment of disease and musculoskeletal conditions.

HLTH 6510 - The Nation's Health

3 credit hours

Investigates the determinants of health and the role of public health and health care on the health status of the population of the United States. Study of biological, socioeconomic, cultural, and behavioral factors that influence health status and care in America.

HLTH 6640 - Thesis Research

1 to 6 credit hours

(Same as EXSC 6640/PHED 6640/LSM 6640.) Selection of a research problem, review of

pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. S/U grading.

HLTH 6850 - Methods in Epidemiology

3 credit hours

Principles and methods of epidemiologic analysis including standardization; stratified analysis; confounding and its control; planning and conducting epidemiologic research; role of multivariate analysis in epidemiologic research.

HLTH 6860 - Program Planning for Health Promotion

3 credit hours

Program planning, theories and models of health education and promotion, development of interventions, and program implementation, including mission, goals, objectives, and activities of health education and promotion programs. Introduces needs assessment and program evaluation.

HLTH 6870 - Health Promotion

3 credit hours

Health promotion knowledge as well as the ability to impart this knowledge to the lay population. In-depth information will be covered regarding lifestyle and its relationship to risk factors for cardiovascular disease and cancer.

HLTH 6880 - Internship and Special Projects

3 to 6 credit hours

(Same as EXSC 6880/PHED 6880/LSM 6880.) On-site practical experience in an exercise science, health promotion, or sport management program. Those with extensive work experience will develop, implement, and conclude a project (research or applied) in consultation with the major professor.

HLTH 6910 - Special Problems

1 to 3 credit hours

(Same as EXSC 6910/PHED 6910/LSM 6910.) Individual study of current problems or areas of interest. S/U grading.

HLTH 6930 - Principles and Philosophy of School Health Education Programs

3 credit hours

A detailed overview.

HLTH 6950 - Advanced Methods of Community Health Education

3 credit hours

Review of program planning, development of interventions, and implementation of programs. Budgeting, needs assessment, and evaluation of health education and promotion programs covered.

HLTH 6970 - Advanced Methods in Human Sexuality Education

3 credit hours

Methodology, teaching techniques, and the organization of sexuality education programs for schools (K-12) and other community settings. Additional emphasis directed to concepts and information about human sexuality education, i.e., the psychological, physiological, sociological, and ethical aspects.

HLTH 7120 - Research in Epidemiology

3 credit hours

Advanced study in epidemiological analysis, methods, and critique with an emphasis within the field of health and human performance. Areas include epidemiology and chronic disease, public health, exercise science, and sports medicine.

Health and Human Performance

HHP 6100 - Qualitative Writing Workshop in Health and Human Performance

3 credit hours

Prerequisites: HHP 6620/HHP 7620, SOC 6720, SPSE 7100, or permission of department. Explores the theoretical, ethical, and practical issues involved in transforming qualitative data into a written research report. Student will write representations of data they have already collected.

HHP 6610 - Research Methods in Health and Human Performance

3 credit hours

Location of information, methods of research, methods of collecting data, application of the computer in analyzing data, and preparation and presentation of a research paper.

HHP 6620 - Foundations of Qualitative Inquiry in Health and Human Performance

3 credit hours

Exposes students to the disciplinary and conceptual origins of qualitative inquiry in the social sciences while exploring various methods of data generation

and analysis in the field of health and human performance. Students will be exposed to conventional methods of data generation and analysis as well as more recent, unconventional qualitative methods. Provides preparation to consume, critique, and design research projects using some of the tools offered by qualitative inquiry.

HHP 6700 - Data Analysis and Organization for Human Performance

3 credit hours

Pertinent skills needed to analyze and organize research data through introduction of concepts, principles, techniques, and activities that lead to the appropriate organization and analysis of research data collected for health and human performance.

HHP 6999 - Comprehensive Examination and Preparation

1 credit hours

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

HHP 7020 - University Leadership in Health and Human Performance

3 credit hours

Provides administrators and professional students with a broad base of workable leadership principles and guides.

HHP 7030 - Research Seminar in Human Performance

3 credit hours

Current problems, issues, trends, and research in human performance; selected lectures, reports, and class discussion.

HHP 7060 - Research Practicum in Human Performance

1 to 6 credit hours

Research experience under the direct supervision of a graduate faculty member resulting in the submission of a manuscript to a refereed journal or a grant to a funding agency.

HHP 7080 - Professional Preparation in Human Performance

3 credit hours

Review of the current trends within the academic scope of teaching research and service.

HHP 7100 - Qualitative Writing Workshop in Health and Human Performance

3 credit hours

Prerequisites: HHP 6620/HHP 7620, SOC 6720, SPSE 7180, or permission of department. Explores the theoretical, ethical, and practical issues involved in transforming qualitative data into a written research report. Students will write representations of data they have already collected.

HHP 7300 - Current Measurement Issues in Health and Human Performance

3 credit hours

Prerequisites: HHP 6610 and HHP 6700 or equivalent. Advanced applications of measurement theories (i.e., item response theory), test construction, statistical techniques, and computer software for measurement research in the area of health and human performance.

HHP 7600 - Teaching Practicum in Human Performance

3-6 credit hours

Teaching experience under the direct supervision of graduate faculty member in a 3-credit undergraduate course within the student's area of specialization.

HHP 7620 - Foundations of Qualitative Inquiry in Health and Human Performance

3 credit hours

Exposes students to the disciplinary and conceptual origins of qualitative inquiry in the social sciences while exploring various methods of data generation and analysis in the field of health and human performance. Students will be exposed to conventional methods of data generation and analysis as well as more recent, unconventional qualitative methods. Provides preparation to consume, critique, and design research projects using some of the tools offered by qualitative inquiry.

HHP 7640 - Dissertation Research

1 to 6 credit hours

Assignment by department or chair of candidate's committee. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of dissertation. Once enrolled,

student should register for at least one credit hour of doctoral research each semester until completion. S/U grading

HHP 7700 - Advanced Data Analysis and Organization for Human Performance

3 credit hours

Prerequisites: HHP 6610 and HHP 6700 or equivalent. Skills and understanding necessary to read, conduct, report, and interpret advanced data analytical techniques using data from HHP. Practical and written assignments, presentations, examinations, and projects will furnish doctoral student with tools necessary for data analysis associated with dissertation requirement.

HHP 7710 - Experimental Design in Human Performance

3 credit hours

Prerequisites: HHP 6610 and HHP 7700 or equivalent. Skills and understanding necessary to evaluate designs used in HHP research literature. Practical and written assignments, evaluation of current research, examinations, and projects; knowledge and skills for planning appropriately the design for future research projects.

HHP 7720 - Advanced Research Methods in Health and Human Performance

3 credit hours

Examines the types of research methods, designs, and procedures that are required to conduct scholarly research in health and human performance. Students will read, interpret, and critique scientific research articles that are published in scholarly journals, and improve their skills in conducting and reporting their research in written and oral form.

HHP 7740 - Meta-Analysis

3 credit hours

Designed to provide students with the theory and application of meta-analysis for quantitative analysis and review of scientific literature. The conceptual and statistical bases of meta-analysis are reviewed, selected meta-analysis articles are critiqued, and basic skills of meta-analysis are applied. Students will be required to conduct and report a meta-analysis in areas of interest to students.

HHP 7999 - Comprehensive Examination and Preparation

1 credit hours

Open only to students who are not enrolled in any

other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

Leisure and Sports Management

LSM 5120 - Community Development through Leisure, Sport, and Tourism

3 credit hours

Explores and utilizes sustainable practices to assess, develop, implement, and evaluate tourism's potential contribution to, or detractor from, the quality of life for communities through existing systematic approaches utilizing community development and evaluative frameworks. Examines economic, environmental, socio-cultural, and political impacts on community tourism development within the community tourism development context.

LSM 5130 - Sport Tourism

3 credit hours

The global sport tourism industry in post-modern society is a complex and interdependent niche sector best understood through an interdisciplinary approach. This course aims to familiarize students with the industry through exploration of sport in global society, sport event planning/execution/evaluation, spectatorship, the economic and political sport tourism landscape, and policy impacting, and impacted by sport tourism

LSM 5140 - Wine Tourism

3 credit hours credit hours

Familiarizes students with how wine and tourism industry diverge, and indeed converge, across a range of economic, technical, cultural, geographic, and vocational factors.

LSM 5340 - Fitness Education for the Adult

3 credit hours

(Same as HLTH 5340 and PHED 5340 .) Planning, teaching, and participating in individual and group fitness programs for the adult. Administers and interprets assessments of related components with an understanding of physiological principles related to exercise in the adult. Major lifetime wellness activities covered.

LSM 5380 - Disabilities and Diversity in Leisure, Sport and Tourism

3 credit hours

Important issues such as advocacy, accessibility, legalities, and the importance of and broad range of opportunities in the provision of recreational services for persons with disability in our society.

LSM 5470 - Leisure and Aging

3 credit hours

Aging relative to the individual, family, peers, and society with an emphasis on leisure. The holistic approach including physical, psychological, social, cultural, environmental, and cognitive aspects explored. Interdisciplinary approach ideal for the developing or practicing human service professional.

LSM 5480 - Recreational Therapy Techniques

3 credit hours

Activity-based therapeutic interventions currently utilized to alleviate existing health-related problems, maintain current level of functioning, or to assist in overall rehabilitation efforts of transdisciplinary treatment team.

LSM 5490 - Campus Recreation

3 credit hours

For those wishing to acquire a specific and comprehensive knowledge of the recreational sports program and an understanding of its place and value in education and society.

LSM 5499 - Therapeutic Terminology in Recreational Therapy

3 credit hours

Offers preparation for establishing a vital knowledge base necessary to work in today's fast changing rehabilitation settings. Terminology related to third-party reimbursement, accreditation of health care organizations, and basic medical abbreviations used in charting.

LSM 5500 - Introduction to Recreational Therapy

3 credit hours

Prerequisite: REC 3010. Explores the profession of recreational therapy, the wide range of disabilities, and the role of intervention in a variety of settings: clinical, community, and transitional. Topics include history, philosophy, professional development/certification, systemic program design, and implementation.

LSM 5510 - Recreational Therapy in Clinical Settings

3 credit hours

Prerequisites: REC 3010 and REC 4500. Increases understating of recreational therapy in clinical settings working with persons with health-related issues and/or disabilities. Concepts of disease and disability, holistic approach, interdisciplinary treatment, assessment, intervention planning and implementation, evaluation, documentation, and third-party reimbursement explored.

LSM 5520 - Transitional and Community Recreational Therapy

3 credit hours

Issues clients may face when leaving institutions and returning to their communities. Examines the role and provision of recreational therapy services in transitional and community-based settings.

LSM 5540 - Organization and Administration of Leisure, Sport, and Tourism

3 credit hours

Prerequisite: REC 3010. Duties and responsibilities of an administrator and how these are performed.

LSM 5560 - Field Studies in Leisure, Sports, and Tourism

3 credit hours

Prerequisite: REC 3530. Opportunity for supervised practical application of classroom theory in professional field work.

LSM 5570 - Outdoor Recreation Workshop

3 credit hours

Off-campus course that provides materials and experiences not available in the classroom. exposure to issues, trends, and concerns relevant to outdoor recreation, resource management, and the delivery of programs and services in outdoor environments. Public, private non-profits, and commercial agencies experienced through a series of field trips, lectures, group exercises, and other experiential-based activities.

LSM 5580 - Seminar: Outdoor Recreation and Environmental Issues

3 credit hours

Awareness of the importance of environmental considerations when planning, managing, or administering outdoor recreation programs. Includes environmental issues and methods of seeking solutions to environmental problems.

LSM 5590 - Readings in Leisure, Sport, and Tourism

3 credit hours

In-depth reading and preparation of an annotated bibliography and report. Arrangements for this course should be made with the instructor prior to registration.

LSM 5660 - Evaluation of Leisure, Sport, and Tourism

3 credit hours

Research and evaluation procedures and techniques applicable to assessing recreation and leisure service programs, participants, administrative structures, and resources. Emphasis on beginning and completing a "real-world" evaluation project.

LSM 5700 - Challenge Course Facilitation

3 credit hours

A systematic approach to the fundamentals of group management in an experiential ropes course setting. Focuses on both interpersonal and technical facilitation skills. Several on and off-campus experiential, demonstration, and practical application sessions well be required.

LSM 5790 - Sport and Society

3 credit hours

(Same as SOC 5790.) A behavioral approach to the sport and leisure phenomena from the related perspectives of sociology and anthropology.

LSM 5965 - Aquatic Exercise and Therapeutic Techniques

3 credit hours

(Same as ATHT 5965 and EXSC 5965.) Examines the various uses of the aquatic environment to develop, maintain, and improve physical performance with practical development of skills and techniques and aquatic exercise programming. Combines both didactic and laboratory activities in an experiential learning environment.

LSM 6020 - Systems Thinking and Learning in Leisure and Sport Management

3 credit hours credit hours

Focuses on organizational theory within leisure and sport management settings including knowledge and appreciation of how organizations function as a system and the role of the supervisor and administrator within each setting. Populations and settings examined include recreation/intramural managers, sport managers, and similar positions.

LSM 6050 - Design and Management of Leisure and Sport Facilities

3 credit hours

The planning, design, and management process as it relates to leisure and sport facilities. Design and planning process, facility operation, and risk management.

LSM 6500 - Legal Issues and Risk Management in Sport and Leisure Services

3 credit hours

Understanding the legal basis for management actions, concepts of legal liability including torts, contracts, and constitutional law as applied to sport and leisure services organizations. Emphasis on the ability to plan, develop, and implement risk management programs.

LSM 6510 - Financial Management and Marketing of Leisure and Sport Services

3 credit hours

Principles and practices of budgeting, financial methods and strategies, and revenue sources for recreation and leisure service agencies and sport organizations, including cost accounting and fiscal control. Includes traditional approaches to marketing with particular focus on approaches unique to leisure and sport organizations.

LSM 6520 - Management Practices in Recreation and Leisure Services

3 credit hours

Administrative processes and management techniques used in planning, organizing, staffing, directing, and controlling with respect to leisure service delivery systems.

LSM 6530 - History and Philosophy of Leisure and Sport

3 credit hours

In-depth study of history and philosophy as related to leisure and sport in society. Emphasis on tracing the historical and philosophical underpinnings of the profession and their impact on current research and practice.

LSM 6550 - Outdoor Environmental Education

3 credit hours

Camping leadership and outdoor education principles with implications for management, planning of, and interpretation in recreation areas as well as for policy development.

LSM 6570 - Issues, Trends, and Research in Leisure and Sport

3 credit hours

Identification and analysis. Emphasis on meaningful, outstanding studies and research in the field of leisure and sport..

LSM 6640 - Thesis Research

1 to 6 credit hours

(Same as EXSC 6640/HLTH 6640/PHED 6640.)

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

LSM 6670 - Behavioral Concepts in Leisure and Sport

3 credit hours

Social/psychological concepts concerning leisure and sport participation behavior in various types of leisure and sport settings. Range of different theoretical perspectives and behavioral concepts underlying pertinent research.

LSM 6710 - The Sport Industry

3 credit hours

Overview of career paths in the sport industry with a focus on philosophical foundations, management theory, business communications, and marketing integration in the performance, promotion, and production segments of the sports industry.

LSM 6720 - Event Planning, Promotion, and Fundraising in Leisure and Sport

3 credit hours

In-depth synthesis of marketing practices in leisure and sport including general marketing theory; pricing, distribution, and promotional techniques; media relations; and branding and sponsorship theory.

LSM 6730 - Socio-Cultural and Ethical Issues in Leisure and Sport

3 credit hours

Sociocultural basis of sport and consideration of ethical issues that provide a foundation for the development of sound judgment by sport professionals.

LSM 6740 - Sport in Film and Fiction

3 credit hours

Examines sport themes expressed in films, fiction,

and poetry, with special emphasis on themes that can be compared with real sport experiences. Themes include sport heroes; youth and aging in sport, sport in the country and the city; nationalism, racism, and sexism in sport; the individual versus the community in sport; and humor and poetry in sport.

LSM 6850 - Cross-Cultural Perspectives in Leisure and Tourism

3 credit hours

In-depth study of the leisure experience in other cultures (non-U.S.) through on-site observation; visits to cultural/historic sites; and interactions with managers and staff at parks, museums, attractions, and world heritage sites.

LSM 6880 - Internship/Special Project

3 to 6 credit hours

(Same as EXSC 6880 / HLTH 6880 / PHED 6880.)

On-site practical experience in an exercise science, health promotion, or leisure/sport industry program. Those with extensive work experience will develop, implement, and conclude a project (research or applied) in consultation with the major professor.

LSM 6910 - Special Problems

1 to 3 credit hours

(Same as EXSC 6910 / HLTH 6910 / PHED 6910.)

Individual study of current problems or areas of interest. S/U grading.

LSM 7020 - Systems Thinking and Learning in Leisure and Sport Management

3 credit hours

Focuses on organization theory within leisure sport management settings including knowledge and appreciation of how organizations function as a system and the role of the supervisor and administrator within each setting. Populations and setting examined include recreation/intramural managers, sport managers, and similar positions.

LSM 7530 - History and Philosophy of Leisure and Sport

3 credit hours

In-depth study of history and philosophy as related to leisure and sport in society. Emphasis on tracing the historical and philosophical underpinnings of the profession and their impact on current research and practice.

LSM 7670 - Behavioral Concepts in Leisure and Sport

3 credit hours

Sociocultural basis of leisure and sport. Consideration of ethical issues that provide a foundation for the development of sound judgment by leisure and sport professionals.

LSM 7730 - Socio-Cultural and Ethical Issues in Leisure and Sport

3 credit hours

Sociocultural basis of sport and consideration of ethical issues that provide a foundation for the development of sound judgment by sport professionals.

LSM 7730 - Socio-Cultural and Ethical Issues in Leisure and Sport

3 credit hours

Sociocultural basis of leisure and sport. Consideration of ethical issues that provide a foundation for the development of sound judgment by leisure and sport professionals.

LSM 7740 - Sport in Film and Fiction

3 credit hours

Examines sport themes expressed in films, fiction, and poetry, with special emphasis on themes that can be compared with real sport experiences. Themes include sport heroes; youth and aging in sport; sport in the country and the city; nationalism, racism, and sexism in sport; the individual versus the community in sport; and humor and poetry in sport.

Physical Education

PHED 5340 - Fitness Education for the Adult

3 credit hours

(Same as HLTH 5340 and REC 5340 .) Planning, teaching, and participating in individual and group fitness programs for the adult. Administers and interprets assessments of related components with an understanding of physiological principles related to exercise in the adult. Major lifetime wellness activities covered.

PHED 5600 - Technology Applications

1 credit hours

(Same as HLTH 5600/REC 5600.) Prerequisite: Introductory course in computer literacy or equivalent with instructor permission. Corequisite: PHED 5601. Focus on understanding of and competency in use of a variety of technology applications related to the

profession. Students will be required to enroll in the corresponding lab during the same semester.

PHED 5601 - Technology Applications Lab

2 credit hours

(Same as HLTH 5601/REC 5601.) Corequisite: PHED 5600. Investigation and application of profession-specific software and hardware applications.

PHED 5810 - Directing Intramural

2 credit hours

The organization and administration of intramural programs. Actual participation in developing and supervising intramural activities.

PHED 5910 - Applied Kinesiology and Biomechanics

3 credit hours

The science of human motion. Emphasis on principles of anatomy, physiology, and mechanics of human activity.

PHED 6000 - Adapted Physical Activity

3 credit hours

Identifies current topics and procedures for testing and programming as well as current research findings and practices to assist students in developing necessary skills to design and implement appropriate physical activity for individuals with disabilities.

PHED 6090 - Motor Learning in Physical Education

3 credit hours

Theories of learning related to the acquisition of motor skills; a review of the literature pertaining to motor skill development and the implications for teaching.

PHED 6640 - Thesis Research

1 to 6 credit hours

(Same as EXSC 6640/HLTH 6640/LSM 6640.) Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. S/U grading.

PHED 6680 - Current Issues in Physical Education Pedagogy

3 credit hours

Examines current issues in contemporary physical education pedagogy with an emphasis on teaching P-16 physical education. Particular attention given to

professional issues for practitioners teaching physical education in the public schools and trends in current professional literature.

PHED 6800 - Program Planning in Physical Education

3 credit hours

Modern programs of physical education for all grade levels and the contribution of activities to the goals of education.

PHED 6801 - Advanced Sport and Exercise Psychology

3 credit hours

Examines the psychological factors that explain high quality performance in sport and exercise. Sample topics include motivation, coaching psychology, the use of mental skills, communication strategies, and factors that affect participation and adherence to exercise.

PHED 6820 - Administration and Supervision of Physical Education and Sport

3 credit hours

The organization, planning, and functions involved in administering and supervising programs of physical education and sport. Clinical or field experience required of students with a sport management concentration.

PHED 6880 - Internship and Special Projects

3 to 6 credit hours

(Same as EXSC 6880/HLTH 6880/LSM 6880.) On-site practical experience in an exercise science, health promotion, or sport management program. Those with extensive work experience will develop, implement, and conclude a project (research or applied) in consultation with the major professor.

PHED 6910 - Special Problems

1 to 3 credit hours

(Same as EXSC 6910/HLTH 6910/LSM 6910.) Individual study of current problems or areas of interest. S/U grading.

PHED 6920 - Analysis of Teaching Physical Education

3 credit hours

Prerequisite: At least one year teaching experience in a physical activity setting or permission of instructor. Explores systematic and informal observation techniques for identifying and analyzing teacher and

student behaviors occurring in physical activity settings.

PHED 6940 - Supervision of Teaching in Physical Education

3 credit hours

Theoretical and clinical approaches to instructional supervision in physical activity settings.

PHED 7000 - Adapted Physical Activity

3 credit hours

Cognitive, neuromuscular, sensory, and orthopedic impairments; identification of current topics and procedures for testing and programming for individuals with disabilities; current research findings and practices to assist students in developing necessary skills to design and implement appropriate physical activity programs for individuals with disabilities.

PHED 7010 - Analysis and Criticism of Professional Literature

3 credit hours

Thorough consideration of selected specialized literature most likely to influence physical education programs, procedures, and practices in the school and community.

PHED 7040 - History of Physical Education

3 credit hours

The role of physical activity in the lives of people from antiquity to the present with an emphasis on the major events, movements, and people that have influenced the development of physical education.

PHED 7090 - Motor Learning in Physical Education

3 credit hours

Theories of learning related to the acquisition of motor skills; a review of the literature pertaining to motor skill development and the implications for teaching.

PHED 7680 - Current Issues in Physical Education Pedagogy

3 credit hours

Examines current issues in contemporary physical education pedagogy with an emphasis on teaching P-16 physical education. Particular attention given to professional issues for practitioners teaching physical education in the public schools and trends in current professional literature.

PHED 7920 - Analysis of Teaching Physical Education

3 credit hours

Prerequisite: At least one year teaching experience in a physical activity setting or permission of instructor. Explores systematic and informal observation techniques for identifying and analyzing teacher and student behaviors occurring in physical activity settings.

PHED 7940 - Supervision of Teaching in Physical Education

3 credit hours

Theoretical and clinical approaches to instructional supervision in physical activity settings.

Recreation

REC 5600 - Technology Applications

1 credit hours

(Same as HLTH 5601 and PHED 5600.) Prerequisite: Introductory course in computer literacy or equivalent with instructor permission. Corequisite: REC 5601. Focus on understanding of and competency in use of a variety of technology applications related to the profession. Students required to enroll in the corresponding lab during the same semester.

REC 5601 - Technology Applications Lab

2 credit hours

(Same as HLTH 5601 and PHED 5601.) Corequisite: REC 5600. Investigation and application of profession-specific software and hardware applications.

Safety

SAFE 5320 - Principles of Accident Control

3 credit hours

Principles, concepts, and methodology of the safety movement. Introductory experiences dealing with accident prevention as well as control efforts recommended by various social institutions and agencies reviewed.

SAFE 5350 - Automotive Transportation Safety Programs

3 credit hours

Federal, state, and local legislation concerning transportation control and design.

SAFE 5850 - Driver and Traffic Safety

Fundamentals

3 credit hours

Prerequisite: Valid driver's license. Introduction to the field of driver and traffic safety education. Primary focus is on current concepts related to safe driving.

SAFE 5870 - Teaching Driver and Traffic Safety

3 credit hours

Prerequisite: SAFE 4850 or SAFE 5850. Designed to develop teaching techniques for laboratory instruction including on-street, driving simulator, and multiple-car range programs.

SAFE 6410 - Administration and Supervision of Safety Programs in Schools and Colleges

3 credit hours

An overview of the total program administration through analysis of tasks, strategies, and situational factors affecting them; examines handicaps to safety programming, needed change, and methods for implementation.

SAFE 6450 - Field Practice in Safety Education

3 credit hours

Professional assignment under supervision of one or more safety educators or agency directors in school or community organizations.

SAFE 6470 - Disaster Preparedness and Emergency Care Systems

3 credit hours

Major elements involved in disasters and emergencies, preparedness planning, systems utilization, and attention to essential human services, with emphasis on community action.

SAFE 6920 - School Safety and Safety Education

3 credit hours

School safety education concepts in all disciplines and levels, including content, methodology, and teacher liability.

Human Sciences

Deborah G. Belcher, Chair

(615) 898-2884

www.mtsu.edu/humansciences/

The Human Sciences Department offers a graduate-level minor.

Human Sciences Minor

There are two patterns of minors from which a candidate may choose:

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

Child Development Family Services

CDFS 5140 - Violence in the Family

3 credit hours

(Same as SOC 5140.) Causes, dynamics, and consequences of violence in the family. Includes the discussion of violence toward children, spouses, dating partners, siblings, and elders. Emphasizes the social conditions that lead to these types of violence.

CDFS 5340 - The Contemporary Family

3 credit hours

Prerequisite: CDFS 3320 or permission of department. An ecological approach to the study of contemporary issues, problems, questions, and lifestyles as they relate to families and individuals.

CDFS 5390 - Families in Later Life

3 credit hours

Prerequisite: Human Sciences majors - CDFS 3320; Sociology majors - SOC 2600; or permission of department. Examines families in later life from an ecological approach with emphasis on family forms and relationships.

CDFS 5391 - Aging Health and Development

3 credit hours

Prerequisite: CDFS 4390 or SOC 2600 or permission of department. A service learning opportunity that seeks to provide students with understanding of the concepts and application of aging, families in later life, assessment, and gerontological program planning and implementation.

CDFS 6300 - Application of Child Development Principles I

3 credit hours

A comprehensive exploration of human growth and development from conception to age six. Recognizing and assessing developmental ages and stages as well as special needs is an integral part of this course.

CDFS 6310 - Application of Child Development Principles II

3 credit hours

Prerequisite: CDFS 6300 or equivalent. Advanced study of the child from the age of six through adolescence from a holistic perspective.

CDFS 6320 - Families at Risk

3 credit hours

Prerequisite: CDFS 3320 or permission of the instructor. The dynamics, context, and overall impact

of factors which place families at risk. Methods by which family members cope with normative and/or catastrophic stressor events analyzed from a variety of theoretical perspectives.

CDFS 6330 - Theories of Child Development and Family Relations

3 credit hours

The advanced study of individual and family theory, as well as theory principles and evaluation criteria.

Family and Consumer Sciences

FCSE 5500 - Occupational Field Experience

3 to 9 credit hours

Prerequisite: Permission of department. Directed participation in planned and supervised occupational experiences of eight hours field experience per week. Must apply previous semester.

FCSE 5501 - Occupational Field Experience: Care and Guidance of Children

3 to 9 credit hours

Prerequisite: Permission of department. Directed participation in planned and supervised occupational experiences of eight hours field experience per week. Must apply previous semester.

FCSE 5502 - Occupational Field Experience: Food Management, Production, and Services

3 to 9 credit hours

Prerequisite: Permission of department. Directed participation in planned and supervised occupational experiences of eight hours field experience per week. Must apply previous semester.

FCSE 5540 - Teaching Family and Consumer Sciences Education

1 to 6 credit hours

Synthesis and application of relevant concepts relating to educational planning; changes relating to the development of effective family and consumer sciences education programs. A maximum of six semester hours credit may be applied toward a degree.

FCSE 5550 - Curriculum Development

3 credit hours

Review of recent advances in family and consumer sciences education. Analysis and evaluation of selected topics, materials, and methods in terms of their appropriateness for reaching curriculum

objectives in family and consumer sciences education..

FCSE 5560 - Problems in Teaching Materials
1 to 3 credit hours

Prerequisite: Permission of department. Application of principles and techniques involved in the selection and preparation of effective teaching materials and visual aids.

FCSE 5570 - Occupational Family and Consumer Sciences Seminar
3 credit hours

Prerequisite: Permission of department. Examination and analysis of program development, execution, and evaluation in a selected occupational area.

Human Sciences

HSC 5040 - Seminar in Human Sciences
3 credit hours

Prerequisite: Permission of department. Individual research and/or analysis of contemporary problems and issues in a concentrated area of study. For advanced students. May be repeated for up to 9 hours.

HSC 5041 - Seminar in Human Sciences: Child Development and Family Studies
3 credit hours

Prerequisite: Permission of department. Individual research and/or analysis of contemporary problems and issues in a concentrated area of study. For advanced students. May be repeated for up to 9 hours.

HSC 5042 - Seminar in Human Sciences: Nutrition and Food Science
3 credit hours

Prerequisite: Permission of department. Individual research and/or analysis of contemporary problems and issues in a concentrated area of study. For advanced students. May be repeated for up to 9 hours.

HSC 5043 - Seminar in Human Sciences: Textiles, Merchandising, and Design
3 credit hours

Prerequisite: Permission of department. Individual research and/or analysis of contemporary problems and issues in a concentrated area of study. For advanced students. May be repeated for up to 9 hours.

HSC 5044 - Seminar in Human Sciences: Interior Design

3 credit hours

Prerequisite: Permission of department. Individual research and/or analysis of contemporary problems and issues in a concentrated area of study. For advanced students. May be repeated for up to 9 hours.

HSC 5050 - Advanced Problems in Human Sciences

3 credit hours

Prerequisite: Permission of department. Provides an opportunity for advanced students to do independent study or conduct research in their areas of concentration. Topics of study or research to be determined by student and professor prior to registration. May be repeated for up to 9 hours.

HSC 5051 - Advanced Problems in Human Sciences: Child Development and Family Studies
3 credit hours

Prerequisite: Permission of department. Provides an opportunity for advanced students to do independent study or conduct research in their areas of concentration. Topics of study or research to be determined by student and professor prior to registration. May be repeated for up to 9 hours.

HSC 5052 - Advanced Problems in Human Sciences: Nutrition and Food Science
3 credit hours

Prerequisite: Permission of department. Provides an opportunity for advanced students to do independent study or conduct research in their areas of concentration. Topics of study or research to be determined by student and professor prior to registration. May be repeated for up to 9 hours.

HSC 5053 - Advanced Problems in Human Sciences: Textiles, Merchandising, and Design
3 credit hours

Prerequisite: Permission of department. Provides an opportunity for advanced students to do independent study or conduct research in their areas of concentration. Topics of study or research to be determined by student and professor prior to registration. May be repeated for up to 9 hours.

HSC 5054 - Advanced Problems in Human Sciences: Interior Design

3 credit hours

Prerequisite: Permission of department. Provides an opportunity for advanced students to do independent study or conduct research in their areas of concentration. Topics of study or research to be determined by student and professor prior to registration. May be repeated for up to 9 hours.

HSC 5060 - Readings in Human Sciences

1 to 3 credit hours

Prerequisite: Permission of department. Selected readings of current trends, developments, and research in human sciences of interest to teachers and students.

HSC 5061 - Readings in Human Sciences

1 to 3 credit hours

Prerequisite: Permission of department. Selected readings of current trends, developments, and research in human sciences of interest to teachers and students.

HSC 5410 - Consumer Economics

3 credit hours

Study of the economic system and factors influencing consumer decisions and the marketplace; identifies social, economic, and political forces shaping consumer demands; and analyzes the influence of customs, trends, peer groups, and advertising.

HSC 5420 - Personal and Family Management

3 credit hours

Examines management functions. Emphasis on management roles and responsibilities of human sciences professionals, the relationship of the learning organization concept to the human sciences profession, and the use of quality improvement techniques to solve problems encountered by professionals.

HSC 5430 - Resource Management

3 credit hours

Opportunity to identify and integrate the management functions of the human sciences areas. Emphasis on management roles and responsibilities of human sciences professionals, the relationship of the learning organization concept to the human science profession, and the use of quality improvement techniques to solve human sciences-related problems.

HSC 5450 - Professionalism in Consumer Services

3 credit hours

The roles, functions, and responsibilities of consumer services professionals employed in business, government, and other organizations.

HSC 6100 - Teaching Personal Finance

3 credit hours

Personal Finance methods and materials for middle and high school teachers. On-campus one week summer institute with emphasis on college access and success, active learning tools, content, and application plus demonstrated completion of an MTSU approved financial literacy workshop.

HSC 6500 - Issues and Trends in Human Sciences

1 to 3 credit hours

An in-depth analysis of one or more current issues or trends in human sciences. Topics will vary.

HSC 6520 - Public Policy on Consumer and Family Issues

3 credit hours

The ideological roots, impact, and effectiveness of family policy. Family well-being in the areas of health, child care, care of the elderly and disabled, and poverty examined in relation to the development of public policy.

HSC 6530 - Effective Program Management

3 credit hours

Integration of human sciences concepts and content with the principles of program management, including planning, organization, staffing, implementation, and evaluation.

HSC 6620 - Research Methods in Human Sciences

3 credit hours

Introduction to methods and tools of research. Selection and statement of research problems, formulation of research proposal.

HSC 6640 - Thesis Research

1 to 6 credit hours

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

Interior Design

IDES 5700 - History of Interiors **3 credit hours**

Prerequisite: Junior standing. Historic interiors: survey, analysis, and applications. Emphasis on major design characteristics of interior architectural and furnishing styles.

IDES 5710 - Survey of Contemporary Interior Design **3 credit hours**

Prerequisite: IDES 4700 or IDES 5700. Survey of the development of contemporary interiors from the nineteenth century to the present with consideration given to style characteristics, cultural influences, designers, and relationships among styles.

Nutrition and Food Science

NFS 5100 - Food Service Management for Culinary Arts **3 credit hours**

Explores the management process of the food service industry. Areas of study include food and beverage operations, facility design, food service marketing, menu planning, and nutritional concerns.

NFS 5200 - Diet and Disease **3 credit hours**

Prerequisites: BIOL 2030/2031, NFS 4270. Nutritional problems in disease and modifications of normal diet to meet dietary requirements of pathological conditions. Offered once a year.

NFS 5210 - Nutrition in Aging **3 credit hours**

Prerequisite: NFS 1240 or 2220. Nutritional needs of elderly individuals and how these requirements are affected by physiological, pathological, and socioeconomic changes associated with aging. Emphasis on assessment, nutrition counseling skills, and resources to assist elderly individuals with adequate nutrient intake.

NFS 5220 - Food Systems Management **3 credit hours**

Prerequisite: NFS 3200 with B or better. Corequisite: NFS 5221. Emphasis on food systems model, food safety and sanitation, menu planning, procurement, quality food production, distribution and service. flow

of food, and foodservice equipment. Combination of lecture and field placement. Six hours per week.

NFS 5221 - Food Systems Management Lab **0 credit hours**

Corequisite: NFS 5220

NFS 5222 - Nutrition and Food Service Management **3 credit hours**

Prerequisite: HSC 4430. Principles and responsibilities of food and nutrition professionals. Emphasis on marketing food and nutrition services, financial management, facilities planning and design, human resources management, work improvement, and productivity. Offered spring only.

NFS 5240 - Experimental Food Study **3 credit hours**

Prerequisites: NFS 3200 and CHEM 2030/2031 or permission of department. Chemical and physical factors affecting the flavor, texture, color, and appearance of food. Emphasis on evaluation of sensory qualities of food using subjective and objective measurements and new food product development. Offered once per year.

NFS 5250 - Maternal Child Nutrition **3 credit hours**

Prerequisite: NFS 1240 or 2220. Nutritional needs during pregnancy, infancy, and childhood related to physical and mental development. Emphasis on cultural, social, and psychological aspects of the development of food patterns and nutrition education resources.

NFS 5260 - Food Safety Issues from Production to Consumption **3 credit hours**

Issues that impact food production, food storage and transportation, food processing, and food consumption within food production facilities, the home, and food service facilities. Consumer concerns evaluated based on risk theory and scientific evaluation of safety, including decision-making through critical thinking. Food standards and regulations designed to improve safety of food also discussed.

NFS 5270 - Advanced Nutrition **3 credit hours**

Prerequisites: NFS 2220, BIOL 2010/2011, and BIOL 2020/2021 (with a C or better). Advanced study of

nutrients, standards for determination of nutrient needs and metabolism of nutrients in the body.

Offered Fall only.

NFS 5400 - Dietetic Practicum

6 credit hours

Prerequisites: NFS 4310/NFS 5200, NFS 4220/NFS 5220, and NFS 4222/NFS 5222. Practical preparation in clinical dietetics. Clinical experience provided with the cooperation of Middle Tennessee Medical Center and other facilities. For dietetics students only. Offered summer only.

NFS 5800 - Diet and Disease Seminar

1 credit hours

To be taken concurrently with NFS 5200. Nutrition and Food Science majors only. Practice in applying the knowledge base acquired in NFS 5200 to structured case studies and development of the critical thinking skills needed to design accurate and systematic nutrition care plans in the clinical setting.

NFS 6100 - Advanced Studies in Food and Culture in the United States

3 credit hours

Focuses on health, culture, food, and nutrition habits of the most general ethnic and racial groups living in the United States. Comprehensive coverage includes Native Americans, Europeans, Africans, Mexicans and Central Americans, Chinese, Koreans, Southeast Asians, and Middle Easterners.

NFS 6200 - Advances in Carbohydrates, Lipids, and Proteins

3 credit hours

Prerequisite: CHEM 3530/3531 or equivalent. Sequential to NFS 5270 or equivalent. Advanced study of carbohydrates, lipids, and proteins with emphasis on the metabolic interactions at the cellular, tissue, and organ levels. Offered alternate years.

NFS 6210 - Vitamin and Mineral Metabolism

3 credit hours

Prerequisite: CHEM 3530/3531 or equivalent. Sequential to NFS 5270 or equivalent. Metabolic functions and mechanisms of micronutrient action in human nutrition with an emphasis on physiological requirements, assessment techniques, and interrelationships in disease prevention. Offered alternate years.

NFS 6220 - Food Industry Applied Nutrition

3 credit hours

Integration of food technological considerations, nutrition attributes, consumer perceptions, and socio-demographic influences to determine food choice, and thus diet quality.

NFS 6230 - Advanced Clinical Nutrition

3 credit hours

Sequential to NFS 5200 and NFS 5270. Integration of the principles of basic biological diseases in the pathogenesis, diagnosis, and management of the nutritional aspects of disease including nutritional assessment and dietary implication in the etiology of disease.

NFS 6290 - Clinical Dietetics

6 credit hours

Planned educational experiences in administration of food service systems and experiences in a health care facility applying principles of normal and clinical nutrition to nutritional problems occurring throughout the life cycle.

Textiles, Merchandising, and Design

TXMD 5130 - History of Costume

3 credit hours

Survey of clothing and design from ancient to modern times; consideration given to social, economic, and cultural conditions reflected in dress.

TXMD 5170 - Social Aspects of Clothing

3 credit hours

Principles of sociology and psychology applied to the study of clothing behavior. Research methods for studying sociopsychological aspects of clothing included. Offered once a year.

Nursing

Jenny Sauls, Director

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Jenny.Sauls@mtsu.edu

The School of Nursing offers the Master of Science in Nursing (M.S.N.) through the Regents Online Degree Program (RODP) and the Health Care Informatics concentration within the Master of Science in Professional Science (M.S.) degree in collaboration with the Biology and Mathematical Sciences departments.

Nursing, Advanced Practice: Family Nurse Practitioner, M.S.N. (RODP)

Jenny Sauls, Director

(615) 898-2437

Jenny.Sauls@mtsu.edu

The School of Nursing offers the Master of Science in Nursing (M.S.N.) through the Regents Online Degree Program (RODP).

The Master of Science in Nursing degree (M.S.N.) is delivered following the standard protocol established for the delivery of RODP courses and programs. The program includes four concentrations: Nursing Administration, Nursing Education, Advanced Practice (Family Nurse Practitioner), and Nursing Informatics (new students not currently being enrolled). Courses are offered each semester (Fall, Spring, and Summer) through all six Tennessee Board of Regents universities.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Master of Science in Nursing with a concentration in Advanced Practice: Family Nurse Practitioner requires

1. an unencumbered license to practice as a Registered Nurse in Tennessee or the state in which the clinical assignments are completed;
2. a bachelor's degree with an overall GPA of 3.0 on a 4.0 scale;
3. successful completion of a 3-semester-hour or 4-quarter-hour undergraduate level statistics course;
4. TOEFL (Test of English as a Foreign Language) if needed. Graduate school score requirements vary by TBR university. Consult the graduate admission requirements at each campus for further details.

Application Procedures

Students are advised to contact the graduate program director in the School of Nursing before beginning the application procedure. Applications are due by October 1 for spring admission, February 1 for summer admission, and April 1 for fall admission.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official copies of transcripts;
3. submit three signed letters of recommendation;
4. submit an updated vita or resume;
5. submit a copy of RN license;
6. submit background check information;
7. submit proof of immunization;
8. submit proof of payment of malpractice insurance.

NOTE: Applicants residing in Middle Tennessee (Bedford, Cannon, Cheatham, Coffee, Davidson, Dickson, Franklin, Giles, Hickman, Houston, Humphreys, Lawrence, Lewis, Lincoln, Marshall, Maury, Montgomery, Moore, Perry, Robertson, Rutherford, Sumner, Stewart, Wayne, Williamson and Wilson county) are randomly assigned to one of the three TBR institutions in Middle Tennessee (APSU, MTSU, or TSU). Students who reside in one of these counties must first apply to the RODP program at www.rodop.org/admissions/admissions-steps. Students approved and assigned to MTSU will then apply to the MTSU College of Graduate Studies.

Degree Requirements

Candidate must

1. complete 46 hours of graduate nursing courses (see specifics in Curriculum section below);
2. complete a practicum in accordance with ROPD requirements for this degree.

Curriculum: Nursing, Advanced Practice: Family Nurse Practitioner

Candidate must complete 46 hours in the following course of study:

Core (15 hours)

- NURS 6000 - Theoretical Foundations **3 credit hours**
- NURS 6001 - Health Care Policy **3 credit hours**
- NURS 6002 - Advanced Nursing Research **3 credit hours**
- NURS 6003 - Advanced Role Development **3 credit hours**
- NURS 6990 - Scholarly Synthesis **3 credit hours**

Concentration Courses (10 hours)

- NURS 6101 - Advanced Health Assessment **3 credit hours**
- NURS 6102 - Advanced Health Assessment Clinical **1 credit hours ***
- NURS 6103 - Advanced Pathophysiology **3 credit hours**
- NURS 6104 - Advanced Pharmacology **3 credit hours**

Family Nurse Practitioner Courses (17 hours)

- NURS 6601 - Family Nurse Practitioner I **3 credit hours**
- NURS 6602 - Family Nurse Practitioner I - Clinical **2 credit hours**
- NURS 6603 - Family Nurse Practitioner II **3 credit hours**
- NURS 6604 - Family Nurse Practitioner II - Clinical **4 credit hours**
- NURS 6605 - Family Nurse Practitioner III **3 credit hours**
- NURS 6606 - Family Nurse Practitioner III - Clinical Practicum **2 credit hours**

Practicum (4 hours)

- NURS 6609 - Advanced Family NP Practicum **4 credit hours**
Total practice contact hours - 780

**(NURS 6102 - 60 contact hours which do not count in certification eligibility requirements)*

Program Notes

The School of Nursing also offers selected graduate courses that may be transferred to programs offering the Master of Science in Nursing. Other courses designed to assist individuals to meet the requirements of the State of Tennessee Board of Nursing for a Certificate of Fitness to practice as an Advanced Practice Nurse are also available. Please contact the School of Nursing for further information.

Nursing, Nursing Administration, M.S.N. (RODP)

Jenny Sauls, Director

(615) 898-2437

Jenny.Sauls@mtsu.edu

The School of Nursing offers the Master of Science in Nursing (M.S.N.) through the Regents Online Degree Program (RODP).

The Master of Science in Nursing degree (M.S.N.) is delivered following the standard protocol established for the delivery of RODP courses and programs. The program includes four concentrations: Nursing Administration, Nursing Education, Advanced Practice (Family Nurse Practitioner), and Nursing Informatics (new students not currently being enrolled). Courses are offered each semester (Fall, Spring, and Summer) through all six Tennessee Board of Regents universities.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Master of Science in Nursing with a concentration in Nursing Administration requires

1. an unencumbered license to practice as a Registered Nurse in Tennessee or the state in which the clinical assignments are completed;
2. a bachelor's degree with an overall GPA of 3.0 on a 4.0 scale;
3. successful completion of a 3-semester-hour or 4-quarter-hour undergraduate level statistics course;
4. TOEFL (Test of English as a Foreign Language) if needed. Graduate school score requirements vary by TBR university. Consult the graduate admission requirements at each campus for further details.

Application Procedures

Students are advised to contact the graduate program director in the School of Nursing before beginning the application procedure. Applications are due by October 1 for spring admission, February 1 for summer admission, and April 1 for fall admission.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official copies of transcripts;
3. submit three signed letters of recommendation;
4. submit an updated vita or resume;
5. submit a copy of R.N. license;
6. submit background check information;
7. submit proof of immunization;
8. submit proof of payment of malpractice insurance.

NOTE: Applicants residing in Middle Tennessee (Bedford, Cannon, Cheatham, Coffee, Davidson, Dickson, Franklin, Giles, Hickman, Houston, Humphreys, Lawrence, Lewis, Lincoln, Marshall, Maury, Montgomery, Moore, Perry, Robertson, Rutherford, Sumner, Stewart, Wayne, Williamson and Wilson county) are randomly assigned to one of the three TBR institutions in Middle Tennessee (APSU, MTSU, or TSU). Students residing in one of these counties must first apply to the RODP program at www.rodop.org/admissions/admissions-steps. Students approved and assigned to MTSU will then apply to the MTSU College of Graduate Studies.

Degree Requirements

Candidate must

1. complete 36 hours of graduate nursing courses (see specifics in Curriculum section below);
2. complete a practicum in accordance with RODP requirements for this degree.

Curriculum: Nursing, Nursing Administration

Candidate must complete 36 hours in the following course of study:

Core Courses (15 hours)

- NURS - 6000 Theoretical Foundations **3 credit hours**
- NURS - 6001 Health Care Policy **3 credit hours**
- NURS - 6002 Advanced Nursing Research **3 credit hours**
- NURS - 6003 Advanced Role Development **3 credit hours**
- NURS - 6990 Scholarly Synthesis/Research **3 credit hours**

Concentration Courses (15 hours)

- NURS 6301 - Nursing Administration I **3 credit hours**
- NURS 6302 - Nursing Administration II **3 credit hours**
- NURS 6303 - Health Care Finance **3 credit hours**
- NURS 6304 - Human Resources Management **3 credit hours**
- NURS 6305 - Quality Management in Nursing and Health Care **3 credit hours**

Practicum (6 hours)

- NURS 6309 - Nursing Administration Practicum **4 credit hours**
- NURS 6307 - Nursing Management Practicum **2 credit hours**

Total practice contact hours - 360

Program Notes

The School of Nursing also offers selected graduate courses that may be transferred to programs offering the Master of Science in Nursing. Other courses designed to assist individuals to meet the requirements of the State of Tennessee Board of Nursing for a Certificate of Fitness to practice as an Advanced Practice Nurse are also available. Please contact the School of Nursing for further information.

Nursing, Nursing Education, M.S.N. (RODP)

Jenny Sauls, Director

(615) 898-2437

Jenny.Sauls@mtsu.edu

The School of Nursing offers the Master of Science in Nursing (M.S.N.) through the Regents Online Degree Program (RODP).

The Master of Science in Nursing degree (M.S.N.) is delivered following the standard protocol established for the delivery of RODP courses and programs. The program includes four concentrations: Nursing Administration, Nursing Education, Advanced Practice (Family Nurse Practitioner), and Nursing Informatics (new students not currently being enrolled). Courses are offered each semester (Fall, Spring, and Summer) through all six Tennessee Board of Regents universities.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Master of Science in Nursing with a concentration in Nursing Education requires

1. an unencumbered license to practice as a Registered Nurse in Tennessee or the state in which the clinical assignments are completed;
2. a bachelor's degree with an overall GPA of 3.0 on a 4.0 scale;
3. successful completion of a 3-semester-hour or 4-quarter-hour undergraduate level statistics course;
4. TOEFL (Test of English as a Foreign Language) if needed. Graduate school score requirements vary by TBR university. Consult the graduate admission requirements at each campus for further details.

Application Procedures

Students are advised to contact the graduate program director in the School of Nursing before beginning the application procedure. Applications are due by October 1 for spring admission, February 1 for summer admission, and April 1 for fall admission.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply/php);
2. submit official copies of transcripts;
3. submit three signed letters of recommendation;
4. submit an updated vita or resume;
5. submit a copy of R.N. license;
6. submit background check information;
7. submit proof of immunization;
8. submit proof of payment of malpractice insurance.

NOTE: Applicants residing in Middle Tennessee (Bedford, Cannon, Cheatham, Coffee, Davidson, Dickson, Franklin, Giles, Hickman, Houston, Humphreys, Lawrence, Lewis, Lincoln, Marshall, Maury, Montgomery, Moore, Perry, Robertson, Rutherford, Sumner, Stewart, Wayne, Williamson and Wilson county) are randomly assigned to one of the three TBR institutions in Middle Tennessee (APSU, MTSU, or TSU). Students who reside in one of these counties must first apply to the RODP program at www.rod.org/admissions/admissions-steps. Students approved and assigned to MTSU will then apply to the MTSU College of Graduate Studies.

Degree Requirements

Candidate must

1. complete 40 hours of graduate nursing courses (see specifics in Curriculum section below);
2. complete a practicum in accordance with RODP requirements for this degree.

Curriculum: Nursing, Nursing Education

Candidate must complete 40 hours in the following course of study:

Core Courses (15 hours)

- NURS 6000 - Theoretical Foundations **3 credit hours**
- NURS 6001 - Health Care Policy **3 credit hours**
- NURS 6002 - Advanced Nursing Research **3 credit hours**
- NURS 6003 - Advanced Role Development **3 credit hours**
- NURS 6990 - Scholarly Synthesis **3 credit hours**

Concentration Courses (16 hours)

- NURS 6101 - Advanced Health Assessment **3 credit hours**
- NURS 6102 - Advanced Health Assessment Clinical **1 credit hours**
- NURS 6103 - Advanced Pathophysiology **3 credit hours**
- NURS 6104 - Advanced Pharmacology **3 credit hours**
- NURS 6204 - Curriculum Design and Educational Theory **3 credit hours**
- NURS 6205 - Evaluation in Nursing Education **3 credit hours**

Clinical Focus Course (3 hours)

Select one course from the following:

- NURS 6505 - Advanced Adult Health Nursing **3 credit hours**
- NURS 6515 - Advanced Psychiatric/Mental Health Nursing **3 credit hours**
- NURS 6525 - Advanced Critical Care Nursing **3 credit hours**
- NURS 6545 - Advanced Women's Health and Perinatal Nursing **3 credit hours**
- NURS 6635 - Advanced Pediatric Nursing **3 credit hours**

Practicum (6 hours)

- NURS 6207 - Clinical Focus Practicum **2 credit hours**
- NURS 6209 - Nursing Education Practicum **4 credit hours**

Total practice contact hours - 360

Clinical Focus Practicum - 120; Nursing Education Practicum - 240

Program Notes

The School of Nursing also offers selected graduate courses that may be transferred to programs offering the Master of Science in Nursing. Other courses designed to assist individuals to meet the requirements of the State of Tennessee Board of Nursing for a Certificate of Fitness to practice as an Advanced Practice Nurse are also available. Please contact the School of Nursing for further information.

Nursing, Nursing Informatics, M.S.N. (RODP)

NOTE: Until further notice, applications are not being accepted for this concentration due to a severe shortage of Nursing Informatics faculty. No new students will be admitted in the Informatics concentration after Spring 2014.

Jenny Sauls, Director

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The School of Nursing offers the Master of Science in Nursing (M.S.N.) through the Regents Online Degree Program (RODP).

The Master of Science in Nursing degree (M.S.N.) is delivered following the standard protocol established for the delivery of RODP courses and programs. The program includes four concentrations: Nursing Administration, Nursing Education, Advanced Practice (Family Nurse Practitioner), and Nursing Informatics (new students not currently being enrolled). Courses are offered each semester (Fall, Spring, and Summer) through all six Tennessee Board of Regents universities.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Master of Science in Nursing with a concentration in Nursing Informatics requires

1. an unencumbered license to practice as a Registered Nurse in Tennessee or the state in which the clinical assignments are completed;
2. a bachelor's degree with an overall GPA of 3.0 on a 4.0 scale;
3. successful completion of a 3-semester-hour or 4-quarter-hour undergraduate level statistics course;
4. TOEFL (Test of English as a Foreign Language) if needed. Graduate school score requirements vary by TBR university. Consult the graduate admission requirements at each campus for further details.

Application Procedures

Students are advised to contact the graduate program director in the School of Nursing before beginning the application procedure. Applications are due by October 1 for spring admission, February 1 for summer admission, and April 1 for fall admission.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official copies of transcripts;
3. submit three signed letters of recommendation;
4. submit an updated vita or resume;
5. submit a copy of R.N. license;
6. submit background check information;
7. submit proof of immunization;
8. submit proof of payment of malpractice insurance.

NOTE: Applicants residing in Middle Tennessee (Bedford, Cannon, Cheatham, Coffee, Davidson, Dickson, Franklin, Giles, Hickman, Houston, Humphreys, Lawrence, Lewis, Lincoln, Marshall, Maury, Montgomery, Moore, Perry, Robertson, Rutherford, Sumner, Stewart, Wayne, Williamson and Wilson county) are randomly assigned to one of the three TBR institutions in Middle Tennessee (APSU, MTSU, or TSU). Students who reside in one of these counties must first apply to the RODP program at (www.rodop.org/admissions/admissions-steps). Students approved and assigned to MTSU will then apply to the MTSU College of Graduate Studies.

Degree Requirements

Candidate must

1. complete 38 hours of graduate nursing courses (see specifics in Curriculum section below);
2. complete a practicum in accordance with RODP requirements for this degree.

Curriculum: Nursing, Nursing Informatics

Candidate must complete 38 hours in the following course of study:

Core Courses (15 hours)

- NURS 6000 - Theoretical Foundations **3 credit hours**
- NURS 6001 - Health Care Policy **3 credit hours**
- NURS 6002 - Advanced Nursing Research **3 credit hours**
- NURS 6003 - Advanced Role Development **3 credit hours**
- NURS 6990 - Scholarly Synthesis/Research **3 credit hours**

Concentration Courses (15 hours)

- NURS 6401 - Introduction to Healthcare Informatics **3 credit hours**
- NURS 6402 - Health Care Information Systems and Technology Integration **3 credit hours**
- NURS 6403 - Project Management in the Design and Analysis of Health Care Information Systems **3 credit hours**
- NURS 6404 - Project Management in the Implementation and Evaluation of Health Care Information Systems **3 credit hours**
- NURS - 6406 Health Care Data Analysis and Evidence-based Practice **3 credit hours**

Practicum (8 hours)

- NURS 6407 - Informatics Application I **2 credit hours**
- NURS 6409 - Informatics Application II **2 credit hours**
- NURS 6410 - Informatics Practicum **4 credit hours**

Total practice contact hours - 240

Program Notes

The School of Nursing also offers selected graduate courses that may be transferred to programs offering the Master of Science in Nursing. Other courses designed to assist individuals to meet the requirements of the State of Tennessee Board of Nursing for a Certificate of Fitness to practice as an Advanced Practice Nurse are also available. Please contact the School of Nursing for further information.

Advanced Practice: Family Nurse Practitioner Certificate (RODP)

Jenny Sauls, Director

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The Family Nurse Practitioner (FNP) Certificate program provides a formal program of study for Master's-prepared nurses interested in taking the national certification exam to practice as a Family Nurse Practitioner (FNP). To be eligible for the certification exam, students must successfully complete graduate didactic and clinical requirements of a Master's nurse practitioner program through a formal Master's-level Nurse Practitioner program in the desired area of practice. The FNP Certificate program offers a formal program of study to meet this need for students who already have the Master of Science in Nursing degree without requiring them to complete a second Master's degree.

Admission Requirements

Admission to the program is based on competitive selection from the pool of applicants who meet the College of Graduate Studies admission requirements from the designated home school.

Additional admission requirements for the Advanced Practice: Family Nurse Practitioner Certificate program include

1. a master's degree in nursing from an accredited program (NLNAC or CCNE) that includes satisfactory completion of the following courses at the master's level:
 - Advanced Health Assessment with a didactic and clinical component equivalent to 3-4 semester credit hours;
 - Advanced Pathophysiology equivalent to 3 semester credit hours; and
 - Advanced Pharmacology equivalent to 3 semester credit hours;
2. eligibility to practice as a registered nurse in Tennessee or the compact state in which clinical assignments are completed;
3. overall GPA of 3.00 on a 4.00 scale;
4. TOEFL score of 600 if native language is not English;
5. a written document prepared by the applicant that includes a resumé, a discussion of prior professional experience, future career goals, and reasons for pursuing the certificate program;
6. letters of recommendation from at least three persons (a minimum of one academic) familiar with the applicant's academic and professional background and experience in nursing practice.

Application Procedures

Students are advised to contact the graduate program director in the School of Nursing before beginning the application procedure. Applications are due by October 1 for spring admission, February 1 for summer admission, and April 1 for fall admission.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official copies of transcripts;
3. submit three signed letters of recommendation;
4. submit an updated vita or resumé;
5. submit a copy of R.N. license;
6. submit background check information;
7. submit proof of immunizations;
8. submit proof of malpractice insurance.

NOTE: Applicants residing in Middle Tennessee (Bedford, Cannon, Cheatham, Coffee, Davidson, Dickson, Franklin, Giles, Hickman, Houston, Humphreys, Lawrence, Lewis, Lincoln, Marshall, Maury, Montgomery, Moore, Perry, Robertson, Rutherford, Sumner, Stewart, Wayne, Williamson, and Wilson counties) are randomly assigned to one of the three TBR institutions in Middle Tennessee (APSU, MTSU, or TSU). Students who reside in one of these counties must first apply to the RODP program at

www.rodip.org/admissions/admissions-steps. Students approved and assigned to MTSU will then apply to the MTSU College of Graduate Studies.

Certificate Requirements

Candidate must complete 21 credit hours of graduate nursing courses.

Curriculum: Advanced Practice: Family Nurse Practitioner

- NURS 6601 – Family Nurse Practitioner I (Women's Health) **3 credit hours**
- NURS 6602 – Family Nurse Practitioner I – Clinical **2 credit hours**
- NURS 6603 – Family Nurse Practitioner II (Adult/Geriatric Health) **3 credit hours**
- NURS 6604 – Family Nurse Practitioner II – Clinical **4 credit hours**
- NURS 6605 – Family Nurse Practitioner III (Pediatric Health) **3 credit hours**
- NURS 6606 – Family Nurse Practitioner III – Clinical **2 credit hours**
- NURS 6609 – Advanced Family Nurse Practitioner Practicum **4 credit hours**

Program Notes

Total contact hours – Advanced FNP Clinical/Practicum = 720.

Only two repeated course are allowed.

More than two grades below "C" will lead to dismissal from the program.

Nursing Administration Certificate (RODP)

Jenny Sauls, Director

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The Nursing Administration Certificate program provides a formal program of study for master's-prepared nurses interested in obtaining a credential allowing them to assume a management position in a health care setting. Content necessary in nursing administration-including health care finance, human resource management, and quality management in health care-is provided. Upon completion of the program, students are eligible to sit for the national certification exam. This certificate is the optimal way for those already holding a master's degree and desiring this specialization to gain marketability without having to complete an entire second master's degree.

Admission Requirements

Admission to the program is based on competitive selection from the pool of applicants who meet the College of Graduate Studies admission requirements from the designated home school.

Additional admission requirements for the Nursing Administration Certificate Program include:

1. a master's degree in nursing from an accredited program (NLNAC or CCNE);
2. eligibility to practice as a registered nurse in Tennessee or the compact state in which clinical assignments are completed;
3. overall GPA of 3.00 on a 4.00 scale;
4. TOEFL score of 600 if native language is not English;
5. a written document prepared by the applicant that includes a resume, a discussion of prior professional experience, future career goals, and reasons for pursuing the certificate program;
6. letters of recommendation from at least three persons (a minimum of one academic) familiar with the applicant's academic and professional background and experience in nursing practice.

Application Procedures

Students are advised to contact the graduate program director in the School of Nursing before beginning the application procedure. Applications are due by 1 October for spring admission, 1 February for summer admission, and 1 April for fall admission.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official copies of transcripts;
3. submit three signed letters of recommendation;
4. submit an updated vita or resume;
5. submit a copy of RN license;
6. submit background check information;
7. submit proof of immunizations;
8. submit proof of payment of malpractice insurance.

NOTE: Applicants residing in Middle Tennessee (Bedford, Cannon, Cheatham, Coffee, Davidson, Dickson, Franklin, Giles, Hickman, Houston, Humphreys, Lawrence, Lewis, Lincoln, Marshall, Maury, Montgomery, Moore, Perry, Robertson, Rutherford, Sumner, Stewart, Wayne, Williamson, and Wilson County) are randomly assigned to one of the three TBR institutions in Middle Tennessee (APSU, MTSU, or TSU). Students who reside in one of these counties must first apply to the RODP program at www.rod.org/admissions/admissions-steps. Students approved and assigned to MTSU will then apply to the MTSU College of Graduate Studies.

Certificate Requirements

Candidate must complete 19 credit hours of graduate nursing courses.

Curriculum: Nursing Administration

- NURS 6301 - Nursing Administration I **3 credit hours**
- NURS 6302 - Nursing Administration II **3 credit hours**
- NURS 6303 - Health Care Finance **3 credit hours**
- NURS 6304 - Human Resource Management **3 credit hours**
- NURS 6305 - Quality Management in Nursing and Health Care **3 credit hours**
- NURS 6309 - Nursing Administration Practicum **4 credit hours**

Program Notes

- Only two repeated courses are allowed.
- More than two grades below "C" will lead to dismissal from the program.
- Please contact your advisor in the School of Nursing for information about required clinical hours.

Nursing Education Certificate (RODP)

Jenny Sauls, Director

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The Nursing Education Certificate program provides a formal program of study for master's-prepared nurses interested in obtaining a credential allowing them to teach in schools of nursing. Content necessary to teach nursing students in specific areas of nursing is provided. Upon completion of the program, students are eligible to sit for the national certification exam. This certificate is the optimal way for those already holding a master's degree and desiring this specialization to gain marketability without having to complete an entire second master's degree.

Admission Requirements

Admission to the program is based on competitive selection from the pool of applicants who meet the College of Graduate Studies admission requirements from the designated home school.

Additional admission requirements for the Nursing Education Certificate Program include

1. a master's degree in nursing from an accredited program (NLNAC or CCNE);
2. satisfactory completion of the following courses at the master's level: Advanced Pathophysiology, Advanced Pharmacology, Advanced Health Assessment, and Advanced Health Assessment-Clinical;
3. eligibility to practice as a registered nurse in Tennessee or the compact state in which clinical assignments are completed;
4. overall GPA of 3.00 on a 4.00 scale;
5. TOEFL score of 600 if native language is not English;
6. a written document prepared by the applicant that includes a resume, a discussion of prior professional experience, future career goals, and reasons for pursuing the certificate program;
7. letters of recommendation from at least three persons (a minimum of one academic) familiar with the applicant's academic and professional background and experience in nursing practice.

Application Procedures

Students are advised to contact the graduate program director in the School of Nursing before beginning the application procedure. Applications are due by October 1 for spring admission, February 1 for summer admission, and April 1 for fall admission.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official copies of transcripts;
3. submit three signed letters of recommendation;
4. submit an updated vita or resume;
5. submit a copy of RN license;
6. submit background check information;
7. submit proof of immunizations;
8. submit proof of payment of malpractice insurance.

NOTE: Applicants residing in Middle Tennessee (Bedford, Cannon, Cheatham, Coffee, Davidson, Dickson, Franklin, Giles, Hickman, Houston, Humphreys, Lawrence, Lewis, Lincoln, Marshall, Maury, Montgomery, Moore, Perry, Robertson, Rutherford, Sumner, Stewart, Wayne, Williamson, and Wilson County) are randomly assigned to one of the three TBR institutions in Middle Tennessee (APSU, MTSU, or TSU). Students who reside in one of these counties must first apply to the RODP program at www.rodip.org/admissions/admissions-steps. Students approved and assigned to MTSU will then apply to the MTSU College of Graduate Studies.

Certificate Requirements

Candidate must complete 15 credit hours in graduate nursing courses.

Curriculum: Nursing Education Certificate

Candidate must complete 15 hours in the following course of study:

- NURS 6204 - Curriculum Design and Educational Theory **3 credit hours**
- NURS 6205 - Evaluation in Nursing Education **3 credit hours**
- NURS 6207 Clinical Focus Practicum **3 credit hours**
- NURS 6209 Nursing Education Practicum **3 credit hours**
- **Clinical Focus Courses. Select one course from the following:**
- NURS 6505 - Advanced Adult Health Nursing **3 credit hours**
- NURS 6515 - Advanced Psychiatric/Mental Health Nursing **3 credit hours**
- NURS 6525 - Advanced Critical Care Nursing **3 credit hours**
- NURS 6635 - Advanced Pediatric Nursing **3 credit hours**
- NURS 6545 - Advanced Women's Health and Perinatal Nursing **3 credit hours**

Program Notes

- Only two repeated courses are allowed.
- More than two grades below "C" will lead to dismissal from the program.
- Please contact your advisor in the School of Nursing for information about required clinical hours.

Nursing Informatics Certificate (RODP)

NOTE: Until further notice, applications are not being accepted for this program due to a severe shortage of Nursing Informatics faculty. No new students will be admitted after Spring 2014.

Jenny Sauls, Director
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The Nursing Informatics Certificate program provides a formal program of study for masters-degree prepared nurses interested in obtaining a credential allowing them to assume a position in health care informatics within various health care settings. Upon completion of the program, the student is eligible to sit for the national certification exam. This certificate is the optimal way for those already holding a master's degree and desiring this specialization to gain marketability without having to complete an entire second master's degree.

Admission Requirements

Admission to the certificate program is based on competitive selection from the pool of applicants who meet the College of Graduate Studies admission requirements from the designated home school. Additional requirements for the Nursing Informatics Certificate Program include

1. a master's degree in nursing from an accredited program (NLNAC or CCNE);
2. eligibility to practice as a registered nurse in Tennessee or the state in which clinical assignments are completed;
3. overall GPA of 3.00 on an 4.00 scale;
4. TOEFL score of 600 if native language is not English;
5. a written document prepared by the applicant that includes a resume, a discussion of prior professional experience, future career goals, and reasons for pursuing the certificate program;
6. letters of recommendation from at least three persons (a minimum of one academic) familiar with the applicant's academic and professional background and experience in nursing practice.

Application Procedures

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official copies of transcripts;
3. submit three signed letters of recommendation;
4. submit an updated vita or resume;
5. submit a copy of RN license;
6. submit background check information;
7. submit proof of immunization;
8. submit proof of malpractice insurance.

NOTE: Applicants residing in Middle Tennessee (Bedford, Cannon, Cheatham, Coffee, Davidson, Dickson, Franklin, Giles, Hickman, Houston, Humphreys, Lawrence, Lewis, Lincoln, Marshall, Maury, Montgomery, Moore, Perry, Robertson, Rutherford, Sumner, Stewart, Wayne, Williamson, and Wilson County) are randomly assigned to one of the three TBR institutions in Middle Tennessee (APSU, MTSU, or TSU). Students who reside in one of these counties must first apply to the RODP program at www.rodop.org/admissions-steps. Students approved and assigned to MTSU will then apply to the MTSU College of Graduate Studies.

Certificate Requirements

Candidate must complete 23 hours of graduate nursing courses.

Curriculum: Nursing Informatics

Candidate must complete 23 hours in the following course of study:

- NURS 6401 - Introduction to Healthcare Informatics **3 credit hours**
- NURS 6402 - Health Care Information Systems and Technology Integration **3 credit hours**
- NURS 6403 - Project Management in the Design and Analysis of Health Care Information Systems **3 credit hours**
- NURS 6404 - Project Management in the Implementation and Evaluation of Health Care Information Systems **3 credit hours**
- NURS 6406 - Health Care Data Analysis and Evidence Based Practice **3 credit hours**
- NURS 6407 - Informatics Application I **2 credit hours**
- NURS 6409 - Informatics Application II **2 credit hours**
- NURS 6410 - Informatics Practicum **4 credit hours**

Program Notes

- Only two repeated courses are allowed.
- More than two grades below "C" will lead to dismissal from the program.
- Please contact your advisor in the School of Nursing for information about required clinical hours.

Nursing

NURS 5035 - Special Topics

3 credit hours

Explores selected nursing topics in depth. Specified topic offered each semester according to student interest and faculty availability.

NURS 5055 - Informatics for the Health Care Professional

3 credit hours

Present and potential impact of health care and nursing informatics on the nursing and allied health care disciplines and how informatic tools and systems can assist in providing solutions to health care education and practice. Emphasis on the provider's role as a leader and advocate in this rapidly emerging field.

NURS 6005 - Advanced Independent Health Care Study

1 to 3 credit hours

Students pursue individual interests in the health care arena by contracting with an instructor and documenting the plan of learning as well as its fulfillment.

NURS 6101 - Advanced Health Assessment

3 credit hours

Prerequisite: Undergraduate adult physical assessment course. Physical assessment skills and clinical practice related to evaluation of the health status of the adult client. Refines physical assessment skills learned at the undergraduate level. Predictable pathological findings and the mechanisms underlying these findings in selected diseases. Emphasis on differentiating normal and abnormal findings and on techniques used to distinguish the abnormal. Two lecture hours and two clinical hours per week.

NURS 6102 - Advanced Health Assessment Clinical

1 credit hours

NURS 6103 - Advanced Pathophysiology

3 credit hours

An exploration and analysis of scientific knowledge relevant to selected pathophysiological states confronted in health care management. Basis for the foundation of clinical decisions related to selected diagnostic tests and the initiation of therapeutic regimens. Pathophysiology across the lifespan correlated with clinical diagnoses and management.

NURS 6104 - Advanced Pharmacology

3 credit hours

Advanced pharmacokinetics and pharmacodynamics of commonly used drug categories analyzed in depth with consideration to safe, quality, cost effective drug therapy for client care. Emphasis on pharmacologic therapy management by nurse clinicians in independent and collaborative practice for clients across the lifespan. Prescriptive guidelines included.

NURS 6204 - Curriculum Design and Educational Theory

3 credit hours

Prerequisite: NURS 6000, Theoretical Foundations of Advanced Nursing Practice. Introduces the student to traditional and contemporary considerations for curriculum planning and design as applied to nursing education. Emphasis is placed on curriculum designs and explores major research based theories of adult and nursing education. Concepts will be applied to a variety of settings/and or levels of education.

NURS 6205 - Evaluation in Nursing Education

3 credit hours

Prerequisite: NURS 6002 and NURS 6204. Analysis of testing, benchmarking, and evaluation methods in the clinical practice of nursing across classroom, seminar, and electronic formats; includes evaluation methods to ensure competency in the clinical area.

NURS 6307 - Nursing Management Practicum

2 credit hours

Prerequisites: NURS 6001, NURS 6002, NURS 6003, NURS 6301, NURS 6302, NURS 6303, NURS 6304, and NURS 6305. Integrates theory into a reality context of the nurse manager's role. Students will participate in various functions and phases of the nurse manager role. Student's strengths and weaknesses related to the skills and competencies of nursing management evaluated.

NURS 6400 - Introduction to the Clinical Healthcare Environment

2 credit hours

For M.S. in Professional Science informatics professionals without a clinical health care background. Topics include an overview of the health care industry with a cursory analysis of the various players and their roles, as well as current issues in health care delivery. Students with two or more years of clinical health care experience are not required to take this course and may choose an elective.

NURS 6401 - Introduction to Healthcare Informatics

3 credit hours

Prerequisite: Digital literacy. Foundation to informatics study providing the theoretical framework for information management within various health care setting. Topics include an overview of health care information systems and applications and national health care information management initiatives.

NURS 6402 - Health Care Information Systems and Technology Integration

3 credit hours

Pre/Corequisite: NURS 6401. Corequisite: Instructor/advisor permission. Foundations of information system hardware and software interaction inclusive of the structure and function of networks and the Internet. Offers preparation for leading technology integration projects in practice. Additional topics will include computer hardware found in health care information systems, interface standards, and human-computer interaction such as ergonomics and workflow analysis.

NURS 6403 - Project Management in the Design and Analysis of Health Care Information Systems

3 credit hours

Prerequisite: NURS 6407. Explores project management concepts and skills related to the analysis and design of information systems. Topics include project management, systems lifecycle and solution design, vendor and system selection, and evaluating solutions against strategic objectives.

NURS 6404 - Project Management in the Implementation and Evaluation of Health Care Information Systems

3 credit hours

Prerequisite: NURS 6403. Explores project management concepts and skills related to the implementation and evaluation of information systems. Topics include project management, systems testing, implementation strategies, and solution evaluation.

NURS 6406 - Health Care Data Analysis and Evidence Based Practice

3 credit hours

M.S.N. prerequisite: NURS NURS 6402 and NURS 6407. M.S. in Professional Science prerequisite: STAT 5140 and NURS 6402. Complex data analysis within the health care environment with emphasis on health care practice outcomes for quality

improvement. Principles of data collection, organization, statistical analysis, and interpretation presented. Data analysis used as a tool for problem identification and data mining.

NURS 6407 - Informatics Application I

2 credit hours

Prerequisites: NURS 6401 and NURS 6402. Integrates informatics concepts with tools used in health care informatics practice. Topics include database design, concept mapping, workflow analysis, and solution modeling.

NURS 6409 - Informatics Application II

2 credit hours

Prerequisite: NURS 6404. Integrates further informatics concepts with tools used in health care informatics practice. Topics include Web applications, website and media design, and data presentation.

NURS 6410 - Informatics Practicum

4 credit hours

Opportunity to gain informatics-related experiences in the health care setting. Students will complete a minimum of 200 hours in the clinical setting, functioning under the supervision of an informatics professional. Specific learning objectives developed based upon the clinical placement. Students eligible to write the ANCC certification exam following this course.

NURS 6505 - Advanced Adult Health Nursing

3 credit hours

Prerequisites: NURS 6101, NURS 6102, NURS 6103, NURS 6104. Focuses on the theoretical and conceptual basis of the advanced practice nurse role in the delivery of care to adult populations experiencing acute and chronic illness from a social, cultural, psychological, physical, spiritual, and economic perspective.

NURS 6515 - Advanced Psychiatric/Mental Health Nursing

3 credit hours

Prerequisites: NURS 6101, NURS 6102, NURS 6103, NURS 6104. Provides a foundation in the specialty care of individuals and families experiencing a psychiatric disorder. The models for different psychiatric health care delivery models will be explored.

NURS 6525 - Advanced Critical Care Nursing

3 credit hours

Prerequisite: NURS 6103. Focuses on advanced concepts related to multi-organ/system function and dysfunction. Physiology, assessment, pathophysiology, system failure, and clinical management of major body systems addressed.

NURS 6545 - Advanced Women's Health and Perinatal Nursing

3 credit hours

Prerequisites: NURS 6101, NURS 6102, NURS 6103, NURS 6104. Focuses on the care of women's health issues and the pre, peri, and post natal care of both mother and newborn. Nursing strategies for illness prevention, health promotion, and clinical management of both acute and chronic conditions are addressed.

NURS 6635 - Advanced Pediatric Nursing

3 credit hours

Prerequisites: NURS 6101, NURS 6102, NURS 6103, NURS 6104. Focuses on health maintenance and health promotion for children and their families. Care for children and families experiencing both acute and chronic illness/disabilities are addressed.

Psychology

Greg Schmidt, Chair

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www.mtsu.edu/psychology/

The Department of Psychology offers programs which lead to two graduate degrees: the Master of Arts with a major in Psychology and concentrations in Clinical, Experimental, Industrial/Organizational, Quantitative Psychology, and Pre-Specialist in Education: School Psychology and the Specialist in Education with a major in Curriculum and Instruction, concentration in School Psychology. The department also offers a minor at the graduate level.

Psychology, Clinical Concentration, M.A.

Dr. Mary Ellen Fromuth, Program Director

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The Department of Psychology offers programs which lead to two graduate degrees: the Master of Arts with a major in Psychology and concentrations in Clinical, Experimental, Industrial/Organizational, Quantitative Psychology, and Pre-Specialist in Education: School Psychology and the Specialist in Education with a major in Curriculum and Instruction, concentration in School Psychology. The department also offers a minor at the graduate level. Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to graduate study in Clinical Psychology is competitive and not automatic for students meeting minimal admission requirements. Students are selected from a pool of qualified applicants. Each year the number of students admitted to the program depends on the availability of adequate faculty supervision.

In order to be considered for unconditional admission, candidates must meet two standards: an undergraduate grade point average (GPA) of 3.00 or higher and a minimum score on the Graduate Record Exam (GRE). A minimum of 291 (current scale) or 900 (former scale) on the combined Verbal and Quantitative sections is expected for the Clinical Psychology concentration within the Master of Arts in Psychology.

Applications for Summer/Fall admission must be complete by March 1 and applications for Spring admission must be complete by October 1. Late applicants who meet the admission criteria may be considered on a case-by-case basis. (See admission standards under Admission to the College of Graduate Studies.) Applicants to the Clinical Psychology program should go to www.mtsu.edu/psychology/grad/clinical.php for a supplemental application and reference forms.

Students who do not meet admission requirements may be admitted conditionally to the Clinical Psychology program. Students admitted conditionally must maintain a 3.25 GPA in their first semester (9 hours minimum) of required graduate courses.

Applicants must demonstrate knowledge of the core areas of psychology by completing the following courses at either the undergraduate or graduate level prior to entering the Clinical Program or during enrollment in the program (relevant courses offered at MTSU are listed in parentheses):

- a. group measurement/testing (PSY 4260/PSY 5260 or PSY 6050);
- b. abnormal psychology (PSY 3230/PSY 5230);
- c. learning or cognition (PSY 4040, PSY 4480, PSY 5480*, or PSY 6190*);
- d. social or developmental (PSY 2210, PSY 2300, PSY 4190, PSY 4210/PSY 5210, PSY 4610/ PSY 5610, PSY 6120*, PSY 6130*, PSY 6410);
- e. brain and behavior, sensation and perception, or research methods (PSY 3070/PSY 5070, PSY 4780/PSY 5780, PSY 4240/PSY 5240, or PSY 4030/PSY 5030);
- f. basic statistics (PSY 3020).

Courses marked with an asterisk (*) may be counted as approved graduate electives depending upon specialization. Most applicants have completed 15 semester hours of psychology classes prior to admission to their graduate programs. Those applicants without 15 semester hours of undergraduate psychology may be admitted to the programs but must complete those credits in addition to their graduate programs.

Previous students seeking readmission to the Clinical Psychology program should contact the graduate program director and refer to the program handbook for readmission policy. All potential students must apply to the clinical program and will be evaluated on the current criteria as delineated in the graduate catalog (i.e., GRE, GPA, transcript, three supplemental reference forms, and the supplemental clinical application).

If a student already has an M.A. degree from either the Clinical or School Psychology programs at MTSU and wants to return to take specific courses to prepare for either the psychological assistant or the behavior analysis specialization, s/he may be considered in the applicant pool. If admitted, however, no new degree would be obtained; the student would be a non-degree-seeking student but would be admitted to take specific clinical courses.

If a student has a master's degree or graduate coursework from another MTSU program or from another university, s/he may also be considered in the applicant pool. If accepted, credit for previous coursework would be allocated on an individual basis, consistent with the following MTSU policies:

1. If no previous graduate degree was obtained, up to 6 graduate credit hours may be applied to the Clinical master's degree.
2. If a previous master's degree was obtained, no credit that applied to that degree can be applied to the Clinical master's degree at MTSU. Additional coursework would be necessary to meet the 46-hour program requirement.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts of all previous college work;
3. submit official scores on the Graduate Record Examination (GRE);
4. submit the required supplementary application (online at www.mtsu.edu/psychology/forms/clinicalsupappl.pdf);
5. submit three required supplemental reference forms (online at www.mtsu.edu/psychology/forms/clinicalsupref.pdf).

Degree Requirements

The Master of Arts degree in Psychology with a Clinical concentration requires completion of 46 semester hours including at least 33 hours in psychology. Only 30 percent of the total number of hours may be dually listed (5000-level meeting in conjunction with 4000- or 3000-level) courses.

Candidate must

1. complete PSY 6280, PSY 6290, and PSY 6640 (3 hours);
2. successfully write and orally present an empirical thesis evaluated by a committee of psychology faculty in conjunction with PSY 6640;
3. pass a written comprehensive examination prepared by the faculty in the student's concentration (may be taken no more than twice).

Curriculum: Psychology, Clinical

Candidate must complete 46 hours in the following course of study:

Core Clinical Courses (34 hours)

All clinical students are required to take the following:

- PSY 5470 - Theories of Counseling **3 credit hours** OR
- PSY 6841 - Theories of Individual Psychotherapy **3 credit hours** OR
- PSY 6080 - Interventions with Children and Adolescents **3 credit hours**
(PSY 6080 must be taken for Behavior Analysis specialization.)
- PSY 6020 - Theories of Personality **3 credit hours**
- PSY 6100 - Intellectual Assessment **3 credit hours**
- PSY 6101 - Laboratory in Intellectual Assessment **1 credit hours**
- PSY 6250 - Objective Personality Assessment **3 credit hours**
- PSY 6280 - Psychological Statistics: Regression **3 credit hours**
- PSY 6281 - Psychological Statistics: Regression Lab **0 credit hours**
- PSY 6290 - Psychological Statistics: ANOVA **3 credit hours**

- PSY 6291 - Psychological Statistics: ANOVA Lab **0 credit hours**
- PSY 6510 - Psychopathology **3 credit hours**
- PSY 6640 - Thesis Research **1 to 6 credit hours** (total of 3 credits required)
- PSY 6690 - Professional Issues and Roles **3 credit hours**
- PSY 6801 - Interviewing and Intervention **3 credit hours**
- PSY 6851 - Assessment Field Practicum (Clinical) **3 credit hours**

Specialization (12 hours)

In addition to the required courses in the core area and the research area, students in the Clinical concentration must take 12 elective credits to form a specialization. Students must choose a specialization from the following set within the Clinical concentration:

Psychological Assistant: General Clinical Specialization

Choose four courses (12 hours) from the following list. At least one of these courses must be marked with an asterisk (*).

- PSY 5480 - Learning Theories **3 credit hours** *
- PSY 5610 - Adult Psychology and Aging **3 credit hours**
- PSY 5720 - Multicultural Perspectives in Psychology and Education **3 credit hours**
- PSY 5780 - Human Neuropsychology **3 credit hours** *
- PSY 5820 - Psychology of Language **3 credit hours**
- PSY 6120 - Developmental Psychology: Child **3 credit hours**
- PSY 6130 - Developmental Psychology: Adolescent **3 credit hours**
- PSY 6190 - Advanced Cognitive Psychology **3 credit hours** *
- PSY 6340 - Behavioral Medicine: Theory and Application **3 credit hours**
- PSY 6390 - Independent Research in Psychology: Clinical **1 to 9 credit hours** (3 credit hours total)
- PSY 6400 - Psychological Disorders of Children **3 credit hours**
- PSY 6440 - Advanced Applied Behavioral Analysis **3 credit hours**
- PSY 6500 - Behavioral Methodology **3 credit hours**
- PSY 6520 - Psychopharmacology **3 credit hours** *
- PSY 6530 - The Psychology of Reading and Reading Development **3 credit hours**
- PSY 6580 - Multivariate Data Analysis **3 credit hours**
- PSY 6750 - Psychology and Assessment of Learning Disabilities **3 credit hours**
- PSY 6770 - Assessment and Therapeutic Interventions for Children's Emotional Problems **3 credit hours**
- PSY 6780 - Clinical Neuropsychology **3 credit hours** *
- PSY 6820 - Family Therapy: Evaluation and Treatment Planning **3 credit hours**
- PSY 7100 - Multicultural and Social Bases for Assessment and Intervention Practices **3 credit hours**
- PSY 7520 - Assessment and Treatment of Addictions **3 credit hours**

Health/Neuropsychology Specialization

Required (3 hours)

- PSY 6780 - Clinical Neuropsychology **3 credit hours**

Electives (9 hours)

Choose three courses (9 hours) from the following:

- PSY 5780 - Human Neuropsychology **3 credit hours**
- PSY 6340 - Behavioral Medicine: Theory and Application **3 credit hours**
- PSY 6390 - Independent Research in Psychology: Clinical **1 to 9 credit hours** (3 hours total)
- PSY 6520 - Psychopharmacology **3 credit hours**
- PSY 7520 - Assessment and Treatment of Addictions **3 credit hours**

Behavior Analysis Specialization

Required (9 hours)

Choose 9 hours from the following:

- PSY 5480 - Learning Theories **3 credit hours** OR
- PSY 6785 - Principles of Behavior Analysis **3 credit hours**
- PSY 6440 - Advanced Applied Behavioral Analysis **3 credit hours**
- PSY 6500 - Behavioral Methodology **3 credit hours** (and BA ethics)

Elective (3 hours)

Choose one course (3 hours) from the following:

- PSY 6390 - Independent Research in Psychology: Clinical **1 to 9 credit hours** (3 credit hours total)
- PSY 6400 - Psychological Disorders of Children **3 credit hours**
- PSY 6520 - Psychopharmacology **3 credit hours**
- PSY 6770 - Assessment and Therapeutic Interventions for Children's Emotional Problems **3 credit hours**
- PSY 6340 - Behavioral Medicine: Theory and Application **3 credit hours**
- PSY 6350 - Laboratory in Behavioral Medicine **1 credit hours**

Program Notes

Students must be admitted to the clinical program prior to enrolling in most required clinical core courses. Non-degree-seeking students may not enroll in required clinical courses, except by special permission.

Professional liability insurance (\$1,000,000 each incident/\$3,000,000 annual aggregate) must be maintained throughout enrollment in the program with a current insurance binder filed with the department at all times.

Students must be able to meet the demands required for professional work in psychology. Therefore, students may be subject to dismissal from the Psychology Department if they (a) commit a serious breach of ethics or gross professional negligence or (b) present evidence of impaired psychological functioning that would present a danger to themselves or others in a professional role. Students who are dismissed may reapply and will be considered for readmission on a competitive basis. Students who reapply may be asked to provide evidence of improved ability to meet performance requirements.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

Psychology, Experimental Concentration, M.A.

Dr. Stephen Schmidt, Program Coordinator

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The Department of Psychology offers programs that lead to two graduate degrees: the Master of Arts with a major in Psychology and concentrations in Clinical, Experimental, Industrial/Organizational, Quantitative Psychology, and Pre-Specialist in Education: School Psychology and the Specialist in Education with a major in Curriculum and Instruction, concentration in School Psychology. The department also offers a minor at the graduate level.

A major goal of the Experimental concentration in Psychology is to prepare the student to be a research psychologist. The primary objective is to prepare the student to enter a Ph.D. program in psychology. However, many industries, clinical settings, and research universities are interested in students with the analytical and statistical skills of a research psychologist. In addition, students with master's degrees in experimental psychology may also be employed as faculty at the community college level as psychology instructors.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to graduate study in experimental psychology is competitive and not automatic for students meeting minimal admission requirements. Students are selected from a pool of qualified applicants. Each year the number of students admitted to the program depends on the availability of adequate faculty supervision.

In order to be considered for unconditional admission, candidates must meet two standards: an undergraduate grade point average (GPA) of 3.00 or higher and a minimum score on the Graduate Record Exam (GRE). A minimum of 291 (current scale) or 900 (former scale) on the combined Verbal and Quantitative sections is expected for the Experimental concentration within the Master of Arts in Psychology.

Applications for Summer/Fall admission must be complete by March 1, and applications for Spring admission must be complete by October 1. Late applicants who meet the admission criteria may be considered on a case-by-case basis. (See admission standards under Admission to the College of Graduate Studies.)

Students who do not meet admission requirements may be admitted conditionally to the Experimental concentration. Students admitted conditionally must maintain a 3.25 GPA in their first semester (9 hours minimum) of required graduate courses in the concentration area.

Previous students seeking readmission to the Experimental program should contact the graduate program director and refer to the program handbook for readmission policy.

Experimental students need to have a strong background in the core areas of experimental psychology. Some of this background can be attained at the undergraduate level; however, students must also complete a core of graduate experimental courses. In addition, students are encouraged to become involved in research and to participate in research projects throughout their graduate enrollment. Toward this goal, the student should enroll in at least one hour of research (PSY 6600) or thesis work (PSY 6640) each semester.

Applicants must demonstrate knowledge of the core areas of psychology by completing the following courses at either the undergraduate or graduate level prior to entering the Experimental program or during enrollment in the program (relevant courses offered at MTSU are listed in parentheses):

1. introductory/general psychology (PSY 1410);
2. research methods (PSY 3070 or PSY 5070);
3. social psychology or personality (PSY 2210, 3230/PSY 5230, 3590, PSY 6020, or PSY 6030);
4. learning or cognition (PSY 4040, 4480/PSY 5480, or PSY 6190);
5. developmental (PSY 2300, 4190, 4210/PSY 5210, 4610/PSY 5610, PSY 6120, PSY 6130, PSY 6410);
6. brain and behavior or sensation and perception (PSY 2190, 4030/PSY 5030, 4240/PSY 5240, or 4780/ PSY 5780);
7. statistics (PSY 3020).

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts of all previous college work;
3. submit three letters of reference;
4. submit letter of intent stating goals and objectives;
5. submit official scores on the Graduate Record Examination (GRE).

Degree Requirements

The major in Psychology with a concentration in Experimental requires completion of 36 semester hours including at least 30 hours in graduate psychology courses. Only 30 percent of the total number of hours may be dually listed (5000-level meeting in conjunction with 4000- or 3000-level) courses.

Candidate must

1. complete PSY 6280 and PSY 6290;
2. successfully write and orally present a written thesis evaluated by a committee of psychology faculty in conjunction with PSY 6640;
3. pass a written comprehensive examination prepared by the faculty in the student's concentration (may be taken no more than twice).

Curriculum

Candidate must complete 36 hours in the following course of study:

Core Courses (27 hours)

- PSY 5240 - Behavioral Neuroscience **3 credit hours** (or PSY 5780)
- PSY 6810 - Literature Review and Reading in Psychology: Social **1 to 3 credit hours (3 credit hours)** OR
- PSY 6020 - Theories of Personality **3 credit hours**
- PSY 6120 - Developmental Psychology: Child **3 credit hours** OR
- PSY 6130 - Developmental Psychology: Adolescent **3 credit hours** OR
- PSY 6410 - Development Across the Lifespan **3 credit hours**
- PSY 6190 - Advanced Cognitive Psychology **3 credit hours**
- PSY 6600 - Independent Research in Psychology: General and Experimental **1 to 9 credit hours** (3 hours total)
- PSY 6615 - Basic and Applied Research Methods in Psychology **3 credit hours**
- PSY 6640 - Thesis Research **1 to 6 credit hours** (3 hours total)

Literature Review and Reading in Psychology (3 hours)

- PSY 6590 - Literature Review and Reading in Psychology: General and Experimental **1 to 3 credit hours**
- PSY 6660 - Literature Review and Reading in Psychology: Quantitative **1 to 3 credit hours**
- PSY 6670 - Literature Review and Reading in Psychology: Behavioral Neuroscience **1 to 3 credit hours**
- PSY 6680 - Literature Review and Reading in Psychology: Cognitive **1 to 3 credit hours**
- PSY 6700 - Literature Review and Reading in Psychology: Developmental **1 to 3 credit hours**
- PSY 6720 - Literature Review and Reading in Psychology: Learning **1 to 3 credit hours**
- PSY 6730 - Literature Review and Reading in Psychology: Personality **1 to 3 credit hours**
- PSY 6740 - Literature Review and Reading in Psychology: Reading **1 to 3 credit hours**

- PSY 6790 - Literature Review and Reading in Psychology: Sensation and Perception **1 to 3 credit hours**
- PSY 6810 - Literature Review and Reading in Psychology: Social **1 to 3 credit hours**

Electives (6 hours)

To be chosen with the approval of the student's advisor.

Program Notes

Students must be able to meet the demands required for professional work in psychology. Therefore, students may be subject to dismissal from the Psychology Department if they (a) commit a serious breach of ethics or gross professional negligence or (b) present evidence of impaired psychological functioning that would present a danger to themselves or others in a professional role. Students who are dismissed may reapply and will be considered for readmission on a competitive basis. Students who reapply may be asked to provide evidence of improved ability to meet performance requirements.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

Psychology, Industrial/Organizational Concentration, M.A.

Patrick McCarthy, Coordinator

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The Department of Psychology offers programs which lead to two graduate degrees: the Master of Arts with a major in Psychology and concentrations in Clinical, Experimental, Industrial/Organizational, Quantitative Psychology, and Pre-Specialist in Education: School Psychology and the Specialist in Education with a major in Curriculum and Instruction, concentration in School Psychology. The department also offers a minor at the graduate level.

The goal of the Industrial/Organizational (I/O) concentration is to produce professionals who are able to apply the science of psychology in business, industry, and government settings. The program is designed to prepare students for positions in human resource departments or consulting, or for entry into an I/O doctoral program.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to graduate study in Industrial/Organizational Psychology is competitive and not automatic for students meeting minimal admission requirements. Students are selected from a pool of qualified applicants. Each year the number of students admitted to the program depends on the availability of adequate faculty supervision.

In order to be considered for unconditional admission, candidates must meet two standards: an undergraduate grade point average (GPA) of 3.00 or higher and a minimum score on the Graduate Record Exam (GRE). A minimum score of 141 (current scale) or 450 (former scale) on the quantitative measure of the Graduate Record Examination is expected for admission to the I/O concentration within the Master of Arts in Psychology.

Applications for Summer/Fall admission must be complete by March 1 and applications for Spring admission must be complete by October 1. Late applicants who meet the admission criteria may be considered on a case-by-case basis. (See admission standards under Admission to the College of Graduate Studies.) Applicants to the Industrial/Organizational Psychology program must provide a letter of intent stating goals and objectives.

Conditional Admission: Students who do not meet admission requirements may be admitted conditionally to the Industrial/Organizational concentration. Students admitted conditionally must maintain a 3.25 GPA in their first semester (9 hours minimum) of required graduate courses in their concentration areas.

Applicants must demonstrate knowledge of the core areas of psychology by completing the following courses at either the undergraduate or graduate level prior to entering the I/O program or during enrollment in the program (relevant courses offered at MTSU are listed in parentheses):

- a. group measurement/testing (PSY 4260/PSY 5260 or PSY 6050);
- b. abnormal psychology or personality (PSY 3230/PSY 5230, PSY 3590, or PSY 6020);
- c. learning or cognition (PSY 4040, PSY 4480/PSY 5480*, or PSY 6190*);
- d. social or developmental (PSY 2210, PSY 2300, PSY 4190, PSY 4210/PSY 5210, PSY 4610/PSY 5610, PSY 6410);
- e. brain and behavior, sensation and perception, or research methods (PSY 3070/PSY 5070, PSY 4240/PSY 5240, or PSY 4030/PSY 5030);
- f. introductory course in I/O psychology.

Courses marked with an asterisk (*) may be counted as approved graduate electives depending upon specialization. Most applicants have completed 15 semester hours of psychology classes prior to admission to the graduate program in Industrial/Organization psychology. Those applicants without 15 semester hours of undergraduate psychology may be admitted to the program but must complete those credits in addition to their graduate program requirements.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts of previous college work;
3. submit letter of interest/intent;
4. submit official scores on the Graduate Record Examination (GRE);
5. submit three letters of recommendation;
6. submit a resume' or curriculum vitae.

For more information about application materials, please see mtweb.mtsu.edu/iopsych/prospectivestudents.html.

Degree Requirements

The Master of Arts with an Industrial/Organizational concentration requires completion of 43 semester hours including at least 38 hours in psychology courses. Only 30 percent of the total number of hours may be dually listed (5000-level meeting in conjunction with 4000- or 3000-level) courses.

Candidate must

1. demonstrate knowledge of the core areas of psychology by completing the following courses at either the undergraduate or graduate level prior to entering the Industrial/Organizational program or during enrollment in the program (relevant courses offered at MTSU are listed in parentheses):
 - a. group measurement/testing (PSY 4260/PSY 5260 or PSY 6050);
 - b. abnormal psychology or personality (PSY 3230/PSY 5230, PSY 3590, or PSY 6020);
 - c. learning or cognition (PSY 4040, PSY 4480/PSY 5480, or PSY 6190);
 - d. social or developmental (PSY 2210, PSY 2300, PSY 4190, PSY 4210, PSY 4610/PSY 5610, or PSY 6410);
 - e. brain and behavior, sensation and perception, or research methods (PSY 3070/PSY 5070, PSY 4240/PSY 5240, or PSY 4030/PSY 5030);
 - f. introductory course in I/O psychology (PSY 3320).
2. complete PSY 6280, PSY 6290, and PSY 6640 (3 hours);
3. successfully write and orally present a written thesis evaluated by a committee of psychology faculty in conjunction with PSY 6640;
4. pass a written comprehensive examination prepared by the Industrial/Organizational faculty (may be taken no more than twice).

Curriculum: Psychology, Industrial/Organizational

Candidate must complete 43 hours in the following course of study:

Required Courses (6 hours)

- PSY 6280 - Psychological Statistics: Regression **3 credit hours**
- PSY 6281 - Psychological Statistics: Regression Lab **0 credit hours**
- PSY 6290 - Psychological Statistics: ANOVA **3 credit hours**
- PSY 6291 - Psychological Statistics: ANOVA Lab **0 credit hours**

Core Courses (22 hours)

- PSY 6070 - Advanced Industrial Organizational Training and Development **3 credit hours**
- PSY 6090 - Practicum: Industrial and Organizational Psychology **3 credit hours**
- PSY 6300 - Literature Review and Reading in Psychology: Industrial and Organizational **2 credit hours**

- PSY 6320 - Performance Appraisal and Job Analysis **3 credit hours**
- PSY 6330 - Professional Issues in Industrial and Organizational Psychology **1 credit hours**
- PSY 6420 - Advanced Personnel Selection and Placement **3 credit hours**
- PSY 6450 - Advanced Organizational Psychology **3 credit hours**
- PSY 6570 - Psychological Research Methods in Human Resource Management **3 credit hours**
- PSY 6085 - Pre-Practicum for Industrial Organizational Psychology **1 credit hours**

Electives (12 hours)

At least two of the following four courses must be among the electives selected:

- PSY 5290 - Wage and Salary Administration **3 credit hours**
- PSY 6360 - Organizational Change and Development **3 credit hours**
- PSY 6365 - Organizational Surveys and Employee Attitudes and Motivation **3 credit hours**
- PSY 6380 - Work Group Effectiveness **3 credit hours**

NOTE: Students may fulfill all 12 elective hours by taking all four classes above. If interested in one or two alternate elective courses, consult your advisor. Following are examples of alternate electives that are sometimes available:

- PSY 5340 - Human Factors Psychology **3 credit hours**
- PSY 6370 - Organizational Skills **3 credit hours**
- PSY 6460 - Factor Analysis and Related Methods **3 credit hours**

NOTE: This is not an inclusive list of all potential alternate electives, and some may be available from other departments. Advisor approval required for all electives.

Thesis (3 hours)

- PSY 6640 - Thesis Research **1 to 6 credit hours**

Program Notes

Students must be able to meet the demands required for professional work in psychology. Therefore, students may be subject to dismissal from the Psychology Department if they (a) commit a serious breach of ethics or gross professional negligence or (b) present evidence of impaired psychological functioning that would present a danger to themselves or others in a professional role. Students who are dismissed may reapply and will be considered for readmission on a competitive basis. Students who reapply may be asked to provide evidence of improved ability to meet performance requirements.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

Psychology, Pre-Specialist in Education: School Psychology Concentration, M.A.

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The Department of Psychology offers programs which lead to two graduate degrees: the Master of Arts with a major in Psychology and concentrations in Clinical, Experimental, Industrial/Organizational, Quantitative Psychology, and Pre-Specialist in Education: School Psychology and the Specialist in Education with a major in Curriculum and Instruction and concentration in School Psychology. The department also offers a minor at the graduate level.

The School Psychology program includes two degrees. Program completion and endorsement for a State Department of Education license require successful completion of both degrees. The M.A. portion of the program comes first. The Ed.S. is an advanced degree. It is only available to students who have master's degrees in School Psychology. Respecializing students from other master's programs in Psychology or Counseling may apply, but they will be required to complete deficiencies.

The School Psychology program is field-based. As such, a student is required to be continuously enrolled in at least one field-based course every semester from the completion of PSY 6140 until the completion of the program. PSY 6960, PSY 6980, PSY 7080, and PSY 7810 are field-based courses. The policy excludes summer sessions.

Tennessee teacher licensing in school psychology is obtained through MTSU's program. Licensing requires (1) completion of the Ed.S. with a concentration in School Psychology, (2) 1,200 hours of internship in school psychology, (3) acceptable scores on the School Psychology Praxis II Test, and (4) verification of readiness for independent practice by an internship supervisor. The School Psychology PRAXIS II test assesses the following areas: a) diagnosis and fact finding; b) prevention and intervention; c) applied psychological foundations; and d) ethics and legal considerations.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Master of Arts in Psychology with Pre-Specialist in Education: School Psychology concentration requires

1. an earned bachelor's degree from an accredited university or college. Most applicants have completed 15 semester hours of psychology classes prior to admission to their graduate programs. Those applicants without 15 semester hours of undergraduate psychology may be admitted to the programs but must complete those credits in addition to their graduate programs.
2. an acceptable grade point average in all college work taken (at least 3.00).
3. completion of the Graduate Record Examination (GRE) with acceptable scores.

NOTE: Students who do not meet admission requirements may be admitted conditionally to a specific concentration. Students admitted conditionally must maintain a 3.25 GPA in their first semester (9 hours minimum) of required graduate courses in their concentration areas.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Application Deadlines: Applications for Summer/Fall admission must be complete by March 1, and applications for Spring admission must be complete by October 1. Late applicants who meet the admission criteria may be considered on a case-by-case basis.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php).
2. submit official scores on the GRE—a minimum of 291 (current scale) or 900 (former scale) on the combined Verbal and Quantitative sections is expected.
3. submit official transcripts of all previous college work.

4. submit the supplemental School Psychology program application.
5. submit three (3) reference forms (found online at www.mtsu.edu/schoolpsychology/admissions.php). It is recommended that at least two references should be completed by faculty who can attest to the applicant's academic abilities.
6. submit a current curriculum vita that includes education and employment history, research involvement, volunteer activities, references, and awards/scholarships.
7. submit a statement of purpose, including reasons for interest in the field of School Psychology and the program at MTSU, and a description of professional goals. (Typically two to three [2-3] pages in length).

NOTE: Admission to graduate study is competitive and not automatic for students meeting minimal admission requirements. Students are selected from a pool of qualified applicants. Each year the number of students admitted to the program depends on the availability of adequate faculty supervision.

NOTE: Applicants to the School Psychology programs should contact the department for a special application and reference forms.

Degree Requirements

Candidates for the Master of Arts degree in Psychology with a concentration in Pre-Specialist in Education: School Psychology must

1. be able to meet the demands required for professional work in psychology. Therefore, students may be subject to dismissal from the Psychology Department if they (a) commit a serious breach of ethics or gross professional negligence or (b) present evidence of impaired psychological functioning that would present a danger to themselves or others in a professional role. Students who are dismissed may reapply and will be considered for readmission on a competitive basis. Students who reapply may be asked to provide evidence of improved ability to meet performance requirements. See each area coordinator and program handbook for readmission policy.
2. be continuously enrolled in at least one field-based course every semester from the completion of PSY 6140 until the completion of the program, with the exception of summer sessions.
3. demonstrate knowledge of the core areas of psychology by completing the following courses prior to entering the School Psychology program or during enrollment in the program (relevant courses offered at MTSU are listed in parentheses):
 - a. testing (PSY 6100 and PSY 6101; PSY 4260 or equivalent is a prerequisite);
 - b. abnormal psychology (PSY 6400);
 - c. learning (PSY 6440);
 - d. developmental (PSY 6120, PSY 6130, or PSY 6410);
 - e. research methods (PSY 6640, 3 hours).
4. complete a total of 44 semester hours (see Curriculum section below for specifics). Only 30 percent of the total number of hours may be dually listed (5000-level meeting in conjunction with 4000- or 3000-level) courses; students without at least an undergraduate minor in psychology (at least 15 hours) will be required to complete up to 15 hours of additional psychology coursework that will not count toward the M.A. degree.
5. complete PSY 6280 and PSY 6290.
6. successfully write and orally present a written thesis evaluated by a committee of Psychology faculty in conjunction with PSY 6640.
7. pass a written comprehensive examination prepared by the faculty in the student's concentration (may be taken no more than twice).
8. maintain professional liability insurance (coverage amount at the student's discretion) throughout enrollment in the program, with a current insurance binder filed with the department at all times.

Curriculum

Candidate must complete 44 hours in the following course of study:

Required Courses (26 hours)

- PSY 6060 - School Psychology: Ethics and Practice **3 credit hours**
- PSY 6080 - Interventions with Children and Adolescents **3 credit hours**
- PSY 6100 - Intellectual Assessment **3 credit hours**
- PSY 6101 - Laboratory in Intellectual Assessment **1 credit hours**
- PSY 6140 - Practicum: School Psychology **3 credit hours**
- PSY 6750 - Psychology and Assessment of Learning Disabilities **3 credit hours**
- PSY 6760 - Educational Assessment **1 credit hours**
- PSY 6770 - Assessment and Therapeutic Interventions for Children's Emotional Problems **3 credit hours**
- PSY 6875 - Practicum: Consultation/Collaboration in School Psychology **3 credit hours**
- PSY 6065 - Introduction to School-Based Mental Health Services **3 credit hours**

Abnormal Psychology (3 hours)

- PSY 6400 - Psychological Disorders of Children **3 credit hours**

Learning or Cognition (3 hours)

- PSY 6440 - Advanced Applied Behavioral Analysis **3 credit hours**

Developmental Psychology (3 hours)

Select one from the following:

- PSY 6120 - Developmental Psychology: Child **3 credit hours**
- PSY 6130 - Developmental Psychology: Adolescent **3 credit hours**
- PSY 6410 - Development Across the Lifespan **3 credit hours**

Research Methods (3 hours)

- PSY 6640 - Thesis Research **1 to 6 credit hours**

Statistics (6 hours)

- PSY 6280 - Psychological Statistics: Regression **3 credit hours**
- PSY 6281 - Psychological Statistics: Regression Lab **0 credit hours**
- PSY 6290 - Psychological Statistics: ANOVA **3 credit hours**
- PSY 6291 - Psychological Statistics: ANOVA Lab **0 credit hours**

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Psychology, Quantitative Psychology Concentration, M.A.

Dana K. Fuller, Coordinator

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The Department of Psychology offers programs that lead to two graduate degrees: the Master of Arts with a major in Psychology and concentrations in Clinical, Experimental, Industrial/Organizational, Quantitative Psychology, and Pre-Specialist in Education: and School Psychology and the Specialist in Education with a major in Curriculum and Instruction, concentration in School Psychology. The department also offers a minor at the graduate level. Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Master of Arts in Psychology with a concentration in Quantitative Psychology requires

1. an earned bachelor's degree from an accredited university or college;
2. an acceptable grade point average in all college work taken (generally 3.00 or higher);
3. an acceptable score on the Graduate Record Examination (GRE)—generally a minimum of 291 (current scale) or 900 (former scale) on the combined Verbal and Quantitative sections is expected.

NOTE: Students who do not meet admission requirements may be admitted conditionally to a specific concentration. Students admitted conditionally must maintain a 3.25 GPA in their first semester (9 hours minimum) of required graduate courses in their concentration areas.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Application Deadlines: Applications for Summer/Fall admission must be complete by March 1, and applications for Spring admission must be complete by October 1. Late applicants who meet the admission criteria may be considered on a case-by-case basis.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts of all previous college work;
3. submit official GRE scores;
4. submit letter of intent stating goals and objectives;
5. submit three required recommendation forms (online at www.mtsu.edu/graduate/pdf/ReferenceForm.pdf)

NOTE: Most applicants have completed 15 semester hours of psychology classes prior to admission to their graduate programs. Those applicants without 15 semester hours of undergraduate psychology may be admitted to the programs but must complete those credits in addition to their graduate programs.

NOTE: Admission to graduate study is competitive and not automatic for students meeting minimal admission requirements. Students are selected from a pool of qualified applicants. Each year the number of students admitted to the program depends on the availability of adequate faculty supervision.

Degree Requirements

Candidate must

1. be able to meet the demands required for professional work in psychology. Therefore, students may be subject to dismissal from the Psychology Department if they (a) commit a serious breach of ethics or gross professional negligence or (b) present evidence of impaired psychological functioning that would present a danger to themselves or others in a professional role. Students who are dismissed may reapply and will be considered for readmission on a competitive basis. Students who reapply may be asked to provide evidence of improved ability to meet performance requirements. See each area coordinator and program handbook for readmission policy.

2. demonstrate knowledge of the core areas of psychology by completing the following courses at either the undergraduate or graduate level prior to entering the Quantitative program or during enrollment in the program (relevant courses offered at MTSU are listed in parentheses):
 - a. basic statistics (PSY 3020)
 - b. research methods (PSY 3070/PSY 5070)
 - c. group measurement/testing (PSY 4260/PSY 5260 or PSY 6050)
 - d. abnormal psychology, personality, social, or developmental (PSY 2210, 2300, 3230/PSY 5230, 3590, 4190, 4210/PSY 5210, or 4610/PSY 5610)
 - e. learning, cognition, brain and behavior, or sensation and perception (PSY 2190, 4040, 4480/PSY 5480, 4780/PSY 5780, 4240/PSY 5240, or 4030/ PSY 5030).
3. complete PSY 6280 and PSY 6290.
4. complete a minimum of 36 semester hours, including at least 30 hours in psychology (see Curriculum section below for specifics). Only 30 percent of the total number of hours may be dually listed (5000-level meeting in conjunction with 4000- or 3000-level) courses.
5. pass a written comprehensive examination prepared by the faculty in the student's concentration (may be taken no more than twice);
6. complete either the thesis or non-thesis curriculum as detailed below in the Curriculum Section;
7. if choosing the thesis option, successfully write and orally present a written thesis evaluated by a committee of Psychology faculty in conjunction with PSY 6640 (thesis, 3 hours).

Curriculum: Psychology, Quantitative Psychology

Thesis Option (36 hours)

Candidate must complete 36 hours in the following course of study:

Required (30 hours)

- PSY 6210 - Advanced Psychometrics **3 credit hours** OR
- PSY 7210 - Advanced Psychometrics **3 credit hours**
- PSY 6280 - Psychological Statistics: Regression **3 credit hours**
- PSY 6281 - Psychological Statistics: Regression Lab **0 credit hours**
- PSY 6290 - Psychological Statistics: ANOVA **3 credit hours**
- PSY 6291 - Psychological Statistics: ANOVA Lab **0 credit hours**
- PSY 6460 - Factor Analysis and Related Methods **3 credit hours**
- PSY 6550 - Structural Equation Modeling **3 credit hours**
- PSY 6560 - Computer-Based Statistical Packages **3 credit hours**
- PSY 6580 - Multivariate Data Analysis **3 credit hours** OR
- PSY 7580 - Multivariate Data Analysis **3 credit hours**
- PSY 6585 - Test Construction and Validation **3 credit hours** OR
- PSY 7585 - Test Construction and Validation **3 credit hours**
- PSY 6660 - Literature Review and Reading in Psychology: Quantitative **1 to 3 credit hours (3 credit hours)**
- PSY 6640 - Thesis Research **1 to 6 credit hours (3 credit hours)**

Electives (6 hours)

Students must take 6 elective credits in addition to required courses. The courses may be in psychology or related areas with the permission of the academic advisor.

Non-thesis Option (36 hours)

Candidate must complete 36 hours in the following course of study:

Required (30 hours)

- PSY 6210 - Advanced Psychometrics **3 credit hours** OR
- PSY 7210 - Advanced Psychometrics **3 credit hours**
- PSY 6280 - Psychological Statistics: Regression **3 credit hours**
- PSY 6281 - Psychological Statistics: Regression Lab **0 credit hours**
- PSY 6290 - Psychological Statistics: ANOVA **3 credit hours**
- PSY 6291 - Psychological Statistics: ANOVA Lab **0 credit hours**
- PSY 6460 - Factor Analysis and Related Methods **3 credit hours**
- PSY 6550 - Structural Equation Modeling **3 credit hours**
- PSY 6560 - Computer-Based Statistical Packages **3 credit hours**
- PSY 6580 - Multivariate Data Analysis **3 credit hours** OR
- PSY 7580 - Multivariate Data Analysis **3 credit hours**
- PSY 6585 - Test Construction and Validation **3 credit hours** OR
- PSY 7585 - Test Construction and Validation **3 credit hours**
- PSY 6490 - Practicum: Quantitative Psychology **3 credit hours (6 credit hours)**

Electives (6 hours)

Students must take 6 elective credits in addition to required courses. The courses may be in psychology or related areas with the permission of the academic advisor.

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Curriculum and Instruction, School Psychology Concentration, Ed.S.

James O. Rust, Coordinator

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The Department of Psychology offers programs which lead to two graduate degrees: the Master of Arts with a major in Psychology and concentrations in Clinical, Experimental, Industrial/Organizational, Quantitative Psychology, and Pre-Specialist in Education: School Psychology and the Specialist in Education with a major in Curriculum and Instruction and concentration in School Psychology. The department also offers a minor at the graduate level.

The School Psychology program includes two degrees. Program completion and endorsement for a State Department of Education license require successful completion of both degrees. The M.A. portion of the program comes first. The Ed.S. is an advanced degree. It is only available to students who have master's degrees in School Psychology. Respecializing students from other master's programs in Psychology or Counseling may apply, but they will be required to complete deficiencies.

The School Psychology program is field-based. As such, a student is required to be continuously enrolled in at least one field-based course every semester from the completion of PSY 6140 until the completion of the program. PSY 6960, PSY 6980, PSY 7080, and PSY 7810 are field-based courses. The policy excludes summer sessions.

Tennessee teacher licensing in school psychology is obtained through MTSU's program. Licensing requires (1) completion of the Ed.S. with a concentration in School Psychology, (2) 1,200 hours of internship in school psychology, (3) acceptable scores on the school psychology Praxis II Test, and (4) verification of readiness for independent practice by an internship supervisor. The School Psychology PRAXIS II test assesses the following areas: a) diagnosis and fact finding; b) prevention and intervention; c) applied psychological foundations; and d) ethics and legal considerations.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Specialist in Education degree with a concentration in School Psychology requires

1. an earned master's degree in psychology, educational psychology, or school counseling from an accredited university or college. Normally, candidates should have completed all courses listed under the M.A. program for the Pre-Specialist in Education: School Psychology concentration;
2. an acceptable grade point average in all college work taken;
3. a minimum score of 291 (current scale) or 900 (former scale) on the combined verbal and quantitative measures of the Graduate Record Examination (GRE).

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Application Deadlines: Applications for Summer/Fall admission must be complete by March 1, and applications for Spring admission must be complete by October 1. Late applicants who meet the admission criteria may be considered on a case-by-case basis.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the GRE—a minimum of 291 (current scale) or 900 (former scale) on the combined Verbal and Quantitative sections is expected;
3. submit official transcripts of all previous college work;
4. submit the supplemental School Psychology program application (found online at www.mtsu.edu/schoolpsychology);
5. submit three (3) reference forms (found online at www.mtsu.edu/schoolpsychology). It is recommended that at least two references should be completed by faculty who can attest to the applicant's academic abilities;
6. submit a current curriculum vita that includes education and employment history, research involvement, volunteer activities, references, and awards/scholarships;

7. submit a statement of purpose, including reasons for interest in the field of school psychology and the program at MTSU and a description of professional goals. (Typically two to three [2-3] pages in length.)

NOTE: Admission to graduate study is competitive and not automatic for students meeting minimal admission requirements. Students are selected from a pool of qualified applicants. Each year the number of students admitted to the program depends on the availability of adequate faculty supervision.

Degree Requirements

Candidate must

1. be able to meet the demands required for professional work in psychology. Therefore, students may be subject to dismissal from the Psychology Department if they (a) commit a serious breach of ethics or gross professional negligence or (b) present evidence of impaired psychological functioning that would present a danger to themselves or others in a professional role. Students who are dismissed may reapply and will be considered for readmission on a competitive basis. Students who reapply may be asked to provide evidence of improved ability to meet performance requirements. See each area coordinator and program handbook for readmission policy.
2. complete a minimum of 30 graduate semester hours (see Curriculum section below for specifics) with a minimum of 15 hours at the 7000 level.
3. satisfy a residency requirement consisting of
 - a. the completion of 18 semester hours of graduate study within a 12-month period and
 - b. full-time enrollment (at least 9 semester hours) for a least one semester.
4. complete FOED 6610/FOED 7610 (for those who did not have a thesis listed on their transcripts as part of their master's degree).
5. complete courses in the following areas (based on National Association of School Psychologists standards):
 - a. data-based decision making and accountability;
 - b. consultation and collaboration;
 - c. effective instruction and development of cognitive/academic skills;
 - d. socialization and development of life skills;
 - e. student diversity in development and learning;
 - f. school and systems organization, policy, development, and climate;
 - g. prevention, crisis intervention, and mental health;
 - h. home/school/community collaboration;
 - i. research and program evaluation;
 - j. school psychology practice and development;
 - k. information technology.
6. complete PSY 7810, an internship of 1,200 hours as a capstone experience.
7. pass a written comprehensive examination approved by the faculty (may be taken no more than twice).
8. maintain professional liability insurance (coverage amount at the student's discretion) throughout enrollment in the program, with a current insurance binder filed with the department at all times.

Curriculum: Curriculum and Instruction, School Psychology

Candidate must complete 30 hours in the following course of study:

Required Courses (21 hours)

- SPSE 6390 - School Law **3 credit hours**
- SPSE 6640 - Microcomputers in the K-12 Educational Setting **3 credit hours**
- PSY 7080 - Practicum: Advanced Interventions with Children **3 credit hours**
- PSY 7100 - Multicultural and Social Bases for Assessment and Intervention Practices **3 credit hours**
- PSY 7530 - The Psychology of Reading and Reading Development **3 credit hours**
- PSY 7810 - Advanced Internship: School Psychology **3 to 6 credit hours (4 or 6 credit hours)**

Guided Electives (9 hours)

- PSY 6105 - Psychoeducational Assessment of Preschool Children **3 credit hours**
- PSY 6661 - Program Evaluation **3 credit hours**
- PSY 7200 - School Neuropsychology **3 credit hours**

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

Psychology Minor

There are two patterns of minors from which a candidate may choose:

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

Psychology

PSY 5030 - Psychology of Sensation and Perception

3 credit hours

Prerequisite: PSY 1410. Modern theories of perception as they relate to knowledge of the external world through perceptual acquaintance. Philosophy of perception, history of sensory psychology, physiological mechanisms of perception, and ecological determinants of perceptual capabilities.

PSY 5050 - Applied Psychopharmacology

3 credit hours

Impact of drugs on behavior in today's society. The nature of drug use, abuse, psychological and physiological dependence examined.

PSY 5060 - Sport Psychology

3 credit hours

Prerequisite: PSY 1410 or consent of instructor. (Same as ATHC 5060.) Application of psychological principles, motivational research, and social/psychological findings to the arena of sports. Theory and application of performance enhancement and teamwork in sports.

PSY 5070 - Research Methods

3 credit hours

Prerequisite: PSY 3020. Analysis of methodological issues in psychological research. Offers skills in the formulation, execution, interpretation, and presentation of psychological investigations. Three hours lecture and one one-hour laboratory.

PSY 5071 - Research Methods Lab

1 credit hours

Corequisite: PSY 5070.

PSY 5120 - Psychology of Criminal Behavior

3 credit hours

Survey of theory and research pertaining to criminal behavior, covering topics such as mental illness and crime, criminal homicide, assault, and sex offenses.

PSY 5130 - Laboratory in Psychology of Sensation and Perception

1 credit hours

PSY 5150 - Laboratory in Behavioral Neuroscience

1 credit hours

PSY 5180 - Laboratory in Learning Theories

1 credit hours

PSY 5210 - Adolescent Psychology

3 credit hours

Physiological, emotional, mental, and social characteristics of adolescent development, including primary vectors of influence.

PSY 5220 - Correctional Psychology

3 credit hours

Law enforcement, delinquency, and criminal psychology, including psychological evaluation, classification, therapy, and rehabilitation. Special classifications. Field problems. Preventive implications.

PSY 5230 - Abnormal Psychology

3 credit hours

Patterns of maladaptive behavior, including anxiety, depression, schizophrenia, antisocial behavior, and mental retardation.

PSY 5240 - Behavioral Neuroscience

3 credit hours

The role of the brain in those areas which are typically considered by psychology, such as sensory and motor functions, motivation, higher mental functions, and mental disorders.

PSY 5250 - Psychology of Exceptional Children

3 credit hours

Identification and etiology of patterns of exceptionality, with consideration given to behavioral manifestations and preventive and correctional programs.

PSY 5260 - Introduction to Psychological Testing

3 credit hours

Modern practices in test construction, selection, and application to classroom and guidance situations. (Student required to participate as principal and subject in administration, scoring, profiling, and in making predictions based on test results.)

PSY 5290 - Wage and Salary Administration

3 credit hours

Analysis of theory and practice in administering compensation. Practices and issues related to job evaluation, salary market data, pay for performance, and legal considerations.

PSY 5320 - Introduction to Industrial and Organizational Psychology

3 credit hours

Application of psychology to business and industry. Topics include employee selection, performance appraisal, training, leadership, motivation, job analysis, legal issues, job satisfaction, work teams, and occupational health.

PSY 5340 - Human Factors Psychology

3 credit hours

Prerequisite: PSY 3320/PSY 5320 or consent of instructor. The process of designing for human use. Considers individual differences, visual, auditory, and tactile displays, anthropometry, illumination, noise, humans in motion, and space and environmental studies.

PSY 5350 - Safety Psychology

3 credit hours

Basic theories of accident causation, safety research literature, methods of accident prevention, and industrial hygiene.

PSY 5370 - Motivation and Work Attitudes

3 credit hours

Motivation theories and applications to workplace. Emotions, attitudes, e.g., job satisfaction, organizational commitment, work-family balance. Performance effects.

PSY 5380 - Group Dynamics

3 credit hours

Functioning of groups. Includes development of group structure, group conflict, cohesion, social influence, leadership, group productivity, group decision making, and growth groups.

PSY 5390 - Persuasion

3 credit hours

Survey and analysis of theory and research on interpersonal influence. Applications of findings to various areas of human experience.

PSY 5440 - Social Psychology of Close Relationships

3 credit hours

Prerequisites: PSY 1410 and 2210. Theoretical and empirical issues in the scientific study of adult, close relationships from a social psychological perspective: initial attraction, relationship formation and maintenance, and dissolution. (Not a course in the broad area of marriage and the family; See CDFS

3320 Family Relationships and SOC 2500 Marriage and Family.)

PSY 5460 - Psychology of Happiness and Well-Being

3 credit hours

Survey of the theoretical and research literature in the areas of subjective well-being, happiness, life satisfaction, stress-resistant personality styles, and self-actualizations.

PSY 5470 - Theories of Counseling

3 credit hours

Integration of the major theories of counseling and psychotherapy and their application.

PSY 5480 - Learning Theories

3 credit hours

Research and experiments in learning and the related growth of the major theories of learning with emphasis on classical and instrumental conditioning and related topics.

PSY 5490 - Operant Conditioning

3 credit hours

Prerequisite: PSY 1410. Philosophy of B.F. Skinner's behaviorism explored in his own writings and those of his followers and critics. Current applications of behaviorism in all areas of psychology (child, marriage and family, animal conditioning, mental health, addictions, etc.) also examined.

PSY 5600 - Psychosexual Adjustment

3 credit hours

Psychological, cultural, and biological facets of the human sexual experience. Attitudes and behaviors, variances and dysfunctions, implications, and strategies for intervention.

PSY 5610 - Adult Psychology and Aging

3 credit hours

A survey of the research on adult development with emphasis on old age. Examines the physical, intellectual, social, vocational, and personality changes during the adult years.

PSY 5620 - Psychology of Women

3 credit hours

Psychological impact of the culture on women's attitudes, roles, aspirations, problems, and personality development.

PSY 5630 - Death and Dying**3 credit hours**

An experiential course covering the folklore of thanatology, the funeral industry, handling grief, counseling the bereaved, the hospice concept. Objectives include an attempt to view death with equanimity and personal growth through confronting death.

PSY 5650 - Health Psychology**3 credit hours**

Prerequisite: PSY 1410 or consent of instructor. Psychological factors and principles involved in the study of correlates of health and illness, disease prevention, therapeutic interventions, and rehabilitative strategies.

PSY 5660 - Psychology Seminar: Industrial-Social**1 credit hours**

Representative and integrative study of scientific journals of the field. May be taken for total of three credits.

PSY 5670 - Psychology Seminar: Clinical-Personality**1 credit hours**

Representative and integrative study of scientific journals of the field. May be taken for total of three credits.

PSY 5680 - Psychology Seminar: General-Experimental**1 credit hours**

Representative and integrative study of scientific journals of the field. May be taken for total of three credits.

PSY 5700 - History and Systems of Psychology**3 credit hours**

A survey of the history and intensive coverage of current systems of psychology.

PSY 5720 - Multicultural Perspectives in Psychology and Education**3 credit hours**

Theories and research relative to the education of multi-ethnic/racial minorities. Relation of culture and socialization to learning styles, assessment practices, and counseling considerations.

PSY 5740 - Apprenticeship: Child**1 to 3 credit hours**

Supervised practical experience utilizing

psychological principles and tools in an established organization.

PSY 5750 - Apprenticeship: Pre-Clinical**1 to 3 credit hours**

Supervised practical experience utilizing psychological principles and tools in an established organization.

PSY 5760 - Apprenticeship: Adolescent**1 to 3 credit hours**

Supervised practical experience utilizing psychological principles and tools in an established organization.

PSY 5780 - Human Neuropsychology**3 credit hours**

Prerequisite: PSY 5240 or consent of instructor. Organization and function of specific brain areas and the behavioral deficits and changes resulting from focal and diffuse brain damage.

PSY 5820 - Psychology of Language**3 credit hours**

Prerequisite: PSY 1410. A cognitive approach to how people learn and use language to communicate. Covers basic psycholinguistics (production, perception, comprehension, and mental representation), language acquisition, and applied psycholinguistics (bilingualism, language disorders, and machine language).

PSY 6000 - Orientation to School Psychology**1 credit hours**

Introduction to a career as a school psychologist. Uses appropriate materials from the National Association of School Psychologists as well as relevant court decisions and legislative acts to orient students to school psychology.

PSY 6010 - Clinical Interventions**3 credit hours**

Prerequisites: Admission to the clinical program or permission of instructor; PSY 6510 and PSY 6801. A supervised experience in which the student learns how to apply techniques of clinical interviewing for the purpose of developing, implementing, and evaluating treatment plans for clients. Liability insurance required prior to enrollment.

PSY 6020 - Theories of Personality**3 credit hours**

Examines traditional schools of personality theory and current developments within each.

PSY 6030 - Current Topics in Personality**3 credit hours**

Examines current research findings on personality traits and personality-related processes.

PSY 6040 - Topics in Industrial and Organizational Psychology**3 credit hours**

Focus on practical aspects of functioning as a professional in the field. Current issues, recent developments, and less-traditional relevant areas.

PSY 6050 - Psychological Testing**3 credit hours**

Prerequisite: PSY 3020 or equivalent. Modern practices in test construction, selection, and application; legal guidelines, reliability, and validity. Intelligence, abilities, interests, attitudes, values, and personality testing. Students required to participate as examiners and subjects in administering, scoring, profiling, and in making predictions based on test results.

PSY 6060 - School Psychology: Ethics and Practice**3 credit hours**

An introduction with particular emphasis on the psychosocial perspective. Adaptive instruction of behavior measures included, as are observations of classrooms and teacher interviews.

PSY 6065 - Introduction to School-Based Mental Health Services**3 credit hours**

School psychologist's role as a mental health service provider with both a practical and theoretical focus. Basic helping and interviewing skills.

PSY 6070 - Advanced Industrial Organizational Training and Development**3 credit hours**

Prerequisite: PSY 3020 or equivalent. Theory and methodology used in the training and development of human resources in organizations: needs assessment, program development, program evaluation, and legal and special issues in training and development.

PSY 6080 - Interventions with Children and Adolescents**3 credit hours**

Prerequisite: PSY 5250 or PSY 6400 or permission of instructor. Theoretical and practical issues related to interventions with children and adolescents exhibiting behavioral and emotional problems. Intervention strategies for specific problems. Experience designing and evaluating intervention plans. Legal, ethical, and practical issues.

PSY 6085 - Pre-Practicum for Industrial Organizational Psychology**1 credit hours**

Prerequisite: Admission to program. Expectations, requirements, and procedures involved in a practicum in the Industrial/Organizational Psychology program. Encourages students to assess career goals and helps facilitate selection of a practicum that moves toward exploring and meeting those career goals.

PSY 6090 - Practicum: Industrial and Organizational Psychology**3 credit hours**

Prerequisite: Consent of instructor. Supervised experience in industry, business, or government using psychological principles at a professional, applied level.

PSY 6100 - Intellectual Assessment**3 credit hours**

Prerequisite: PSY 4260/PSY 5260 or PSY 6050. Practical didactic instruction in theory and practice of intelligence testing. Practical supervised experience in rapport, administration, scoring, and interpretation of individual intelligence tests for all age levels. Liability insurance required.

PSY 6101 - Laboratory in Intellectual Assessment**1 credit hours**

Skill development in completing intellectual assessments, calculating scores, and conducting parent conferences in a laboratory setting.

PSY 6102 - Theory of Health Education and Behavior**3 credit hours**

(Same as HLTH 6102.) Links behavioral change theory to the research and practice of interventions in health behaviors. Application of the theoretical constructs linked to design, implementation, and evaluation of individual and group behavioral change programs.

**PSY 6105 - Psychoeducational Assessment of
Preschool Children**

3 credit hours

Prerequisite: PSY 6100. Instruction in theory and practice relevant to the assessment of preschool age children's cognitive, social, and emotional functioning. Field experience and liability insurance required.

PSY 6120 - Developmental Psychology: Child
3 credit hours

Survey of research including prenatal, neonatal, and general physical development, emotional development, cognitive development, and social and personality development. Observations.

**PSY 6130 - Developmental Psychology:
Adolescent**

3 credit hours

Survey of research on adolescence from a biopsychosocial perspective. Student observation and study of developing adolescents from cognitive, biological, social, and psychological frameworks.

PSY 6140 - Practicum: School Psychology
3 credit hours

Prerequisite: 15 semester hours of related graduate credits, including PSY 6060, PSY 6080, PSY 6100, PSY 6750, and PSY 6770. Supervised assessment of low incidence learning and adjustment problems with follow-up parent, teacher, and administrator conferences. Practicum experience includes 90 hours of supervised work with a practicing, certified, full-time psychologist. At least 50 percent of the practicum placement shall be in a school setting. Liability insurance required prior to enrollment.

PSY 6170 - Group Counseling and Psychotherapy
3 credit hours

Prerequisites: PSY 5470 or PSY 6020; PSY 6260 or PSY 6010; permission of instructor. Corequisite: PSY 6180 . Group process, ethics, and techniques. Application of counseling theory, group procedures, sociometrics, and group dynamics to interpersonal relations, mental health, school, and industrial settings. Supervised experience. Liability insurance required prior to enrollment.

PSY 6190 - Advanced Cognitive Psychology
3 credit hours

Topic-oriented overview of cognitive psychology. Models of attention, perception, memory, language, reasoning, problem solving, and decision making.

Issues in cognitive development and cognitive neuropsychology.

PSY 6210 - Advanced Psychometrics
3 credit hours

Prerequisites: PSY 6280, HHP 6700, or equivalent. Classical test theory and item response theory. Model, assumptions, and problems of classical test theory. Mathematical modeling, parameter estimating, and adaptive testing procedures using item response theory. Both theories utilized for test construction.

PSY 6250 - Objective Personality Assessment
3 credit hours

Prerequisites: PSY 4260/PSY 5260 or PSY 6050; PSY 6100. Practical supervised experience in objective measurement, analysis, and pattern confirmations of key variables of personality, both for normative and specific divergent groups. Emphasis on MMPI. Liability insurance required prior to enrollment.

PSY 6280 - Psychological Statistics: Regression
3 credit hours

Prerequisite: PSY 3020 or equivalent or admission to Psychology graduate program. Corequisite: PSY 6281. Review of basic statistics; various correlation coefficients; multiple and partial correlation; simple and multiple regression. Laboratory included.

**PSY 6281 - Psychological Statistics: Regression
Lab**

0 credit hours

Corequisite: PSY 6280.

PSY 6290 - Psychological Statistics: ANOVA
3 credit hours

Prerequisite: PSY 3020 or equivalent or admission to Psychology graduate program. Corequisite: PSY 6291. Review of basic statistics. Scientific quantification, research design, and statistical analysis from the perspective of analysis of variance: one-way, factorial, repeated measures, and mixed designs. Laboratory included.

PSY 6291 - Psychological Statistics: ANOVA Lab
0 credit hours

Corequisite: PSY 6290.

**PSY 6300 - Literature Review and Reading in
Psychology: Industrial and Organizational**
2 credit hours

Supervised literature review and/or readings on a

topic of current importance in psychology. Topics and requirements obtained from individual faculty members. Specific courses may be repeated to a total of 6 credits.

PSY 6310 - Independent Research in Psychology: Industrial and Organizational
1 to 9 credit hours

Prerequisite: Permission of instructor. Individualized empirical research and library research approved by the instructor. (1-3 credits applicable to degree)

PSY 6320 - Performance Appraisal and Job Analysis
3 credit hours

Prerequisites: PSY 6280 or permission of instructor. Analysis of theory and practice in job analysis and performance appraisal, including legal aspects, a survey of techniques available, current research, cognitive aspects, and reliability and validity issues.

PSY 6330 - Professional Issues in Industrial and Organizational Psychology
1 credit hours

Survey of issues related to professional ethics, relevant legislation, professional affiliations, professional identity, and professional responsibilities.

PSY 6340 - Behavioral Medicine: Theory and Application
3 credit hours

Prerequisite: Consent of instructor. Review theory, methodology, and application of behavioral medicine. Includes behavioral science issues in health and applications of this information to diagnosis, prevention, treatment, and rehabilitation of health problems for which "life-stress" factors predominate. See PSY 6350.

PSY 6350 - Laboratory in Behavioral Medicine
1 credit hours

Prerequisite: Consent of instructor.

PSY 6360 - Organizational Change and Development
3 credit hours

Prerequisite: PSY 6450 or permission of instructor. Analysis of theory and practice of organizational change and development, process of change, organizational development (OD) interventions, and evaluation and research of OD effectiveness.

PSY 6365 - Organizational Surveys and Employee Attitudes and Motivation
3 credit hours

Prerequisite: PSY 6450. Special topics in employee attitudes and motivation and the measurement of employee attitudes through the use of organizational surveys. Develops skills in survey techniques and includes practical experience with surveys.

PSY 6370 - Organizational Skills
3 credit hours

Prerequisite: PSY 6450 or permission of instructor. Analysis of a variety of interpersonal situations which impact organizational effectiveness and climate. Development of skills: conflict resolution, interviewing, performance feedback, effective meetings, giving recognition, discipline.

PSY 6380 - Work Group Effectiveness
3 credit hours

Prerequisite: PSY 5380, PSY 6450, or permission of instructor. Analysis of factors leading to effective work groups. Topics covered include task effects on performance, group composition, leadership, group processes, and team building.

PSY 6390 - Independent Research in Psychology: Clinical
1 to 9 credit hours

Prerequisite: Permission of instructor. Individualized empirical research and library research approved by the instructor. (1-3 credits applicable to degree)

PSY 6400 - Psychological Disorders of Children
3 credit hours

Current research and theory of behavioral, cognitive, and emotional disorders in childhood and adolescence.

PSY 6410 - Development Across the Lifespan
3 credit hours

Theories and characteristics of human development covering the lifespan.

PSY 6420 - Advanced Personnel Selection and Placement
3 credit hours

Prerequisites: PSY 5260 or PSY 6050 and preferably PSY 6280. Legal and research aspects of personnel selection. Methods used for selection, including assessment centers, work samples, and psychological testing.

**PSY 6430 - Internship: Behavior Modification
1 to 4 credit hours**

Prerequisites: 30 semester hours of psychology including PSY 4400, PSY 5480, or PSY 6020. Minimum of 128 hours of supervised internship in an institutional setting. Liability insurance required prior to enrollment. May be repeated; enrollment must be continuous.

**PSY 6440 - Advanced Applied Behavioral Analysis
3 credit hours**

Prerequisite: PSY 4400 or permission of instructor. Intensive presentation of methods used in behavioral assessment and therapy. Application of various behavioral and cognitive-behavioral procedures.

**PSY 6450 - Advanced Organizational Psychology
3 credit hours**

Review of theory and empirical research in organizational psychology. Students will apply theory and research findings to understand and explain work behavior at the individual, group, and organizational levels and will use this knowledge to solve organizational problems.

**PSY 6460 - Factor Analysis and Related Methods
3 credit hours**

Prerequisites: PSY 6280, HHP 6700, or equivalent. Surveys each of the major factor analysis techniques and related latent trait theory with main focus on application. Nature, power, procedure, computer programming, interpretation, and limitations of each technique.

**PSY 6480 - Advanced Topics in Quantitative Psychology
3 credit hours**

Prerequisite: PSY 6280 or equivalent. Advanced topics in quantitative psychology. Focus on current topics, recent issues, and less traditional areas of quantitative psychology. Relevant computer programs. May be repeated for a total of six credits.

**PSY 6490 - Practicum: Quantitative Psychology
3 credit hours**

Prerequisites: 30 credit hours of psychology including PSY 6050, PSY 6210, PSY 6280, PSY 6290, PSY 6460, PSY 6560, PSY 6580, or consent of the instructor. Supervised experience in statistical consultation for social and behavioral sciences. May be repeated for a total of six credits.

**PSY 6500 - Behavioral Methodology
3 credit hours**

Techniques for design and evaluation of clinical treatment and research. Includes single subject and group designs. Emphasis on direct observation and data collection procedures, reliability, social validity, and generalization.

**PSY 6510 - Psychopathology
3 credit hours**

Prerequisite: PSY 3230/PSY 5230. Extensive examination of the disorders included in the current diagnostic manual. Emphasis on adult disorders. Objectives are to enhance understanding of psychopathology and to develop minimal competence in diagnosis.

**PSY 6520 - Psychopharmacology
3 credit hours**

Biochemical, neurophysiological, and neuroanatomical basis; emphasis on drugs used in investigating and treating psychological disorders.

**PSY 6530 - The Psychology of Reading and Reading Development
3 credit hours**

Overview of the cognitive processes involved in reading. The structure of both oral and written language; cognitive mechanisms in reading; language development and the acquisition of reading skills; developmental and acquired disorders of language and reading.

**PSY 6550 - Structural Equation Modeling
3 credit hours**

Prerequisites: PSY 6280, HHP 6700, or equivalent. Structural equation modeling. Review of correlation, multiple regression and path analysis. Conceptual review of measurement models. Model specification, estimation, goodness of fit, and power of structural equation models. Relevant computer programs.

**PSY 6560 - Computer-Based Statistical Packages
3 credit hours**

Prerequisite: PSY 3020 or equivalent. History, principles, and skills of data analysis, using major statistical packages. Commands in both DATA and PROC steps. Other features including various functions, graphics, full screen process (FSP), and interactive matrix language (IML).

PSY 6570 - Psychological Research Methods in Human Resource Management

3 credit hours

Prerequisite: PSY 6280 or permission of instructor. Theory and appropriate methodology for conducting research relevant to human resource practices in organizations. Applied psychometric theory and quasi-experimental design.

PSY 6580 - Multivariate Data Analysis

3 credit hours

Prerequisites: PSY 6280, HHP 6700, or equivalent. Surveys each of the major multivariate data analysis techniques, with main focus on their application. Nature, power, procedure, computer programming, interpretation, and limitations of each.

PSY 6585 - Test Construction and Validation

3 credit hours

Surveys principles in item and test construction. Actual development of items and tests in the student's own field and validation of the items and tests through both classical test theory and item response theory.

PSY 6590 - Literature Review and Reading in Psychology: General and Experimental

1 to 3 credit hours

Supervised literature review and/or readings on a topic of current importance in psychology. Topics and requirements obtained from individual faculty members. Specific courses may be repeated to a total of 6 credits.

PSY 6600 - Independent Research in Psychology: General and Experimental

1 to 9 credit hours

Prerequisite: Permission of instructor. Individualized empirical research and library research approved by the instructor. (1-9 credits applicable to degree)

PSY 6615 - Basic and Applied Research Methods in Psychology

3 credit hours

Prerequisite: Admission to Psychology or Mental Health Counseling graduate program or permission of department. Survey of experimental and quasi-experimental research designs employed in mental health fields. Theoretical and practical knowledge of various research designs and data analysis procedures explored through class lectures and lab assignments. Offers preparation for those training to become mental health practitioners to understand and critically evaluate psychological research.

PSY 6620 - Independent Study: Industrial and Organizational Psychology

1 to 3 credit hours

Prerequisite: Permission of instructor. Individualized library or empirical research project approved by instructor. A maximum of three credits will apply to a master's degree.

PSY 6630 - Literature Review and Reading in Psychology: Clinical

1 to 3 credit hours

Supervised literature review and/or readings on a topic of current importance in psychology. Topics and requirements obtained from individual faculty members. Specific courses may be repeated to a total of 6 credits.

PSY 6640 - Thesis Research

1 to 6 credit hours

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

PSY 6645 - Foundations of Health Psychology

3 credit hours

Introduction to principles, practices, theories, and research in health psychology. Study of factors influencing psychological and physical health. Involves a biopsychosocial approach to research in illness and behavioral health.

PSY 6650 - Positive Psychology

3 credit hours

Introduction to theories and research in positive psychology. Topics relevant to the nature of psychological well-being: research on happiness, life satisfaction, creativity, wellness, self-actualization, wisdom, plus applications in a number of areas.

PSY 6655 - Field Study in Health Psychology

1 credit hours

Prerequisite: 9 hours of graduate health psychology courses. Students will be required to work in an applied setting under the supervision of a health psychology research professional. May be repeated for a total of 3 credit hours. S/U grading.

PSY 6660 - Literature Review and Reading in Psychology: Quantitative
1 to 3 credit hours

Supervised literature review and/or readings on a topic of current importance in psychology. Topics and requirements obtained from individual faculty members. Specific courses may be repeated to a total of 6 credits.

PSY 6661 - Program Evaluation
3 credit hours

(Same as SOC 6661.) Prerequisite: Permission of instructor. Methods and issues of client-centered social program evaluation. Topics include evaluation methods, proposal construction, report writing, and presentation techniques.

PSY 6670 - Literature Review and Reading in Psychology: Behavioral Neuroscience
1 to 3 credit hours

Supervised literature review and/or readings on a topic of current importance in psychology. Topics and requirements obtained from individual faculty members. Specific courses may be repeated to a total of 6 credits.

PSY 6680 - Literature Review and Reading in Psychology: Cognitive
1 to 3 credit hours

Supervised literature review and/or readings on a topic of current importance in psychology. Topics and requirements obtained from individual faculty members. Specific courses may be repeated to a total of 6 credits.

PSY 6690 - Professional Issues and Roles
3 credit hours

Systematic survey of ethical practice requirements, certification, and licensure for psychological practice. Examines critical issues facing psychology and roles of psychologists.

PSY 6700 - Literature Review and Reading in Psychology: Developmental
1 to 3 credit hours

Supervised literature review and/or readings on a topic of current importance in psychology. Topics and requirements obtained from individual faculty members. Specific courses may be repeated to a total of 6 credits.

PSY 6720 - Literature Review and Reading in Psychology: Learning
1 to 3 credit hours

Supervised literature review and/or readings on a topic of current importance in psychology. Topics and requirements obtained from individual faculty members. Specific courses may be repeated to a total of 6 credits.

PSY 6730 - Literature Review and Reading in Psychology: Personality
1 to 3 credit hours

Supervised literature review and/or readings on a topic of current importance in psychology. Topics and requirements obtained from individual faculty members. Specific courses may be repeated to a total of 6 credits.

PSY 6740 - Literature Review and Reading in Psychology: Reading
1 to 3 credit hours

Supervised literature review and/or readings on a topic of current importance in psychology. Topics and requirements obtained from individual faculty members. Specific courses may be repeated to a total of 6 credits.

PSY 6750 - Psychology and Assessment of Learning Disabilities
3 credit hours

Prerequisite: PSY 6100; corequisite: PSY 6760. Characteristics and biological bases of learning disabilities. Assessment methods including CBMs, interventions including RTI, and consultation strategies for working with children with learning disabilities with reference to family, school, and community as sources of understanding and treatment. Liability insurance required prior to enrollment.

PSY 6760 - Educational Assessment
1 credit hours

Prerequisite: PSY 6100; corequisite: PSY 6750. Skills in conducting educational assessment for completing evaluations of children suspected of having learning disabilities.

PSY 6770 - Assessment and Therapeutic Interventions for Children's Emotional Problems
3 credit hours

Prerequisites: PSY 6100 and either PSY 5250 or PSY 6400. Personality and behavioral assessment with children. Linking assessment and diagnosis to

therapeutic intervention. Developing therapeutic relationships with children.

PSY 6780 - Clinical Neuropsychology
3 credit hours

Prerequisites: PSY 5780, PSY 6100, and PSY 6250 or consent of instructor. Review of human neuroanatomy and neurophysiology. Administration of representative neuropsychological test batteries, especially the Halstead-Reitan Neuropsychological Test Battery. Applied experience with clinical population. Liability insurance required prior to enrollment.

PSY 6785 - Principles of Behavior Analysis
3 credit hours

Reinforcement theory and practice in applied settings with an emphasis on basic and advanced issues and best practices in behavioral control using reinforcers, punishers, discrimination, avoidance, shaping of new behaviors, chaining, contingencies, maintenance, and transfer. Special topics include language learning and training and the moral and legal controls in behavioral analysis.

PSY 6790 - Literature Review and Reading in Psychology: Sensation and Perception
1 to 3 credit hours

Supervised literature review and/or readings on a topic of current importance in psychology. Topics and requirements obtained from individual faculty members. Specific courses may be repeated to a total of 6 credits.

PSY 6801 - Interviewing and Intervention
3 credit hours

Interview and intervention techniques common to most psychological assessment procedures and therapies: rapport-building, interviewing skills, management of dangerous or suicidal clients, consultation, and referrals.

PSY 6810 - Literature Review and Reading in Psychology: Social
1 to 3 credit hours

Supervised literature review and/or readings on a topic of current importance in psychology. Topics and requirements obtained from individual faculty members. Specific courses may be repeated to a total of 6 credits.

PSY 6820 - Family Therapy: Evaluation and Treatment Planning
3 credit hours

Examination of evaluation and intervention procedures of major models of family therapy. Emphasis on ethical issues for practitioners of family therapy.

PSY 6841 - Theories of Individual Psychotherapy
3 credit hours

Prerequisite: PSY 6801. Intensive presentation of theory and methods used in psychotherapy. Evaluation of standard of care and treatment effectiveness.

PSY 6850 - Field Practicum (Clinical)
3 credit hours

Prerequisites: Admission to the clinical program or permission of the instructor; 24 hours including PSY 6010, PSY 6100, PSY 6101, PSY 6250, PSY 6510, and PSY 6690. Supervised clinical training in a community mental health agency. Supervision by a licensed psychologist at the agency. 300 clock hours for 3 credit hours. Liability insurance required prior to enrollment.

PSY 6851 - Assessment Field Practicum (Clinical)
3 credit hours

Prerequisites: Admission to the clinical master's program (or permission of instructor) and successful completion of clinical master's program core coursework. Supervised clinical training in psychological assessment and diagnostics in a community mental health or related agency. Supervision by a licensed psychologist at the agency required and provided. Liability insurance required prior to enrollment.

PSY 6860 - Field Practicum (Clinical)
3 credit hours

Prerequisite: PSY 6850. Must be taken in semester immediately following PSY 6850. Continuation of supervised clinical training in a community mental health agency. Supervision by a licensed psychologist at the agency. 300 clock hours for 3 credit hours. Liability insurance required prior to enrollment.

PSY 6870 - Field Practicum (Clinical)
3 credit hours

Prerequisites: Admission to the clinical program or permission of the instructor; 24 hours including PSY 6510, PSY 6100, PSY 6250, PSY 6010, 6840, and PSY 6690. Supervised clinical training in a community

mental health agency. Supervision by a licensed psychologist at the agency. 300 clock hours for 3 credit hours. Liability insurance required prior to enrollment.

PSY 6875 - Practicum: Consultation/Collaboration in School Psychology
3 credit hours

Prerequisite: PSY 6750 or PSY 6760. Field-based training in the knowledge and skills necessary for school psychologists to successfully serve as consultants in school-based settings. Liability insurance required prior to enrollment.

PSY 6880 - Independent Study in School Psychology
1 credit hours

PSY 6940 - Independent Research in Psychology: School
1 to 9 credit hours

Prerequisite: Permission of instructor. Individualized empirical research and library research approved by the instructor. (1-3 credits applicable to degree)

PSY 6950 - Literature Review and Reading in Psychology: School
1 to 3 credit hours

Supervised literature review and/or readings on a topic of current importance in psychology. Topics and requirements obtained from individual faculty members. Specific courses may be repeated to a total of 6 credits.

PSY 6960 - Internship: School Psychology
1 to 4 credit hours

Prerequisites: 30 semester hours of psychology including PSY 6060, PSY 6100, PSY 6140, and PSY 6770; approved thesis proposal. Minimum of 720 hours supervised internship, at least half in a school system. Not acceptable as Ed.S. internship. Liability insurance required prior to enrollment. May be repeated.

PSY 6970 - Independent Study in School Psychology: Learning
1 credit hours

Competencies-oriented individualized study.

PSY 6980 - Independent Study in School Psychology: Fieldwork
1 credit hours

Competencies-oriented individualized study. Learning

competencies-oriented field experience. Forty-five hours of work as a school psychologist in training. Course may be repeated up to three times for credit.

PSY 6990 - Independent Study in School Psychology: Assessment and Consultation
1 credit hours

Competencies-oriented individualized study.

PSY 6999 - Comprehensive Examination and Preparation
1 credit hours

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

PSY 7080 - Practicum: Advanced Interventions with Children
3 credit hours

Prerequisite: PSY 6080. Theoretical and practical issues related to school interventions with children exhibiting psychological and behavior problems. Advanced skills development in consultation with parents and teachers, psychotherapy with children, and brief, short-term family therapy.

PSY 7100 - Multicultural and Social Bases for Assessment and Intervention Practices
3 credit hours

Prerequisite: PSY 6140 or PSY 6270. Theoretical and practical issues related to appropriate practices in assessment, diagnosis, and therapeutic interventions for youth of diverse ethnic and cultural groups.

PSY 7190 - Advanced Cognitive Psychology
3 credit hours

Topic-oriented overview of cognitive psychology. Models of attention, perception, memory, language, reasoning, problem solving, and decision making. Issues in cognitive development and cognitive neuropsychology.

PSY 7200 - School Neuropsychology
3 credit hours

Prerequisites: PSY 6100, PSY 6750, PSY 6770. Prerequisite/corequisite: PSY 6400. Overview of the principles of neuropsychology as applied within the school population. Biological and neurological basis of

behaviors and disorders in the school setting and means of intervention.

PSY 7210 - Advanced Psychometrics
3 credit hours

Prerequisites: PSY 6280, HHP 6700, or equivalent. Classical test theory and item response theory. Model, assumptions, and problems of classical test theory. Mathematical modeling, parameter estimating, and adaptive testing procedures using item response theory. Both theories utilized for test construction.

PSY 7280 - Psychological Statistics: Regression
3 credit hours

Prerequisite: PSY 3020 or equivalent or admission to Psychology graduate program. Corequisite: PSY 7281. Survey of theoretical and practical aspects of multiple regression as typically used by psychologists. Simple and multiple regression through model comparison approach in the general linear model paradigm. Laboratory included.

PSY 7281 - Psychological Statistics: Regression Lab
0 credit hours

Corequisite: PSY 7280.

PSY 7290 - Psychological Statistics: ANOVA
3 credit hours

Prerequisite: PSY 3020 or equivalent or admission to Psychology graduate program. Corequisite: PSY 7291. Review of basic statistics. Scientific quantification, research design, and statistical analysis from the perspective of analysis of variance: one-way, factorial, repeated measures, and mixed designs. Laboratory included.

PSY 7291 - Psychological Statistics: ANOVA Lab
0 credit hours

Corequisite: PSY 7290.

PSY 7460 - Factor Analysis and Related Methods
3 credit hours

Prerequisites: PSY 6280, HHP 6700, or equivalent. Surveys each of the major factor analysis techniques and related latent theories with main focus on application. Nature, power, procedure, computer programming, interpretation, and limitations of each technique.

PSY 7520 - Assessment and Treatment of Addictions
3 credit hours

Systematic analysis of the addictional phenomena with particular emphasis on dynamics and behavioral manifestations. Alcohol, street and prescription drugs, gambling, TV, religion, politics, and sex as aberrational forms of altering consciousness explored. Causation, clinical diagnostics, and treatment procedures as well as prevention are addressed in detail.

PSY 7530 - The Psychology of Reading and Reading Development
3 credit hours

Overview of the cognitive processes involved in reading. The structure of both oral and written language; cognitive mechanisms in reading; language development and the acquisition of reading skills; developmental and acquired disorders of language and reading.

PSY 7550 - Structural Equation Modeling
3 credit hours

Prerequisites: PSY 6280, HHP 6700, or equivalent. Structural equation modeling. Review of correlation, multiple regression, and path analysis. Conceptual review of measurement and structural (latent) models. Model specification, estimation, goodness of fit, and power of structural equation models. Relevant computer programs.

PSY 7580 - Multivariate Data Analysis
3 credit hours

Prerequisites: PSY 6280, HHP 6700, or equivalent. Surveys each of the major multivariate data analysis techniques, with main focus on their application. Nature, power, procedure, computer programming, interpretation, and limitations of each.

PSY 7585 - Test Construction and Validation
3 credit hours

Surveys principles in item and test construction. Actual development of items and tests in the student's own field and validation of the items and tests through both classical test theory and item response theory.

PSY 7810 - Advanced Internship: School Psychology
3 to 6 credit hours

Prerequisites: 60 semester hours of approved graduate classes and PSY 6140, PSY 6875, and PSY 7080. Minimum of 1200 hours supervised

internship, at least half in a public school system. Liability insurance required prior to enrollment. May be repeated; enrollment must be continuous.

PSY 7999 - Comprehensive Examination and Preparation

1 credit hours

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

Social Work

Rebecca Smith, Chair

(615) 898-2868

www.mtsu.edu/socialwork/

The Social Work Department offers the Master of Social Work (M.S.W.) with a concentration in Advanced Generalist Social Work Practice. The M.S.W. is offered through a partnership among MTSU, Austin Peay State University, and Tennessee State University. Applicants holding a B.S.W. from a program accredited by the Council on Social Work Education may be eligible for admission to advanced standing.

Social Work, Advanced Generalist Social Work Practice Concentration, M.S.W.

Barbara F. Turnage

(615) 494-8626

barbara.turnage@mtsu.edu

The Department of Social Work offers the Master of Social Work (M.S.W.) with a concentration in Advanced Generalist Social Work Practice. The M.S.W. is offered through a partnership among MTSU, Austin Peay State University, and Tennessee State University. Applicants holding a B.S.W. from a program accredited by the Council on Social Work Education may be eligible for admission to advanced standing.

The purpose of the 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 M.S.W. program is accredited by the Council on Social Work Education (CSWE).

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Candidates must be admitted to the graduate college of their home campus (MTSU, APSU, or TSU) and must also be admitted to the Mid-Tennessee Collaborative Master of Social Work program. Admission requirements include an earned undergraduate degree with a minimum GPA of 2.75. Applicants interested in obtaining advanced standing must have completed a Bachelor of Social Work degree from a CSWE-accredited program and attained a minimum cumulative GPA of 3.00 in their undergraduate coursework. Students who hold a baccalaureate degree from a social work program outside the United States must have their transcript reviewed by CSWE for a determination of equivalency.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Admission to the M.S.W. program is limited and granted for Fall entry only. Review of applications for Fall admission begins on March 1 of each year and continues until capacity is reached. Applicants are encouraged to submit all required documents as early as possible.

Applicant must

1. submit application with appropriate fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Record Exam (GRE);
3. submit official transcripts of all previous college work;
4. submit a supplementary application that requires an essay, resume, and three letters of recommendation from professionals who can address the applicant's interest in social work, potential for successfully completing a master's program, and potential for professional social work practice (available at www.mtsu.edu/socialwork/msw.php).

Degree Requirements

The M.S.W. degree is a 60-hour program as outlined below, including 30 hours of foundation courses and 30 hours of concentration courses. There are 9 hours of electives (3 from foundation courses and 6 from concentration courses). This is a non-thesis program with a capstone course culminating in a written comprehensive examination.

Curriculum: Social Work, Advanced Generalist Social Work Practice

Candidate must complete 60 hours in the following course of study:

Foundation Courses (27 hours)

- SW 6000 - MSW Practice I **3 credit hours**
- SW 6010 - Human Behavior and the Social Environment **3 credit hours** (online)
- SW 6020 - Research I **3 credit hours**
- SW 6030 - Social Welfare Policy and Services **3 credit hours** (online)
- SW 6100 - MSW Practice II **3 credit hours**
- SW 6110 - Social Justice and Equity for Multicultural Populations **3 credit hours** (online)
- SW 6120 - Research II **3 credit hours**
- SW 6130 - Practicum IA **3 credit hours**
- SW 6140 - Practicum IB **3 credit hours**

Concentration Courses (24 hours)

- SW 6200 - Advanced Direct Practice with Individuals **3 credit hours**
 - SW 6210 - Advanced Practice with Families **3 credit hours** ** OR
 - SW 6220 - Advanced Group Practice **3 credit hours** **
 - SW 6230 - Advanced Macro Practice **3 credit hours**
 - SW 6240 - Social Policy Analysis **3 credit hours** (online)
 - SW 6300 - Empirical Social Work Practice **4 credit hours**
 - SW 6310 - Practicum IIA **4 credit hours**
 - SW 6320 - Practicum IIB **4 credit hours**
- **Either course meets requirement; the other one may be taken as an elective.**

Electives (6-9 hours)

- 9 credit hours of electives are required for the full program; 6 credit hours are required for the advanced standing program.

Program Notes

All M.S.W. students will be reviewed for candidacy by the social work faculty prior to beginning their second practicum. Students must obtain a favorable candidacy recommendation to remain in the program.

Candidate must

1. file a degree plan with the College of Graduate Studies prior to the completion of 21 semester hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which they intend to graduate.

Social Work

SW 5000 - Special Topics

3 credit hours

Prerequisites: Permission of department. Special topics in social work and social welfare. May be repeated for a maximum of 9 hours. online delivery

SW 6000 - MSW Practice I

3 credit hours

Prerequisite: Admission to the M.S.W. program. 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.

SW 6010 - Human Behavior and the Social Environment

3 credit hours

Prerequisite: Admission to the M.S.W. program. 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).

SW 6020 - Research I

3 credit hours

Prerequisite: Admission to the M.S.W. program. This is a basic research and statistical methods course utilizing research in general inquiry and practice evaluation in social work with the generalist perspective.

SW 6030 - Social Welfare Policy and Services

3 credit hours

Prerequisite: Admission to the M.S.W. program. The historical development, philosophical orientation, and analysis of U.S. social welfare policy and services including the global context. online delivery

SW 6100 - MSW Practice II

3 credit hours

Prerequisite: SW 6000 and SW 6010. 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.

SW 6110 - Social Justice and Equity for Multicultural Populations

3 credit hours

Prerequisite: SW 6010. An overview of the

professional commitment of social work to oppressed peoples. online delivery

SW 6120 - Research II

3 credit hours

Prerequisite: SW 6020. An advanced discussion of program evaluation strategies and single-system design issues. The student will conduct a research project.

SW 6130 - Practicum IA

3 credit hours

Prerequisites: SW 6000, SW 6010, SW 6020, and SW 6030. May be taken concurrently with SW 6140. A 200-hour field practicum experience within the generalist perspective.

SW 6140 - Practicum IB

3 credit hours

Prerequisites: SW 6000, SW 6010, SW 6020, and SW 6030. May be taken concurrently with SW 6130. A 200-hour field practicum experience within the generalist perspective.

SW 6200 - Advanced Direct Practice with Individuals

3 credit hours

Prerequisites: Practicum IA (SW 6130) and IB (SW 6140) or advanced standing admission. An advanced social work methods course that prepares students for practice with individuals including client assessment, intervention, and evaluation.

SW 6210 - Advanced Practice with Families

3 credit hours

Prerequisites: Practicum IA (SW 6130) and IB (SW 6140) or advanced standing admission. Advanced practice with families including client system assessment, intervention, and evaluation.

SW 6220 - Advanced Group Practice

3 credit hours

Prerequisites: Practicum IA (SW 6130) and IB (SW 6140) or advanced standing admission. Advanced practice with groups including client system assessment, intervention, and evaluation.

SW 6230 - Advanced Macro Practice

3 credit hours

Prerequisites: Practicum IA (SW 6130) and IB (SW 6140) or advanced standing admission. The advanced generalist practice social work course designed to enable the student to understand and

apply social work methods at the advanced generalist level.

SW 6240 - Social Policy Analysis

3 credit hours

Prerequisites: Practicum IA (SW 6130) and IB (SW 6140) or advanced standing admission. A study of the design, implementation, and analysis of social policies and their impact on social work practice. online delivery

SW 6300 - Empirical Social Work Practice

4 credit hours

Prerequisites: Advanced Direct Practice with Individuals (SW 6200) and Advanced Practice with Families (SW 6210), or Advanced Practice with Individuals (SW 6220) Advanced Macro Practice (SW 6230), and Social Policy Analysis (SW 6240). 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.

SW 6310 - Practicum IIA

4 credit hours

Prerequisites: Advanced Practice with Individuals (SW 6200) and Advanced Practice with Families (SW 6210) or Advanced Group Practice (SW 6220), Advanced Macro Practice (SW 6230), and Social Policy Analysis (SW 6240). May be taken concurrently with Practicum IIB (SW 6320). A 250-hour field practicum experience. Must be taken concurrently with Empirical Social Work Practice (SW 6300).

SW 6320 - Practicum IIB

4 credit hours

Prerequisites: If taken concurrently with SW 6130, prerequisites are the same. If not taken concurrently, SW 6310 is the prerequisite. May be taken concurrently with Practicum IIA (SW 6310) and Empirical Social Work Practice (SW 6300).

SW 6400 - Independent Study

3 credit hours

Prerequisites: Permission of department required. Independent study allows a student to develop more fully an area of his or her particular interest. Topics for intensive study are chosen in joint consultation between the student and the instructor.

SW 6410 - Aging Issues and Controversies

3 credit hours

Prerequisite: Permission of department. An examination of the biological, psychological, and social issues affecting older adults. The field of gerontology is explored with special attention to current controversies in health care, independence, and social status with application of ethical theories to these problems.

SW 6420 - Adult Mental Health

3 credit hours

Prerequisite: Permission of department. This course offers preparation for students for advanced generalist practice by integrating foundation-level knowledge of policy, research, HBSE, and practice with substantive knowledge from the field of mental health. This course provides the basics of DSM-IV-TR diagnosis, biopsychosocial assessment, and treatment planning. They will be exposed to the skills necessary to conduct strengths and competency-based assessments and interventions.

College of Business (Jennings A. Jones)

Accounting

G. Robert Smith, Jr., Chair

(615) 898-2558

www.mtsu.edu/accounting

The Department of Accounting offers the Master of Accountancy (M.Acc.) and courses for the Master of Business Administration degree. A minor in Accounting is offered for students seeking a master's degree other than the M.B.A. A specialization in taxation is also offered. The accounting graduate director serves as advisor.

Accounting, M.Acc.

John Wermert, Program Director

(615) 898-2357

John.Wermert@mtsu.edu

The Department of Accounting offers the Master of Accountancy (M.Acc.) degree program.

The mission of the Master of Accountancy program is to provide a flexible and focused program that prepares students for professional jobs in accounting and other related fields. The program is designed to offer students opportunities to obtain knowledge in non-accounting areas to support their career development. Fulfilling this mission requires that faculty members enhance and broaden their skills through academic and professional research, service to the profession, and educational development.

Please see the undergraduate catalog for undergraduate program information.

Admission Requirements

To be considered for admission to the Master of Accountancy program (see Admission to the College of Graduate Studies), a student must meet **ONE** of the following:

1. Student has an undergraduate accounting degree field from an Association to Advance Collegiate Schools of Business (AACSB) accredited institution with an overall undergraduate GPA of 3.00.
2. Student has either a composite score of 950 with a minimum GMAT of 400 (calculated as $GPA \times 200 + GMAT = 950$) OR Upper Division GPA $\times 200 + GMAT = 1,000$.
3. International students must comply with the following provision: For undergraduate degrees from foreign institutions where a grade point average cannot be clearly established but where that work is thought to be equivalent to domestic grades of B or higher, admission eligibility may be determined by the GMAT score. A score of at least 450 is required for unconditional admission under such circumstances. Preparatory work taken at institutions with grading systems paralleling those of most U. S. institutions must conform to a B average.
4. Students without an undergraduate degree in Accounting may apply for admission to the Master of Accountancy program as long as they meet the requirements in (2) above. In addition, these students will be required to complete certain prerequisite undergraduate accounting courses including (but not limited to) Principles of Accounting I and II, Intermediate Accounting I and II, Cost Accounting, Introduction to Federal Income Tax Auditing, Legal Environment of Management (Business Law), Survey of Economic Theory, Quantitative Methods Survey, Survey of Information Systems Issues, and Survey of Managerial Finance.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

October 1 is the tentative application deadline for admission in the spring. Applications will be accepted after these dates, but admission consideration is not guaranteed.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Management Admissions Test (GMAT) if required;
3. submit official transcripts of all previous college work.

NOTE: Students applying for an assistantship must also submit three letters of recommendation from professors or professionals that address the applicants' potential to successfully complete a Master of Accountancy program.

Degree Requirements

The Master of Accountancy requires completion of a 6 credit-hour core and 24 credit hours in electives. A capstone course must be passed with a grade of B- or higher with a maximum enrollment of two times. The degree is to be completed within six years from the time of admission to the degree program.

Curriculum: Accounting

Candidate must complete 30 hours in the following course of study:

Required Core (6 hours)

- ACTG 6650 - Advanced Accounting Theory **3 credit hours**

Capstone Course (taken in the last semester)

- ACTG 6670 - Advanced Financial Accounting and Reporting Problems **3 credit hours**

Electives (24 hours)

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

Tax Accounting Specialization

Students electing to specialize in tax accounting must complete four of the following courses among their electives:

- ACTG 6510 - Federal Income Tax Research and Planning **3 credit hours**
- ACTG 6530 - Taxation of Pass-Through Entities **3 credit hours**
- ACTG 6540 - Taxation of Business Entities **3 credit hours**
- ACTG 6550 - U.S. International Taxation **3 credit hours**
- ACTG 6560 - Special Topics in Taxation **3 credit hours**

Program Notes

The business prerequisites for a student seeking the M.Acc.degree are

- an undergraduate course in business law or BLAW 3400, Legal Environment of Business
- undergraduate course in economics or ECON 2410 or 2420, Principles of Economics
- undergraduate course in statistics or QM 6000, Quantitative Methods Survey
- undergraduate course in information systems or INFS 3100, Principles of Management Information Systems
- undergraduate course in finance or FIN 3010, Business Finance.

A recent graduate of an AACSB-accredited program would normally possess an adequate background in these prerequisites. In addition, students entering the M.Acc. degree program must have completed an additional 21 hours of prerequisites in accounting including

- ACTG 2110 and ACTG 2125, Principles I and II
- ACTG 3110 and 3120, Intermediate Accounting I and II
- ACTG 3310, Cost Accounting
- ACTG 4550, Introduction to Federal Income Tax

- ACTG 4620 or ACTG 4640, External Auditing I or Internal Auditing.

The Master of Accountancy fulfills the requirement to sit for the CPA exam in Tennessee.

No foreign language or thesis is required in the program.

Students are required to complete a degree plan and to submit it to the College of Graduate Studies prior to completion of 21 semester hours.

A candidate must file a Notice of Intent to Graduate Form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Students who have credit for the undergraduate equivalent of a 5000-level course are not permitted to enroll in the 5000-level course for credit.

Accounting Minor

There are two patterns of minors from which a candidate may choose:

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

Accounting

ACTG 5510 - Accounting Systems

3 credit hours

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

ACTG 5530 - Federal Taxes I

3 credit hours

Prerequisites: Graduate standing and permission of department chair. Addresses determination of taxable income for individuals; federal income tax returns and research methods.

ACTG 5610 - Governmental Accounting and Reporting

3 credit hours

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

ACTG 5680 - Forensic Accountancy and Fraud Auditing

3 credit hours

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

ACTG 5840 - Study Abroad

3 credit hours

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

ACTG 6000 - Survey of Accounting of Principles

3 credit hours

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

ACTG 6100 - Accounting and Legal Issues for Managers

3 credit hours

Surveys accounting skills and legal perspectives necessary for managers without undergraduate business degrees to enter the businessworld. Will not meet the requirements for the M.S. in Accounting/Information Systems, M.Acc. in Accounting, or the M.B.A. degree programs.

ACTG 6110 - Advanced Financial Accounting

3 credit hours

Prerequisite: ACTG 3120 with a minimum grade of C. Extensive coverage of consolidated financial statement preparation. Financial accounting topics including advanced partnerships, interim financial reporting, segment reporting, foreign currency issues, and accounting for fiduciaries also covered. Readings from professional journals and research related to current accounting issues.

ACTG 6310 - Advanced Cost Accounting, Budgeting, and Controllership

3 credit hours

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

ACTG 6510 - Federal Income Tax Research and Planning

3 credit hours

Prerequisite: ACTG 4550 or consent of instructor. Skillful application of tax research methodology in the use of primary tax authority, secondary tax reference materials, and research aids. Research through practice in the use of materials available in the tax library.

ACTG 6530 - Taxation of Pass-Through Entities**3 credit hours**

Prerequisite: ACTG 4550 with a minimum grade of C or consent of instructor. Principles of partnership and S corporation taxation. Addresses the tax consequences of formation, operations, distributions, and liquidations of partnerships. Also covers tax rules unique to S corporations.

ACTG 6540 - Taxation of Business Entities**3 credit hours**

Prerequisite: ACTG 4550 with minimum grade of C or consent of instructor. The federal income taxation of business entities, including C corporations, S corporations, partnerships, limited liability companies, and estates and trusts. Also covers estate and gift taxation.

ACTG 6550 - U.S. International Taxation**3 credit hours**

Prerequisites: ACTG 4530 and ACTG 4540 or consent of instructor. Basic concepts of U.S. taxation of international transactions. Topics include sourcing of income from foreign activities, Subpart F income, selecting the proper vehicle for foreign investments, and computing foreign tax credits.

ACTG 6560 - Special Topics in Taxation**3 credit hours**

Prerequisite: ACTG 4550 with a minimum grade of C or consent of instructor. In-depth investigation of selected advanced topics in taxation.

ACTG 6570 - International Financial Reporting and Controls**3 credit hours**

Prerequisite: Nine hours of accounting with a C or better. Advanced study of international financial reporting issues, international financial statement analysis, international accounting standards, foreign currency translation, foreign currency transaction reporting, international management accounting issues, and international taxation practices.

ACTG 6580 - International Financial Reporting Standards**3 credit hours**

Prerequisite: ACTG 3120 with a C or better. Extensive coverage of the International Accounting Standards Board's International Financial Reporting Standards (IFRS) with an emphasis on inventories, revalued fixed assets, intangible assets, business combinations, and loans and receivables. Examines

international conceptual framework as well as the organizations involved in determining the standards. Importance placed on changing from financial statements prepared under U.S. generally accepted accounting standards to IFRS-based statement.

ACTG 6610 - Advanced Governmental and Nonprofit Accounting and Reporting**3 credit hours**

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

ACTG 6650 - Advanced Accounting Theory**3 credit hours**

Prerequisite: Consent of department chair. History and development of accountancy, tax structures, and industrial development of past, present, and projected societies including relevant research into current controversial issues. Extensive research required. Required for M.Acc.

ACTG 6670 - Advanced Financial Accounting and Reporting Problems**3 credit hours**

Prerequisite: Accounting major or consent of instructor. Application of theoretical concepts and promulgations of authoritative bodies to financial accounting and financial reporting situations encountered in practice.

ACTG 6720 - Advanced Auditing and Public Accounting Practices**3 credit hours**

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

ACTG 6730 - External Auditing II**3 credit hours**

Prerequisite: ACTG 4620 or equivalent with a minimum grade of C. Responsibilities and functions of external auditors in providing attestation services. Auditing concepts, standards, and techniques

including application of audit techniques to various transaction cycles will be covered.

ACTG 6810 - Empirical Methods in Accounting
3 credit hours

Prerequisites: Foundation requirements and consent of instructor. Independent study and research on topics in or related to accounting under supervision of graduate faculty.

ACTG 6910 - Accounting and Business Decisions
3 credit hours

Prerequisite: ACTG 2120 or equivalent. Accounting concepts and their application to the decision-making process. Research reports on a variety of financial and managerial accounting topics prepared and presented orally by the student. Not open to M.Acc. students.

ACTG 6920 - Financial Statement Analysis
3 credit hours

Prerequisite: ACTG 2120 with minimum grade of C or equivalent. Concepts and techniques of financial statement analysis, income determination, and related institutional background. Not open to M.Acc. students.

Business Law

BLAW 6430 - Legal Environment of Management
3 credit hours

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

BLAW 6500 - Legal Aspects of Healthcare
3 credit hours

The U.S. health care system; its major stakeholders; and the laws and regulations that apply to health care institutions, professionals, and suppliers including Medicare, electronic health records, health care fraud and abuse, compliance planning, certificates of need, health care business associations, federal tax exemption, liability and licensing issues, and ethics in decision making.

BLAW 6520 - Current Legal Topics in Corporate Governance, Risk Management and Fraud
3 credit hours

Prerequisite: Graduate standing. Delves into current legal topics in corporate law and governance, including the division of power and responsibilities between the board of directors, board committees, officers, auditors, and shareholders; securities laws and other fraud topics; the duty of care and other fiduciary duties of directors, officers and auditors; special problems of closely held organizations; how governance models compare across the globe; and the Sarbanes-Oxley Act. Includes research related cases in key industries of their prospective careers, such as the healthcare and audit services.

Business Communication and Entrepreneurship

Stephen D. Lewis, Chair

(615) 898-2902

www.mtsu.edu/bcen/

The Department of Business Communication and Entrepreneurship offers the Master of Business Education.

Business Education, M.B.E.

Dr. Stephen D. Lewis, Program Director

(615) 898-2902

Steve.Lewis@mtsu.edu

The Department of Business Communication and Entrepreneurship offers the Master of Business Education degree. The M.B.E. offers preparation to teach business subjects at the middle school and secondary school levels, to teach in technology centers and community colleges, or to train individuals in a corporate environment. A flexible curriculum allows students to customize their programs to fit individual objectives. As many as 27 elective hours may be chosen in consultation with an advisor; thus, tailoring a program to fit goals is easy. Advisement for the degree is provided by graduate faculty members in this department.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admissions are based on a comprehensive assessment of a candidate's qualifications including Graduate Record Examination (GRE) scores or scores on the Miller Analogies Test (MAT) and undergraduate and graduate grade point average.

All students in the graduate program will be expected to have at least 24 semester hours of undergraduate business subjects.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit three letters of recommendation from professors or professionals that address the applicant's potential to successfully complete an M.B.E. program;
3. submit official scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT);
4. submit official transcripts of all previous college work.

Degree Requirements

The Master of Business Education requires completion of 33 semester hours with no more than 30 percent of the total dually listed as undergraduate/graduate hours.

Candidate must

1. successfully complete a written comprehensive examination (may be taken no more than twice);
2. meet licensure requirements to teach business subjects upon completion of the degree or select the non-teaching option.

Curriculum: Business Education

Candidate must complete 33 hours in the following course of study:

General Option (33 hours)

- BCEN 5710 - History and Foundations of Business Education and Marketing Education **3 credit hours** *
- BCEN 6620 - Research in Business and Marketing Education **3 credit hours**
- 27 hours of guided electives

****Students who complete this course at the undergraduate level may substitute another three-hour graduate level course in business or marketing education.***

Research Option (33 hours)

- BCEN 5710 - History and Foundations of Business Education and Marketing Education **3 credit hours** *
 - BCEN 6620 - Research in Business and Marketing Education **3 credit hours**
 - BCEN 6780 - Problems in Business Education, Marketing Education, and Training **3 credit hours**
 - 24 hours of guided electives
- *Students who complete this course at the undergraduate level may substitute another three-hour graduate level course in business or marketing education.***

Notes

BCEN, FOED, SPED, and SPSE electives will be chosen in consultation with BCEN advisor or department chair. A nonlicensure training and development specialization includes BCEN 5410 and BCEN 5450. Electives for this specialization will be chosen in consultation with BCEN advisor or department chair.

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Business Communication and Entrepreneurship

BCEN 5200 - Problems in Business Education, Marketing Education and Office Management 1 to 3 credit hours

Prerequisites: Graduate standing and consent of department chair. Individual research, reading analysis, or projects in contemporary problems and issues in concentrated area of study under direction of a faculty member. May be taken twice.

BCEN 5240 - Materials and Methods in Basic Business 3 credit hours

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

BCEN 5250 - Innovations and Problems in Administrative Business Services and Technology 3 credit hours

Prerequisite: BCEN 2330 or equivalent. Instructional strategies in office technology including objectives, testing, audio-visuals, course content, and standards.

BCEN 5340 - Integrated Administrative Technology 3 credit hours

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

BCEN 5350 - Records Management 3 credit hours

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

BCEN 5410 - Managerial Media Presentations 3 credit hours

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

BCEN 5450 - Training Strategies for Business Systems and Technology 3 credit hours

Prerequisite: BCEN 4410 or equivalent. Corporate learning specialist activities such as design, development, delivery, and evaluation of learning programs for a business environment. Focuses on adult learning theories with emphasis on professional learning activities related to innovative corporate educational programs.

BCEN 5510 - Business Report Writing 3 credit hours

Prerequisite: BCEN 3510 or equivalent. Nature, general functions, and present need of reports in industry. Recognizing, organizing, and investigating problems preparatory to writing reports and construction and writing of distinctive business and technical reports.

BCEN 5520 - Instructional Strategies in Marketing Education 3 credit hours

Develops competence in techniques of teaching with emphasis on problem-solving and demonstration procedures. Emphasizes teaching-learning evaluation.

BCEN 5600 - Organization and Administration of Marketing Education Programs 3 credit hours

Organizing marketing education programs at the secondary and postsecondary levels; emphasizes youth organizations, techniques of coordination, and administrative procedures.

BCEN 5640 - Issues and Trends in Office Management 3 credit hours

Evaluation of significant research in office management. Observations in local business offices and visits to managers and identifying and solving office problems.

BCEN 5660 - Corporate Communication**3 credit hours**

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

BCEN 5670 - International Business Communication**3 credit hours**

Provides a theoretical and practical framework for understanding and conducting effective international business communication. Emphasis on the analysis and development of international business communication processes.

BCEN 5680 - Issues and Trends in Workplace Diversity**3 credit hours**

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

BCEN 5710 - History and Foundations of Business Education and Marketing Education**3 credit hours**

Developments, aims, principles, and present status of business education; organization and evaluation of the business education curriculum; administration and supervision of business education.

BCEN 5810 - Internship Program**3 credit hours**

A supervised program of related work experience. Provides experiential opportunities for the application of the theoretical concepts learned.

BCEN 5840 - Study Abroad**3 credit hours**

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

BCEN 5850 - Digital Communication for Business**3 credit hours**

Prerequisite: BCEN 3510 or BCEN 6820. Skills needed to create digital communication for business with emphasis on the writing process, digital tools, planning, design, collaborating, copyright and fair use, and technical aspects of digital writing.

BCEN 6010 - Training and Development**3 credit hours**

(Same as PRST 6460.) Prerequisite: Graduate status. A broad introduction to training and development as a field of study and practice. Designed for training and development specialists as well as organizational leaders focused on continually improving human and organizational performance.

BCEN 6310 - History and Philosophy of Business Education and Marketing Education**3 credit hours**

Historical development, philosophy, and objectives of business and marketing education. Contributions to general education, vocational education, and adult education. Curriculum in relation to future needs, objectives, and social change.

BCEN 6460 - Issues and Trends in Business Education and Marketing Education**3 credit hours**

Exploration and analysis of research-based studies on current issues and trends in vocational-technical education and business education, marketing education, and office management.

BCEN 6600 - Organization and Coordination of Marketing Education Curriculum**3 credit hours**

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

BCEN 6620 - Research in Business and Marketing Education**3 credit hours**

Introduction to research methods, tools, and interpretation of research data.

BCEN 6640 - Thesis Research**1 to 6 credit hours**

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

BCEN 6650 - Workshop in Business Education and or Marketing Education**3 credit hours**

Innovations in marketing education and/or business education. Special programs and organizations featured.

BCEN 6670 - Organization, Administration, and Supervision of Business Education**3 credit hours**

Administrative problems of a school system. Emphasis on those of the supervisor of business education, the department head, and the teacher as to reorganization, budgets, curriculum, equipment, personnel, adult education, and public relations.

BCEN 6680 - Women and Minorities in Business**3 credit hours**

Advancement of women and minorities as entrepreneurs and their roles on local, regional, and national boards of directors. Students interview local entrepreneurs to gain knowledge of being an entrepreneur in the twenty-first century.

BCEN 6700 - Coordination of Marketing Education Curriculum and Cooperative Programs**3 credit hours**

Organization of such programs and their characteristics in combining classroom instruction with regularly scheduled supervised experience and on-the-job training.

BCEN 6720 - Measurement and Evaluation in Business and Marketing Education**3 credit hours**

Teacher-made, standardized, and industry-developed tests and other standards used in teaching, used to evaluate student achievement, and used by industry for employment and promotion.

BCEN 6780 - Problems in Business Education, Marketing Education, and Training**3 credit hours**

Individualized research projects in special areas of

concern to teachers of business education, marketing education, and vocational education and to trainers in business and industry.

BCEN 6810 - Recent Developments in Basic Business**3 credit hours**

Present status and trends affecting content of basic business courses, aims, objectives, learning aids, motivation devices, resource materials, and current research.

BCEN 6820 - Managerial Communication**3 credit hours**

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

BCEN 6830 - Recent Developments in Integrated Business Technology**3 credit hours**

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

BCEN 6910 - Internship Program**3 credit hours**

A supervised program of related work experience. Provides experiential opportunities for the application of the theoretical concepts learned.

BCEN 6950 - Computer-Based Technologies for E-Training**3 credit hours**

(Same as PRST 6450.) Prerequisite: Graduate status. Concepts for developing computer-based e-training using numerous technologies.

BCEN 6999 - Comprehensive Examination and Preparation**1 credit hours**

Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the

first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

Computer Information Systems

Charles Apigian, Chair

(615) 898-5055

www.mtsu.edu/cis/

The Computer Information Systems (CIS) department offers the Master of Science in Information Systems with concentrations in Information Security and Assurance, IT Project Management, and General Information Systems. Core and elective classes may also be combined to form a strong foundation in database-related topics. The department also offers courses for the Master of Business Administration degree and a minor in Information Systems for students seeking a master's degree other than the M.B.A.

Information Systems, Information Security and Assurance Concentration, M.S.

Jeff Clark, Program Director
(615) 898-2838

Jeff.Clark@mtsu.edu

The Computer Information Systems (CIS) department offers the Master of Science in Information Systems with concentrations in Information Security, IT Project Management, and General Information Systems. Core and elective classes may also be combined to form a strong foundation in database-related topics. The department also offers courses for the Master of Business Administration degree and a minor in Information Systems for students seeking a master's degree other than the M.B.A.

The CIS graduate program director serves as advisor for students majoring in Information Systems. Prospective students are encouraged to contact the graduate program director or the CIS department to discuss the program. Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

To be admitted to the Master of Science in Information Systems program, a student must meet one of the following:

1. $GPA \times 200 + GMAT = 950$ or Upper Division $GPA \times 200 + GMAT = 1,000$
2. International students must comply with the following provision: For undergraduate degrees from institutions where a grade point average cannot be clearly established but where that work is thought to be equivalent to domestic grades of B or higher, admission eligibility may be determined by the GMAT score. A score of at least 450 is required for unconditional admission under such circumstances. Preparatory work taken in institutions with grading systems paralleling that of most United States institutions must conform to a B average.

Foundation Courses

The business prerequisites for a student seeking an M.S. in Information Systems are similar to those required for the M.B.A. and include:

- ACTG 3000 - Survey of Accounting for General Business (or ACTG 2110 and 2120);
- QM 6000 - Quantitative Methods Survey (or QM 2610 and 3620);
- One of FIN 3000 or 3010, MKT 3820, MGMT 6000 (MGMT 3610 or 3620), or ECON 6030 (ECON 2410 or 2420).

A recent graduate of an AACSB-accredited program would normally possess an adequate background in the business prerequisites.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official GMAT scores;
3. submit official transcripts showing a GPA in previous academic work.

Degree Requirements

The Master of Science in Information Systems with a concentration in Information Security and Assurance requires a completion of 30 semester hours. INFS 6980 must be passed with a grade of B- or higher with a maximum enrollment of two times. The degree is to be completed within six years from the time of admission to the degree program.

Curriculum: Information Systems, Information Security and Assurance

Candidate must complete 30 hours in the following course of study:

Required Courses (12 hours)

- INFS 6710 - IT Systems Development Project Management **3 credit hours**
- INFS 6790 - Seminar in Database Management **3 credit hours**
- INFS 6980 - Information Systems Practicum **3 credit hours**
- QM 6770 - Computer-Based Decision Modeling **3 credit hours**

Concentration (9 hours)

- INFS 6300 - IS Security: Management and Assurance **3 credit hours**
- INFS 6301 - IS Security: Preventing and Detecting Breaches **3 credit hours**
- INFS 6302 - IS Security: Intrusion Analysis, Recovery, and Response **3 credit hours**

Electives (9 hours)

- Three hours of approved INFS at the 6000 level
- Six hours of approved INFS at the 5000 or 6000 level

Program Notes

No more than two (2) 5000-level classes may be taken as part of the degree program.

Students planning to graduate in the minimum amount of time, including summer attendance, should plan their programs carefully in order to meet course sequencing and scheduling constraints. The program director can provide scheduling assistance.

A limited number of graduate assistantships are available on a competitive basis to qualified students.

No foreign language or thesis is required in the program.

INFS 6610 may not be taken to satisfy either a required or elective course in the program.

Students electing Information Systems without an undergraduate degree in information systems or demonstrable professional experience in the discipline are required to complete the additional prerequisites of INFS 3800 and 4790 (or 5790). INFS 5790 may be taken for credit toward the graduate degree. Students without formal training or experience in IT may be encouraged to take some additional INFS courses. A portion of these requirements may be satisfied in conjunction with the student's graduate studies.

Candidate must

1. file a degree plan with the College of Graduate Studies near beginning the program of study;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Information Systems, IS General Concentration, M.S.

Jeff Clark, Program Director

(615) 898-2838

Jeff.Clark@mtsu.edu

The Computer Information Systems (CIS) department offers the Master of Science in Information Systems with concentrations in Information Security and Assurance, IT Project Management, and IS General. Core and elective classes may also be combined to form a strong foundation in database-related topics. The department also offers courses for the Master of Business Administration degree and a minor in Information Systems for students seeking a master's degree other than the M.B.A.

The CIS graduate program director serves as advisor for students majoring in Information Systems. Prospective students are encouraged to contact the graduate program director or the CIS department to discuss the program.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

To be admitted to the Master of Science in Information Systems program, a student must meet one of the following:

1. GPA x 200 + GMAT = 950 or Upper Division GPA x 200 + GMAT = 1,000;
2. International students must comply with the following provision: For undergraduate degrees from foreign institutions where a grade point average cannot be clearly established but where that work is thought to be equivalent to domestic grades of B or higher, admission eligibility may be determined by the GMAT score. A score of at least 450 is required for unconditional admission under such circumstances. Preparatory work taken in institutions with grading systems paralleling that of most United States institutions must conform to a B average.

Foundation Courses

The business prerequisites for a student seeking an M.S. in Information Systems are similar to those required for the M.B.A. and include:

- ACTG 3000 - Survey of Accounting for General Business (or ACTG 2110 and 2120);
- QM 6000 Quantitative Methods Survey (or QM 2610 and 3620);
- One of FIN 3000 or 3010, MKT 3820, MGMT 6000 (MGMT 3610 or 3620), or ECON 6030 (ECON 2410 or 2420).

A recent graduate of an AACSB-accredited program would normally possess an adequate background in the business prerequisites.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official GMAT scores;
3. submit official transcripts showing a GPA in previous academic work.

Degree Requirements

The Master of Science in Information Systems with a concentration in General Information Systems requires a completion of 30 semester hours. INFS 6980 must be passed with a grade of B- or higher with a maximum enrollment of two times. The degree is to be completed within six years from the time of admission to the degree program.

Curriculum: Information Systems, General Information Systems

Candidate must complete 30 hours in the following course of study:

Required Courses (12 hours)

- INFS 6710 - IT Systems Development Project Management **3 credit hours**
- INFS 6790 - Seminar in Database Management **3 credit hours**
- INFS 6980 - Information Systems Practicum **3 credit hours**
- QM 6770 - Computer-Based Decision Modeling **3 credit hours**

Electives (18 hours)

- Twelve hours of approved INFS courses at the 6000 level
- Six hours of approved INFS courses at the 5000 or 6000 level

Program Notes

No more than two (2) 5000-level classes may be taken as part of the degree program.

Students planning to graduate in the minimum amount of time, including summer attendance, should plan their programs carefully in order to meet course sequencing and scheduling constraints. The program director can provide scheduling assistance.

A limited number of graduate assistantships are available on a competitive basis to qualified students.

No foreign language or thesis is required in the program.

INFS 6610 may not be taken to satisfy either a required or elective course in the program.

Students without an undergraduate degree in information systems or demonstrable professional experience in the discipline are required to complete the additional prerequisites of INFS 3800 and 4790 (or 5790). INFS 5790 may be taken for credit toward the graduate degree. Students without formal training or experience in IT may be encouraged to take some additional INFS courses. A portion of these requirements may be satisfied in conjunction with the student's graduate studies.

Candidates must

1. file a degree plan with the College of Graduate Studies near beginning the program of study;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the candidate intends to graduate.

Information Systems, IT Project Management Concentration, M.S.

Jeff Clark, Program Director

(615) 898-2838

Jeff.Clark@mtsu.edu

The Computer Information Systems (CIS) department offers the Master of Science in Information Systems with concentrations in Information Security and Assurance, IT Project Management, and General Information Systems. Core and elective classes may also be combined to form a strong foundation in database-related topics. The department also offers courses for the Master of Business Administration degree and a minor in Information Systems for students seeking a master's degree other than the M.B.A.

The CIS graduate program director serves as advisor for students majoring in Information Systems. Prospective students are encouraged to contact the graduate program director or CIS department to discuss the program.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

To be admitted to the Master of Science in Information Systems program, a student must meet one of the following:

1. GPA x 200 + GMAT = 950 or Upper Division GPA x 200 + GMAT = 1,000.
2. International students must comply with the following provision: For undergraduate degrees from foreign institutions where a grade point average cannot be clearly established but where that work is thought to be equivalent to domestic grades of B or higher, admission eligibility may be determined by the GMAT score. A score of at least 450 is required for unconditional admission under such circumstances. Preparatory work taken in institutions with grading systems paralleling that of most United States institutions must conform to a B average.

Foundation Courses

The business prerequisites for a student seeking an M.S. in Information Systems are similar to those required for the M.B.A. and include:

- ACTG 3000 - Survey of Accounting for General Business (or ACTG 2110 and 2120);
- QM 6000 - Quantitative Methods Survey (or QM 2610 and 3620);
- One of FIN 3000 or 3010, MKT 3820, MGMT 6000 (MGMT 3610 or 3620), or ECON 6030 (ECON 2410 or 2420).

A recent graduate of an AACSB-accredited program would normally possess an adequate background in the business prerequisites.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official GMAT scores;
3. submit official transcripts showing a GPA in previous academic work.

Degree Requirements

The Master of Science in Information Systems with a concentration in IT Project Management requires completion of 30 semester hours. INFS 6980 must be passed with a grade of B- or higher with a maximum enrollment of two times. The degree is to be completed within six years from the time of admission to the degree program.

Curriculum: Information Systems, IT Project Management

Required Courses (12 hours)

- INFS 6710 - IT Systems Development Project Management **3 credit hours**
- INFS 6790 - Seminar in Database Management **3 credit hours**
- INFS 6980 - Information Systems Practicum **3 credit hours**
- QM 6770 - Computer-Based Decision Modeling **3 credit hours**

Concentration (9 hours)

- INFS 6500 - IT Project Management Planning and Implementation **3 credit hours**
- INFS 6510 - IT Project Risk Assessment and Control **3 credit hours**
- INFS 6520 - IT Project Management Case Studies **3 credit hours**

Electives (9 hours)

- Three hours of approved INFS courses at the 6000 level
- Six hours of approved INFS courses at the 5000 or 6000 level

Program Notes

No more than two (2) 5000-level classes may be taken as part of the degree program.

Students planning to graduate in the minimum amount of time, including summer attendance, should plan their programs carefully in order to meet course sequencing and scheduling constraints. The program director can provide scheduling assistance.

A limited number of graduate assistantships are available on a competitive basis to qualified students.

No foreign language or thesis is required in the program.

INFS 6610 may not be taken to satisfy either a required or elective course in the program.

Students electing Information Systems without an undergraduate degree in information systems or demonstrable professional experience in the discipline are required to complete the additional prerequisites of INFS 3800 and 4790 (or 5790). INFS 5790 may be taken for credit toward the graduate degree. Students without formal training or experience in IT may be encouraged to take some additional INFS courses. A portion of these requirements may be satisfied in conjunction with the student's graduate studies.

Candidate must

1. file a degree plan with the College of Graduate Studies near beginning the program of study;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Information Systems Minor

There are two patterns of minors from which a candidate may choose:

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

Computer Information Systems

INFS 5790 - Database Design and Development **3 credit hours**

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

INFS 5830 - Database Programming **3 credit hours**

Prerequisite: INFS 4790 or 5790 or consent of instructor. Operational database design and implementation. Includes the development of interfaces that enable end users to query the database contents and transform data into information. Requires each student to participate fully in a group project.

INFS 5840 - Study Abroad **3 credit hours**

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

INFS 5900 - Business Data Communications **3 credit hours**

Prerequisites: 6 hours of information systems. Current topics in the field of data communications.

INFS 6300 - IS Security: Management and Assurance **3 credit hours**

A comprehensive view of the managerial concepts for security and assurance, including strategic alignment of security initiatives with business objectives; risk assessment and management; design, development, and management of an information security program; the development and management of the response and recovery from disruptive and destructive information security events; and the fundamentals of information systems auditing, assurance, and governance.

INFS 6301 - IS Security: Preventing and Detecting Breaches

3 credit hours

Development and management of information systems security prevention and detection technologies and controls. Solutions required to protect and enhance the security of both wired and wireless technology infrastructures in organizations presented. Topics include threats to security, network analysis tools, intrusion prevention and detection systems, remote access, authentication, and encryption.

INFS 6302 - IS Security: Intrusion Analysis, Recovery, and Response

3 credit hours

Addresses the management of security issues facing organizations after a breach has occurred. Focuses on the analysis and recovery required in an organization following an attack to information systems applications and/or infrastructure. Specific topics include contingency planning, incident response planning, disaster recover, business continuity, crisis management, and forensics.

INFS 6500 - IT Project Management Planning and Implementation

3 credit hours

Planning and implementation issues such as project planning and selection, portfolio management, problem solving, communication, conflict resolution, change management, and leadership. Includes a substantial emphasis on organizational and people issues in project management.

INFS 6510 - IT Project Risk Assessment and Control

3 credit hours

Elements involved in identifying and mitigating IT project risks. Offers preparation to monitor project progress, identify and quantify the impact of risks, evaluate the degree to which a program is troubled, and apply appropriate decision strategies to problematic situations.

INFS 6520 - IT Project Management Case Studies **3 credit hours**

Integrates all areas of IT project management into a coherent analysis. Covers topics, situations, and problems using case study techniques. Includes the development of project management software skills.

INFS 6610 - Information Systems Management and Applications

3 credit hours

Focuses on the use of computing resources in managerial context. Students will develop an understanding of issues and implications of information resources and end-user computing as well as develop skills in application of these concepts in a problem-solving oriented microcomputer system environment. **NOT open to students with an undergraduate degree in Information Systems and not acceptable for the M.S. in Information Systems.**

INFS 6620 - Advanced Computer Applications for Business

3 credit hours

Advanced application development in an end-user computing environment. Opportunity to develop skills in building applications to support management activities in the information age. Includes database systems, electronic spreadsheets, and other appropriate application environments.

INFS 6710 - IT Systems Development Project Management

3 credit hours

Prerequisite: Previous coursework or experience in systems analysis. Practical explanation of the total systems concept and a knowledge of systems development. Addresses the entire development cycle including analysis, design, and implementation. Includes an emphasis on project management.

INFS 6720 - Knowledge Management

3 credit hours

Strategic value of knowledge as a critical organizational asset, design of effective knowledge management systems, and implementation of knowledge management programs for organizations operating in the highly competitive knowledge economy.

INFS 6750 - Global Strategic Information Systems

3 credit hours

Examines the managerial, operational, and strategic implications of information and communication technology in the global context. Particular emphasis on the strategic dimension.

INFS 6790 - Seminar in Database Management

3 credit hours

Prerequisite: Previous database coursework or

experience. Advanced topics in computer-related information systems as found in current literature and practical application. Advanced information structures and data management concepts applied in the design of computer-based information systems. Additional topics include data structures as applied to distributed processing systems, computer system component resource allocation, and data communication systems design. Significant computer application projects required.

INFS 6980 - Information Systems Practicum

3 credit hours

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

INFS 6990 - Independent Research in Information Systems

3 credit hours

Prerequisite: Consent of graduate program coordinator or department chair. Provides individual research, readings analysis, or projects in contemporary problems and issues in a concentrated area of study under the direction of an appropriate faculty member. Maximum credit applicable toward degree may not exceed six credits.

INFS 6991 - Independent Research in Information Systems

3 credit hours

Prerequisite: Consent of graduate program coordinator or department chair. Provides individual research, readings analysis, or projects in contemporary problems and issues in a concentrated area of study under the direction of an appropriate faculty member. Maximum credit applicable toward degree may not exceed six credits.

Quantitative Methods

QM 6000 - Quantitative Methods Survey

3 credit hours

Quantitative methodologies to assist in the decision-making process. Emphasis on applied statistics and decision sciences topics that are practical, useful, and of wide application for business analysis. **May not be**

used for elective credit in graduate business degree program.

**QM 6770 - Computer-Based Decision Modeling
3 credit hours**

Advanced techniques in quantitative methods. Modeling and optimization techniques. Computer applications emphasized.

**QM 6960 - Statistical Methodology and Analysis
3 credit hours**

Prerequisite: QM 3620 or QM 6000. Descriptive and inferential statistical concepts with the use of expert systems to assist in the selection of appropriate design and methodology. Usage of common packages for problem solution and analysis.

Economics and Finance

Sean Salter, Interim Chair

(615) 898-2520

Sean.Salter@mtsu.edu

The Department of Economics and Finance offers two degree programs: the Master of Arts (M.A.) with a major in Economics and the Doctor of Philosophy (Ph.D.) with a major in Economics. In the M.A. program, students are offered two curricular paths: general economics and Financial Economics. A minor in Economics is also offered at the graduate level.

Economics, Financial Economics Concentration, M.A.

Duane B. Graddy, Program Director

(615) 898-2525

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The mission of the graduate program in economics is to provide students with advanced studies in economic theory and research methodology. To accomplish its mission, the Department of Economics and Finance offers two degree programs: the Master of Arts (M.A.) with a major in Economics and the Doctor of Philosophy (Ph.D.) with a major in Economics.

The department's approach to these degree programs is global, interactive, and innovative. In the M.A. program, students are offered two curricular paths: general economics and Financial Economics. M.A. students in economics are offered preparation for careers in private business and public service. The focus of the M.A. program is on decision analysis and applied research. The focus of the concentration in Financial Economics is to provide the intellectual foundation and technical skills required of financial economists and analysts in private companies and public agencies.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Applicants are expected to possess a satisfactory score on the Graduate Record Examination (GRE).

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Record Examination (GRE);
3. submit official transcripts of previous college work.

Degree Requirements

The Master of Arts in Economics with a concentration in Financial Economics requires completion of a minimum of 30 semester hours (10 courses) if a thesis is written or a minimum of 33 semester hours (11 courses) if a thesis is not written. At least 24 hours (8 courses) must be in courses numbered exclusively as 6000-level graduate courses (other courses can be taken at the 5000 level). A minimum of 18 of these semester hours must be in economics and include ECON 6010, ECON 6020, ECON 6060, and ECON 6070.

Candidates must successfully complete a written comprehensive examination that may be taken no more than twice. For the major in Economics, the comprehensive examination covers the three core areas: macroeconomics, microeconomics, and econometrics.

Before taking the comprehensive examination, the student is expected to attend and actively participate in regularly scheduled departmental student/faculty workshops where research papers are presented and discussed by the participants.

Curriculum: Economics, Financial Economics

Students in the Financial Economics concentration may choose between the thesis option (30 hours) or non-thesis option (33 hours) in the following course of study:

Thesis Option (30 hours)

Core Courses (12 hours)

- ECON 6010 - Macroeconomics I **3 credit hours**
- ECON 6020 - Microeconomics I **3 credit hours**
- ECON 6060 - Econometrics I **3 credit hours**
- ECON 6070 - Econometrics II **3 credit hours**

Required Financial Economics Courses (12 hours)

- ECON 6460 - Equity Valuation **3 credit hours** OR
- FIN 6460 - Equity Valuations **3 credit hours**
- FIN 6710 - Financial Analysis **3 credit hours**
- ECON 6730 - Financial Institutions **3 credit hours** OR
- FIN 6730 - Financial Institutions **3 credit hours**
- FIN 6740 - Bond Market Analysis **3 credit hours**

Elective (3 hours)

Three hours of electives must be chosen from the following:

- ECON 6430 - Public Finance **3 credit hours** OR
- FIN 6430 - Public Finance **3 credit hours**
- ECON 6450 - Monetary Policy **3 credit hours** OR
- FIN 6450 - Monetary Policy **3 credit hours**
- ECON 5620 - Econometrics and Forecasting **3 credit hours**
- ECON 6000 - Managerial Economics **3 credit hours**
- ECON 6530 - International Economics I **3 credit hours**
- FIN 6720 - Cases in Financial Management **3 credit hours**
- FIN 6860 - International Financial Management **3 credit hours**

Thesis (3 hours)

- ECON 6640 - Thesis Research **1 to 6 credit hours (3 credit hours)**

Non-thesis Option (33 hours)

Core Courses (12 hours)

- ECON 6010 - Macroeconomics I **3 credit hours**
- ECON 6020 - Microeconomics I **3 credit hours**
- ECON 6060 - Econometrics I **3 credit hours**
- ECON 6070 - Econometrics II **3 credit hours**

Required Financial Economics Courses (12 hours)

- ECON 6460 - Equity Valuation **3 credit hours** OR
- FIN 6460 - Equity Valuations **3 credit hours**

- FIN 6710 - Financial Analysis **3 credit hours**
- ECON 6730 - Financial Institutions **3 credit hours** OR
- FIN 6730 - Financial Institutions **3 credit hours**
- FIN 6740 - Bond Market Analysis **3 credit hours**

Electives (9 hours)

Nine hours of electives must be chosen from the following:

- ECON 6430 - Public Finance **3 credit hours** OR
- FIN 6430 - Public Finance **3 credit hours**
- ECON 6450 - Monetary Policy **3 credit hours** OR
- FIN 6450 - Monetary Policy **3 credit hours**
- ECON 5620 - Econometrics and Forecasting **3 credit hours**
- ECON 6000 - Managerial Economics **3 credit hours**
- ECON 6530 - International Economics I **3 credit hours**
- FIN 6720 - Cases in Financial Management **3 credit hours**
- FIN 6860 - International Financial Management **3 credit hours**

Program Notes

Students may include a minor in their degree programs. A minor consists of a minimum of 12 semester hours of approved courses. Students not electing a minor may include a cognate area of up to 6 semester hours in their programs. Cognate areas can be formed from courses in accounting, agriculture, finance, geography, geology, history, insurance, management, political science, psychology, real estate, and sociology.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours (with the assistance of the M.A. advisor);
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Economics, M.A.

Duane B. Graddy, Program Director

(615) 898-2525

Duane.Graddy@mtsu.edu

The mission of the graduate program in economics is to provide students with advanced studies in economic theory and research methodology. To accomplish its mission, the Department of Economics and Finance offers two degree programs: the Master of Arts (M.A.) with a major in Economics and the Doctor of Philosophy (Ph.D.) with a major in Economics.

The department's approach to these degree programs is global, interactive, and innovative. In the M.A. program, students are offered two curricular paths: general economics and Financial Economics. M.A. students in economics are offered preparation for careers in private business and public service. The focus of the M.A. program is on decision analysis and applied research.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Applicants are expected to possess a satisfactory score on the Graduate Record Examination (GRE).

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Record Examination (GRE);
3. submit official transcripts of previous college work.

Degree Requirements

The Master of Arts in Economics requires completion of a minimum of 30 semester hours (10 courses) if a thesis is written or a minimum of 33 semester hours (11 courses) if a thesis is not written. At least 24 hours (8 courses) must be in courses numbered exclusively as 6000-level graduate courses (other courses can be taken at the 5000 level). A minimum of 18 of these semester hours must be in economics and include ECON 6010, ECON 6020, ECON 6060, and ECON 6070.

Candidates must successfully complete a written comprehensive examination that may be taken no more than twice. For the major in Economics, the comprehensive examination covers the three core areas: macroeconomics, microeconomics, and econometrics.

Before taking the comprehensive examination, the student is expected to attend and actively participate in regularly scheduled departmental student/faculty workshops where research papers are presented and discussed by the participants.

Curriculum: Economics (general)

Students may choose between a thesis and non-thesis option.

Thesis Option (30 hours)

Core Courses (12 hours)

- ECON 6010 - Macroeconomics I **3 credit hours**

- ECON 6020 - Microeconomics I **3 credit hours**
- ECON 6060 - Econometrics I **3 credit hours**
- ECON 6070 - Econometrics II **3 credit hours**

Electives (15 hours)

Students completing a thesis must take 15 hours of electives.

Thesis (3 hours)

- ECON 6640 - Thesis Research **1 to 6 credit hours (3 credit hours)**

Non-thesis Option (33 hours)

Core Courses (12 hours)

- ECON 6010 - Macroeconomics I **3 credit hours**
- ECON 6020 - Microeconomics I **3 credit hours**
- ECON 6060 - Econometrics I **3 credit hours**
- ECON 6070 - Econometrics II **3 credit hours**

Electives (21 hours)

Students choosing the non-thesis option must take 21 hours of electives.

Program Notes

Students may include a minor in their degree programs. A minor consists of a minimum of 12 semester hours of approved courses. Students not electing a minor may include a cognate area of up to 6 semester hours in their programs. Cognate areas can be formed from courses in accounting, agriculture, finance, geography, geology, history, insurance, management, political science, psychology, real estate, and sociology.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours (with the assistance of the M.A. advisor);
2. file a Notice of Intent to Graduate form with the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

Economics, Ph.D.

Duane B. Graddy, Program Director

(615) 898-2525

Duane.Graddy@mtsu.edu

The mission of the graduate program in economics is to provide students with advanced studies in economic theory and research methodology. To accomplish its mission, the Department of Economics and Finance offers two degree programs: the Master of Arts (M.A.) with a major in Economics and the Doctor of Philosophy (Ph.D.) with a major in Economics. The department's approach to these degree programs is global, interactive, and innovative.

In the M.A. program, students are offered two curricular paths: general economics and Financial Economics. M.A. students in economics are offered preparation for careers in private business and public service. The focus of the M.A. program is on decision analysis and applied research. Ph.D. students in economics are trained for careers in teaching and applied research. The Ph.D. provides students with the opportunity to combine advanced training in economics with educational pedagogy and research methodology.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

For admission to the doctoral program, candidates are expected to attain a GRE score of 302 (current scale) or 1100 (former scale) or better. Students entering the Ph.D. program in economics must hold a baccalaureate degree.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the General Record Examination (GRE);
3. submit official transcripts of all previous college work.

Degree Requirements

The Doctor of Philosophy in Economics requires students entering to complete a minimum of 64 semester hours, including a minimum of 51 hours of formal coursework, a one-credit hour economics workshop (two presentations), and 12 hours of dissertation research. Students entering with a master's degree in Economics may have up to 12 hours applied toward the 51 hours of formal coursework. Of the total 64 hours, at least 43 hours must be at the 7000 level.

Students must demonstrate competency in economic theory by passing the Qualifying Examination in microeconomics and macroeconomics at the end of the student's first year of study. Students must also complete coursework in a major field and a minor field. A field consists of a minimum of two doctoral-level (7000-level) courses. Students complete a research paper in their major field during the second summer after finishing the field coursework.

Candidates must successfully defend a dissertation prospectus and, upon approval by the candidate's dissertation committee, prepare a dissertation. The student is responsible for contacting a Ph.D. faculty member about becoming the chair of the student's dissertation committee. The chair will suggest other potential committee members.

After completion of the dissertation, the candidate is given an oral examination dealing with the structure and content of the dissertation. The candidate will be notified in writing of the committee's approval of the dissertation.

Curriculum: Economics

Candidate must complete 64 hours in the following course of study:

Required Core Courses (40 hours)

- ECON 6100 - Mathematical Methods for Economics **3 credit hours**
- ECON 7010 - Macroeconomics I **3 credit hours**
- ECON 7020 - Microeconomics I **3 credit hours**
- ECON 7030 - Macroeconomics II **3 credit hours**
- ECON 7040 - Microeconomics II **3 credit hours**
- ECON 7060 - Econometrics I **3 credit hours**
- ECON 7070 - Econometrics II **3 credit hours**
- ECON 7080 - Econometrics III **3 credit hours**
- ECON 7105 - Advanced Mathematical Methods for Economists **3 credit hours**
- ECON 7130 - Microeconomics III **3 credit hours**
- ECON 7500 - Economics Workshop **1 credit hours**
- ECON 7600 - Instructional Development and Practice in Economics **3 credit hours**
- ECON 7660 - History of Economic Thought **3 credit hours**
- ECON 7900 - Research Seminar **3 credit hours**

Fields of Study

Labor Economics (6 hours)

- ECON 7510 - Labor Economics I **3 credit hours**
- ECON 7520 - Labor Economics II **3 credit hours**

Industrial Organization (6 hours)

- ECON 7810 - Industrial Organization I **3 credit hours**
- ECON 7820 - Industrial Organization II **3 credit hours**

Dissertation Research (12 hours)

- ECON 7640 - Dissertation Research **1 to 6 credit hours**

Sample Course and Examination Schedule

The following sample schedule outlines the sequence of Ph.D. course requirements:

Summer Prior to Fall Year 1

- ECON 6100 - Mathematical Methods for Economics **3 credit hours**

Fall Semester-Year 1

- ECON 7105 - Advanced Mathematical Methods for Economists **3 credit hours**
- ECON 7010 - Macroeconomics I **3 credit hours**
- ECON 7020 - Microeconomics I **3 credit hours**
- ECON 7060 - Econometrics I **3 credit hours**

Spring Semester-Year 1

- ECON 7030 - Macroeconomics II **3 credit hours**
- ECON 7040 - Microeconomics II **3 credit hours**
- ECON 7070 - Econometrics II **3 credit hours**
- ECON 7660 - History of Economic Thought **3 credit hours**

Summer-Year 1

- ECON 7600 - Instructional Development and Practice in Economics **3 credit hours**
- ECON 7999 - Comprehensive Examination and Preparation **1 to 3 credit hours**
- Qualifying Exam-Macroeconomics
- Qualifying Exam-Microeconomics

Fall Semester-Year 2

- ECON 7080 - Econometrics III **3 credit hours**
- ECON 7510 - Labor Economics I **3 credit hours**
- ECON 7810 - Industrial Organization I **3 credit hours**

Spring Semester-Year 2

- ECON 7130 - Microeconomics III **3 credit hours**
- ECON 7520 - Labor Economics II **3 credit hours**
- ECON 7820 - Industrial Organization II **3 credit hours**

Summer-Year 2

- ECON 7640 - Dissertation Research **1 to 6 credit hours**
- Field Paper due by September 1st.

Fall Semester-Year 3

- ECON 7640 - Dissertation Research **1 to 6 credit hours**
- ECON 7900 - Research Seminar **3 credit hours**

Spring Semester-Year 3

- ECON 7500 - Economics Workshop **1 credit hours**
- ECON 7640 - Dissertation Research **1 to 6 credit hours**
- Dissertation Proposal

Summer-Year 3

- ECON 7640 - Dissertation Research **1 to 6 credit hours**

Fall Semester-Year 4

- ECON 7640 - Dissertation Research **1 to 6 credit hours**

Spring Semester-Year 4

- ECON 7640 - Dissertation Research **1 to 6 credit hours**
- Dissertation Defense

Program Notes

On matriculation, students will complete a degree plan. The Ph.D. advisor must approve the degree plan. In some cases, it may be possible to complete the program on a part-time basis, but the program is designed for full-time students.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours (in consultation with graduate advisor);
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

Economics Minor

There are two patterns of minors from which a candidate may choose:

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

Economics

ECON 5310 - Public Finance II

3 credit hours

(Same as FIN 5310.) Prerequisites: ECON 2410 and 2420. Current issues in taxation, theory of income taxation, consumption taxes, property and wealth taxes. Advanced treatment of tax incidence, tax efficiency, income distribution, fiscal federalism, and state and local budget issues. Students are required to complete a term project resulting in a paper available for peer review and a class presentation.

ECON 5390 - Employee Benefits

3 credit hours

(Same as FIN 5390.) Includes descriptive review and taxation, legislative, and administrative dimensions of the major components of employee benefit plans such as retirement systems, deferred compensation plans, health insurance, death benefits, disability benefits, paid and unpaid time off. Technical analysis and problem solving emphasized to develop applied skills. Social insurance and international benefits integrated.

ECON 5400 - Business and Government

3 credit hours

Structure, conduct, and performance of American industries; public policies toward business; economic analysis of these policies.

ECON 5420 - Labor and Human Resource

Economics

3 credit hours

Current issues and theories, returns to training and education (human capital), earnings differences; theoretical interpretation and empirical economic impacts of unions, government regulation, and international forces upon labor relations and labor markets; human resource information systems (spreadsheet applications) and integration of Internet information sources and forensic analysis.

ECON 5440 - International Economics

3 credit hours

Differences between domestic trade and international trade and foundations of international trade; economic effects of free trade and restricted trade; mechanisms of international payments and structure of balance of payments; history and contemporary issues of trade policies and world monetary systems.

ECON 5470 - Economic Development of the Third World

3 credit hours

Conditions and problems of the less developed countries; causes, processes, and consequences of economic development; introduction to basic growth models, development theories, and strategies for development. Economic as well as noneconomic factors studied.

ECON 5490 - Industrial Relations Legislation

3 credit hours

Effects of domestic and international legislation and regulation of governments on the practical functions of labor markets and employment relations in the public and private sectors. Specific dimensions include unions and other collective and collaborative institutions, workforce diversity, and the impacts of technology. Domestic and international electronic resources heavily integrated into learning experiences based on research and analysis.

ECON 5500 - Urban and Regional Economics

3 credit hours

Economic problems of urban communities, including problems resulting from population shifts to suburbia, urban planning, land utilization, revenue structures, urban renewal, transportation, problems of minority, and poverty groups.

ECON 5510 - Unions and Collective Bargaining

3 credit hours

Collective bargaining contract administration and alternative dispute resolution mechanisms. Information technology tools. Analytical focus on the impacts of total compensation agreements, strike strategies, and the interdependent influences of the union and non-union sectors of the economy. Practical cases emphasized. A brief international comparative survey of unions and other collective relationships included.

ECON 5620 - Econometrics and Forecasting

3 credit hours

Prerequisites: QM 2610 and MATH 1810 or equivalent. Application of mathematical and statistical techniques to economic problems. Introduces econometric model construction and estimation and related problems. Requires use of econometric computer package.

ECON 5840 - Study Abroad**3 credit hours**

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

ECON 5890 - Internship in Economics**1 to 3 credit hours**

Prerequisite: Graduate status and recommendation of advisor. Supervised work experience in cooperating business firms or government agencies together with specialized academic study relating to the work experience. Pass/Fail.

ECON 5990 - Independent Study in Economics**1 to 3 credit hours**

Problems for intensive study are chosen in joint consultation between student and instructor.

ECON 6000 - Managerial Economics**3 credit hours**

Prerequisites: ECON 2410 and 2420 or 4570 or equivalent. Primarily for M.B.A. students with particular attention given to business administration and finance topics including demand analysis, production and cost decisions, quantitative market analysis, capital budgeting, and alternative theories of the firm. Special emphasis on case studies, software applications, and interpretation of economic meanings of related analyses.

ECON 6010 - Macroeconomics I**3 credit hours**

Core course in macroeconomic theory for students pursuing an M.A. in Economics. First part focuses on long-run economic growth. Topics include exogenous and endogenous growth theory, overlapping generations models, and the neoclassical growth model. Second part focuses on short-run economic fluctuations. Topics include real business cycle theory, traditional Keynesian theories, and New Keynesian models featuring rational expectation. Mathematical models used to address competing theories; comfort with multivariate calculus and linear algebra essential.

ECON 6020 - Microeconomics I**3 credit hours**

Core course in microeconomic theory for students pursuing an M.A. in Economics. First part develops the theory of consumer choice with extensions including the labor supply model, intertemporal choice, and choice under uncertainty. Second part models theory of the firm in both perfectly competitive and monopoly industry settings. Mathematical models used to derive theories; comfort with multivariate calculus and linear algebra essential.

ECON 6030 - Survey of Economic Theory**3 credit hours**

Overview of micro- and macroeconomic principles with an emphasis on applications to decision making in a competitive market environment. May not be used for elective credit in graduate business degree programs.

ECON 6040 - Survey of Employment Relations**3 credit hours**

Survey of employment relations with emphasis on developing a general context, computational skills, and ability to conduct informed discourse on the content. Computational skills include simple time value and statistical analysis limited to calculator or spreadsheet applications. Students expected to demonstrate presentation skills utilizing different media. For current or aspiring professionals in employment relations who need to retool and/or need a course which, upon successful completion, will facilitate entry into the M.A. in Economics Industrial Relations concentration. Also a suitable elective for students in related fields of study.

ECON 6060 - Econometrics I**3 credit hours**

(Same as FIN 6060.) First core course in econometrics for students pursuing an M.A. in Economics. Focuses on ordinary least squares regression analysis, covering the problems of specification, multicollinearity, heteroskedasticity, autocorrelation, and endogeneity. SAS statistical software used as a tool for manipulating data, conducting forecasts, carrying out Monte Carlo simulations, and performing statistical inference.

ECON 6070 - Econometrics II**3 credit hours**

Second core course in econometrics for students pursuing an M.A. in Economics. Emphasizes methods of time series analysis, including Box-Jenkins

methods, general-to-specific modeling, volatility models, vector autoregressions, unit roots and cointegration, unobserved component and state space models, and neural networks. Integrates practical applications in various computing environments including SAS, RATS, and MATLAB.

ECON 6100 - Mathematical Methods for Economics

3 credit hours

Preparation for core courses in economics. Covers all essential mathematical methods including basic matrix algebra, exponential and logarithmic functions, the basics of differential calculus, unconstrained optimization, constrained optimization subject to equality and inequality constraints, comparative statics, and the Envelope theorem.

ECON 6200 - Economics of Education

3 credit hours

Prerequisite: ECON 6020 or permission of instructor. The role of education in creating human capital, the existence of externalities, the returns to education, the education "industry," and the issues surrounding education reform.

ECON 6390 - Social Insurance, Pensions, and Benefits

3 credit hours

Prerequisites: ECON 4390/ECON 5390 (or equivalent). An intensive survey of policy and practice in employee benefits, with an in-depth examination of pension plans. Covers an interdisciplinary mix of economics, accounting/finance, law, and regulation.

ECON 6400 - Health Economics

3 credit hours

Applications of microeconomics to analysis of the health care delivery system in the United States. Major issues include the private and public demand for health care, supply of health care, cost of health care, the pricing of health care, and the analysis of the various health care reform policies of the industry. Examines how economics can provide valuable insights into the above problems of social choice.

ECON 6430 - Public Finance

3 credit hours

(Same as FIN 6430.) Examines the role of government in the allocation and distribution of society's resources. Topics include theories of government sector growth, public and quasi-public goods, externalities and agency theory, transitivity

and completeness of voting preferences, income redistribution and economic justice, social insurance, health care programs, tax shifting and incidence analysis, efficiency and equity in taxation, and efficiency and redistributive aspects of deficit financing. Topics may involve case studies such as budget formulation, environmental policies, payroll taxes, and alternative tax structures.

ECON 6450 - Monetary Policy

3 credit hours

(Same as FIN 6450.) Prerequisite: ECON 3210 or equivalent recommended. Objectives and limitations of monetary policy, alternative monetary theories underlying policy decisions and the controversy among theories, transmission channels of monetary policy, alternative strategies used to achieve the objectives of monetary policy, practical considerations in the execution of monetary policy, global linkages and monetary policy, and the effects and consequences of policy decisions on economic activity and business decisions.

ECON 6460 - Equity Valuation

3 credit hours

(Same as FIN 6460.) Prerequisite: FIN 3010 or FIN 6000. Focuses on the pricing of equity securities using discounted cash flow, relative valuation, and the Black-Scholes real option valuation approaches in the top-down analysis framework. Focuses on analyzing the macroeconomic environment, forecasting short-term and long-term stock market trends, performing industry analysis, identifying the key value drivers for the industry and stocks, interpreting accounting and non-accounting information necessary for valuation, establishing assumptions for equity valuation models, applying valuation quantitative models in the stock research project, and presenting equity research in a professional manner.

ECON 6470 - Economic Growth and Development

3 credit hours

Prerequisites: ECON 2410 and 2420 and permission of instructor. Satisfies the M.B.A. international course requirement. Critical analysis of causes, processes, and consequences of economic development; evaluation of various policies and strategies for economic development; introduction to advanced growth models and theories. Special emphasis on the less developed countries.

ECON 6500 - Modern Issues in Labor and Industrial Relations

3 credit hours

A survey of labor market and employment relations issues evolving in our changing economic environment. Coverage includes the concepts of efficiency, equity, and ethics of market and institutional behavior and economic issues related to work force demographics and work place organization. Distinction drawn between cooperative and competitive models of economic organization and outcomes in the employer-employee relations environment. Internet labor market information sources and international comparisons incorporated.

ECON 6510 - Theory and Analysis in Labor Economics and Industrial Relations

3 credit hours

Prerequisite: ECON 4570 or ECON 6000 or 4420/ECON 5420 (or equivalent of either). Recommended prerequisites: Courses or equivalent experience involving financial computations, spreadsheet applications, and statistical software. Micro and macro theory of labor demand and supply and government policy implications, economic theory and measurement of human capital, returns to education, discrimination, income distribution, and impacts of international trade.

ECON 6520 - Special Media Projects

3 credit hours

Nontraditional learning experiences. Approval includes faculty and student written mutual agreement and conformance to departmental standards for independent study. Examples of special projects include production of CDs, DVDs, cable TV programming, Internet projects, internships that clearly add nonredundant learning experiences, or highly applied projects that demonstrate the integration of information technologies into mainstream business or other organization decision making.

ECON 6530 - International Economics I

3 credit hours

Prerequisite: ECON 5440 or equivalent background recommended. Advanced study of the key topics covered and introduction to other topics not covered in ECON 5440. Critical examination of major issues and evaluation of latest theories in international trade and monetary relations.

ECON 6540 - Japanese Society and Business

3 credit hours

(Same as SOC 6710.) Japanese economy, business practices, and social and physical environment in comparison with those in other countries, particularly the United States.

ECON 6550 - Studies in Economic Development: Pacific Asia

3 credit hours

Prerequisite: ECON 5470 or equivalent recommended. Analysis and evaluation of processes of economic development with focus on a specific area of the United States or of the world. Area covered varies.

ECON 6560 - Mergers and Acquisitions

3 credit hours

(Same as FIN 6560.) Issues covered include the reasons firms merge, buyer and seller motivations, the assessment of merger prospect value, merger waves and their consequences, the concentration of economic power resulting from mergers, policies toward mergers, the effects of takeover defenses, and the effects of mergers on the economy.

ECON 6570 - Industrial Organization and Strategy

3 credit hours

Prerequisites: ECON 6020 and ECON 6060 (or equivalent) or permission of the instructor. Historical overview of the development of industrial organization as a field, followed by intensive review of the recent theoretical and empirical literature on industry behavior and strategy. Behavior of firms in oligopoly markets emphasized. Topics include basic theory of non-cooperative games, welfare effects of non-competitive behavior, and antitrust and regulatory policy toward such behaviors.

ECON 6640 - Thesis Research

1 to 6 credit hours

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

ECON 6660 - History of Economic Thought

3 credit hours

Prerequisites: Graduate status and proficiency in reading and writing English. Examines the history of Western economics beginning with the ancient

Greeks, including the medieval scholastics, the early modern mercantilists, and selected thinkers from classical liberal economics, socialism, the historical and institutionalist schools of economics, neoclassical economics, and contemporary economics.

ECON 6730 - Financial Institutions

3 credit hours

(Same as FIN 6730.) Prerequisite: FIN 3010. Focus on the common and distinctive aspects of the provision of financial services and the management of risk associated with those services. Roles, characteristics, and operation of financial institutions, constraints that these institutions face in meeting that objective, regulatory environment within which they operate, risks that they face and the management of those risks, evolution experienced during the 1980s and 1990s, and the probable course of change in the years ahead.

ECON 6990 - Independent Study in Economics

1 to 3 credit hours

Independent study of a particular topic selected by the student and approved by the instructor. Provides an opportunity to study special areas of interest for which regular courses are not offered.

ECON 6999 - Comprehensive Examination and Preparation

1 to 3 credit hours

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

ECON 7010 - Macroeconomics I

3 credit hours

Prerequisite: ECON 6100. First-semester core course in macroeconomic theory for students pursuing the Ph.D. in Economics. Macroeconomic models are used to study topics related to the national economy. Topics include dynamic macroeconomics, the basic Solow model, savings in an overlapping generations model, infinitely lived agents, recursive deterministic models, recursive stochastic models, Hansen's real business cycle model, practical dynamic programming, impulse response functions, vector auto-regressions, and money.

ECON 7020 - Microeconomics I

3 credit hours

Prerequisite: ECON 6100. First-semester core course in microeconomic theory for students pursuing the Ph.D. in Economics. Microeconomic models are used to study topics related to the production of firms and consumer choice. Topics include profit maximization, cost minimization, utility maximization, choice and demand, consumer and producer surplus, uncertainty, competitive markets, and monopoly.

ECON 7030 - Macroeconomics II

3 credit hours

Prerequisites: ECON 6100 and ECON 7010. Second-semester core course in macroeconomic theory for students pursuing a Ph.D. in Economics. Focuses on modern intertemporal macroeconomics. Develops discrete-time dynamic optimization techniques and examines the role of fiscal and monetary policies in centralized and decentralized economics and their welfare implications. Reviews recent developments in economic growth theory and international macroeconomics. Focus is quantitative but developing intuition about macroeconomic dynamics stressed.

ECON 7040 - Microeconomics II

3 credit hours

Prerequisites: ECON 6100 and ECON 7020. Second-semester core course in microeconomic theory for students pursuing a Ph.D. in Economics. Examines oligopolies and pricing strategies with game theory, general equilibrium including the incorporation of public goods and externalities, and information economics with asymmetric information in principle-agent models. Mathematical models used to derive the theories; comfort with multivariate calculus and linear algebra essential.

ECON 7060 - Econometrics I

3 credit hours

Prerequisite: ECON 6100. First of three Ph.D.-level courses in econometrics, in which empirical models are used to address research questions. Topics include linear algebra, estimation, ordinary least squares, statistical inference, hypothesis testing, dummy variables, the linear statistical model, regression analysis, and non-linear models. Integrates practical applications in various computing environments, including SAS, STATA, RATS, and MATLAB.

ECON 7070 - Econometrics II**3 credit hours**

Prerequisites: ECON 6100 and ECON 7060. Second of three Ph.D.-level courses in econometrics, in which empirical models are used to address research questions. Topics include the methods of time series analysis, Box-Jenkins methods, general-to-specific modeling, volatility models, vector auto-regressions, unit roots, co-integration, unobserved components, state space models, and neural networks. Integrates practical applications in various computing environments, including SAS, STATA, RATS, and MATLAB.

ECON 7080 - Econometrics III**3 credit hours**

Prerequisites: ECON 7060, ECON 7070, and passed Ph.D. qualifying exams in microeconomics and macroeconomics. The third of three Ph.D.-level courses in econometrics, in which empirical models are used to address research questions. Emphasizes nonlinear estimation methodology for cross-section and panel data. Includes discussion of various qualitative and limited dependent variable models, including those for discrete responses, censored and truncated data, sample selection problems, treatment effects, and duration analysis. Incorporates practical applications in SAS, STATA, and other computing environments.

ECON 7105 - Advanced Mathematical Methods for Economists**3 credit hours**

Prerequisite: ECON 6100 or equivalent as determined by instructor. Covers methods of dynamic optimization including calculus of variations, optimal control, and dynamic programming and the mathematical prerequisites of these methods such as integration, difference and differential equations, and advanced matrix algebra. Covers basics of mathematical statistics. Computer applications emphasized.

ECON 7130 - Microeconomics III**3 credit hours**

Prerequisite: ECON 7040. Third semester course in microeconomic theory for students pursuing a Ph.D. in economics. Advanced methods used in practical applications in microeconomics. Topics include set theory approach to cost and production with an emphasis on measurement methods for productivity and efficiency, multifactor productivity and index numbers, and applications of game theory to issues in law and economics, political economy, and finance.

Familiarity with calculus, linear algebra, and game theoretic analysis of basic strategies in oligopoly expected.

ECON 7200 - Economics of Education**3 credit hours**

Prerequisite: ECON 7020 or permission of instructor. The role of education in creating human capital, the existence of externalities, the returns to education, the education industry, and the issues surrounding education reform.

ECON 7250 - Methods of Outcome Assessment**3 credit hours**

Prerequisites: ECON 7040 and ECON 7080. Deals with outcomes assessment of the educational process. Covers techniques to rank educational institutions, methods to assess the effectiveness of educational programs, ways to evaluate individual courses or instructors, and methods to assess student learning. Key quantitative tools that are used in outcomes assessment, including data envelope analysis, stochastic frontier models, and hierarchical linear models. Also considers the political and incentive problems that typically arise in implementing assessment methods in practice.

ECON 7390 - Social Insurance, Pensions, and Benefits**3 credit hours**

Prerequisites: ECON 4390/ECON 5390 (or equivalent). An intensive survey of policy and practice in employee benefits, with an in-depth examination of pension plans. Covers an interdisciplinary mix of economics, accounting/finance, law, and regulation.

ECON 7460 - Financial Markets**3 credit hours**

(Same as FIN 6460/FIN 7460.) Prerequisite: FIN 3000 or 3010 or FIN 6000 or equivalent. Credit flows within the U.S. and the global economies, the economic and financial forces influencing the general level of interest rates and the relationship among interest rates, the characteristics of key short- and long-term financial assets, new financial instruments, derivative instruments, global financing linkages, global linkages among financial instruments and among national economies, and interest rate risk, including the measurement and means of protection.

ECON 7470 - Seminar in Economic Growth and Development

3 credit hours

Prerequisites: ECON 2410 and 2420 and permission of instructor. Satisfies the M.B.A. international course requirement. Critical analysis of causes, processes, and consequences of economic development; evaluation of various policies and strategies for economic development; introduction to advanced growth models and theories. Special emphasis on the less developed countries.

ECON 7500 - Economics Workshop

1 credit hours

Students present material related to their dissertation proposals or ongoing dissertation research to peers and the graduate faculty in a formal workshop setting. Credit is awarded after a student completes two separate workshop presentations that are judged satisfactory by the attending graduate faculty.

ECON 7510 - Labor Economics I

3 credit hours

Prerequisite: Student must have passed Ph.D. qualifying exams in microeconomics and macroeconomics. Serves as the first half of an introduction to labor economics in the areas of human capital formation, wage determination, labor market mobility and job search, changes in wage structure, youth behavior and outcomes, shifts in labor demand, compensating wage differentials, and discrimination. Focus is to introduce students to current economic research methods and modern econometric techniques in preparation for conducting independent research.

ECON 7520 - Labor Economics II

3 credit hours

Prerequisite: Student must have passed Ph.D. qualifying exams in microeconomics and macroeconomics. Serves as the second half to an introduction of the leading theories in labor economics. Focuses on the most current published research techniques as found in top general interest and labor field journals. The nature of the course dictates that a wide range of topics be covered and that content changes. Past topics have included unemployment and inflation, employment allocation and job loss, technological progress, globalization, inequalities, labor market policies, youth behavior and outcomes, health, and labor supply decisions. Frequent use of multivariate regression analysis and other modern econometric techniques allows students

to enhance skills necessary to conduct independent research in the field.

ECON 7530 - International Economics I

3 credit hours

Prerequisite: ECON 5440 or equivalent background recommended. Advanced study of the key topics covered and introduction to other topics not covered in ECON 5440. Critical examination of major issues and evaluation of latest theories in international trade and monetary relations.

ECON 7550 - International Economics II

3 credit hours

Prerequisites: ECON 6530, ECON 7040, and ECON 7080. Applications-oriented course emphasizing quantitative tools to analyze policy issues related to international trade, exchange rates, sectoral resource allocation, and growth. Topics include an extended introduction to trade policy analysis using a general equilibrium modeling framework. Practical aspects of general equilibrium modeling emphasized and applied to a particular issue of interest, such as the impact of trade liberalization on labor markets and growth or the impact of trade and exchange rate distortions on resource allocation and growth.

ECON 7570 - Industrial Organization and Strategy

3 credit hours

Prerequisites: ECON 7020 and ECON 7060 (or equivalent) or permission of the instructor. Historical overview of the development of industrial organization as a field, followed by intensive review of the recent theoretical and empirical literature on industry behavior and strategy. Behavior of firms in oligopoly markets emphasized. Topics include basic theory of non-cooperative games, welfare effects of non-competitive behavior, and antitrust and regulatory policy toward such behaviors.

ECON 7600 - Instructional Development and Practice in Economics

3 credit hours

Prerequisite: Student must have passed Ph.D. qualifying exams in microeconomics and macroeconomics. Workshop environment where students present key economic concepts, use new technology, organize and structure courses and individual classes, use assessment tools, and deal with conflict in the classroom. Offers preparation to teach undergraduate classes in economics.

ECON 7610 - Economic Internship**3 credit hours**

Prerequisites: FOED 7520 and SPSE 7550.
Supervised teaching of undergraduate economics courses.

ECON 7640 - Dissertation Research**1 to 6 credit hours**

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

ECON 7660 - History of Economic Thought**3 credit hours**

Prerequisites: Graduate status and proficiency in reading and writing English. Examines the history of Western economics beginning with the ancient Greeks, including the medieval scholastics, the early modern mercantilists, and selected thinkers from classical liberal economics, socialism, the historical and institutionalist schools of economics, neoclassical economics, and contemporary economics.

ECON 7710 - Monetary Economics I**3 credit hours**

Prerequisite: Student must have passed Ph.D. qualifying exams in microeconomics and macroeconomics. Provides an integrated treatment of a variety of dynamic optimization and dynamic equilibrium models and examines their empirical implications for individual choices and, in particular, savings and asset prices. Three frameworks studied: infinitely lived representative agent models, heterogenous agent models, and representative and heterogenous agent models with financial frictions. Advanced numerical solution methods and panel data estimation techniques also incorporated.

ECON 7720 - Monetary Economics II**3 credit hours**

Prerequisite: Student must have passed Ph.D. qualifying exams in microeconomics and macroeconomics. Introduction to leading theories in monetary economics including measurement of the empirical impact of monetary shocks on real activity, money in the utility function and cash-in-advance models, and New Keynesian models featuring sluggish price and wage adjustment. Emphasis on the analysis of interest rate rules and the conduct of optimal monetary policy under commitment and

discretion. Frequent use of numerical dynamic programming and empirical estimation of monetary models allows students to enhance skills necessary to conduct independent research in the field.

ECON 7810 - Industrial Organization I**3 credit hours**

Prerequisite: Must have passed Ph.D. qualifying exams in microeconomics and macroeconomics. Serves as the first half of the graduate sequence in industrial organization, in which microeconomic models are used to study topics related to firm strategy and market structure. Emphasis on preparing students to conduct their own research, introduces students to current methods and techniques in a variety of research areas within the field of industrial organization.

ECON 7820 - Industrial Organization II**3 credit hours**

Prerequisite: Must have passed Ph.D. qualifying exams in microeconomics and macroeconomics. Serves as the second half of the graduate sequence in industrial organization, in which microeconomic models are used to study topics related to firm strategy and market structure. Aim is to improve students' economic modeling and econometric skills in order to prepare them to conduct independent research. Students will make extensive use of statistical software packages such as MATLAB and STATA.

ECON 7900 - Research Seminar**3 credit hours**

Prerequisites: ECON 7630 ; student must have passed Ph.D. qualifying exams in microeconomics and macroeconomics. Students practice writing academic papers, critiques, and monographs in economics and finance with some emphasis on developing a viable dissertation proposal. Incorporates a detailed discussion of essential steps in the publication process such as identifying a topic, fitting it into the literature, developing a theoretical background, preparing the data, choosing an appropriate methodology, and presenting the results, as well as pitfalls to avoid in working on dissertations and academic papers.

ECON 7999 - Comprehensive Examination and Preparation**1 to 3 credit hours**

Open only to students who are not enrolled in any other graduate course and who will take the master's

comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

Finance

FIN 5310 - Public Finance II

3 credit hours

(Same as ECON 5310.) Prerequisites: ECON 2410 and 2420. Current issues in taxation, theory of income taxation, consumption taxes, property and wealth taxes. Advanced treatment of tax incidence, tax efficiency, income distribution, fiscal federalism, and state and local budget issues. Students are required to complete a term project resulting in a paper available for peer review and a class presentation.

FIN 5360 - Management of Financial Institutions

3 credit hours

Prerequisite: FIN 3210 or equivalent or consent of instructor. Application of principles of institution management with a focus on operations, policy making, asset, liability, and capital management of commercial banks and nonbank financial institutions.

FIN 5390 - Employee Benefits

3 credit hours

(Same as ECON 5390.) Includes descriptive review and taxation, legislative, and administrative dimensions of the major components of employee benefit plans such as retirement systems, deferred compensation plans, health insurance, death benefits, disability benefits, paid and unpaid time off. Technical analysis and problem solving emphasized to develop applied skills. Social insurance and international benefits integrated.

FIN 5430 - Real Property Valuation

3 credit hours

Prerequisite: FIN 2450 or consent of instructor; FIN 3010 strongly recommended. Theory and methods of real property valuation. Qualitative and quantitative analysis incorporated to appraise residential and income-producing properties. Comparable sales, cost-depreciation, and income capitalization analysis emphasized.

FIN 5590 - Independent Study in Real Estate

3 credit hours

Current controversial conditions in the field of real

estate with concentration on major problems and policies in managing real estate and other related resources.

FIN 5710 - Insurance in Estate Planning

3 credit hours

Prerequisite: FIN 3610 or permission of instructor.

Insurance as it may relate to estate planning examined in detail. Focus on estate planning principles including the problems of estate liquidity, taxation, governmental regulation, and costs involved in handling estates. Also included are ownership provisions and beneficiary designations, settlement options, and trusts.

FIN 5730 - Insurance Company Operations

3 credit hours

Prerequisite: FIN 3610 or permission of instructor.

Insurance marketing, underwriting, reinsurance, rate making, claims adjusting, loss control activities, and other functions and activities.

FIN 5750 - Risk Management

3 credit hours

Prerequisite: FIN 3610 or permission of instructor.

Analysis of major sources of liability loss exposures and the insurance coverages designed to meet those exposures. Noninsurance techniques such as loss control and risk transfer are also discussed.

FIN 5790 - Independent Study in Insurance

3 credit hours

Prerequisite: FIN 3610 or permission of instructor.

Application of various insurance coverages to fulfillment of personal, business, and social needs. Special problems are chosen or assigned in areas of the student's interest in joint consultation between student and instructor.

FIN 5840 - Study Abroad

3 credit hours

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

FIN 5890 - Internship in Finance**3 credit hours**

Prerequisite: Graduate status and recommendation of advisor. Supervised work experience in cooperating business firms or government agencies together with specialized academic study relating to the work experience. Pass/Fail.

FIN 5900 - TVA Investment Challenge**3 credit hours**

Theories and concepts related to investing, security analysis, and portfolio management will be put to the test in the management of a real portfolio of stocks. TVA investment guidelines, portfolio management strategies, stock selection, investment gurus, individual investment styles, data sources and Internet sites, stock-screening techniques, and portfolio rebalancing.

FIN 5990 - Independent Study in Finance**1 to 3 credit hours**

Chosen in joint consultation between student and instructor.

FIN 6000 - Survey of Financial Management**3 credit hours**

Principles and tools of financial management including time value of money, security valuation, funds acquisition and capital budgeting, and cost of capital. May not be used for elective credit in graduate business degree programs.

FIN 6060 - Econometrics I**3 credit hours**

(Same as ECON 6060.) First core course in econometrics for students pursuing an M.A. in Economics. Focuses on ordinary least squares regression analysis, covering the problems of specification, multicollinearity, heteroskedasticity, autocorrelation, and endogeneity. SAS statistical software used as a tool for manipulating data, conducting forecasts, carrying out Monte Carlo simulations, and performing statistical inference.

FIN 6430 - Public Finance**3 credit hours**

(Same as ECON 6430.) Examines the role of government in the allocation and distribution of society's resources. Topics include theories of government sector growth, public and quasi-public goods, externalities and agency theory, transitivity and completeness of voting preferences, income redistribution and economic justice, social insurance,

health care programs, tax shifting and incidence analysis, efficiency and equity in taxation, and efficiency and redistributive aspects of deficit financing. Topics may involve case studies such as budget formulation, environmental policies, payroll taxes, and alternative tax structures.

FIN 6450 - Monetary Policy**3 credit hours**

(Same as ECON 6450.) Prerequisite: ECON 3210 or equivalent recommended. Objectives and limitations of monetary policy, alternative monetary theories underlying policy decisions and the controversy among theories, transmission channels of monetary policy, alternative strategies used to achieve the objectives of monetary policy, practical considerations in the execution of monetary policy, global linkages and monetary policy, and the effects and consequences of policy decision on economic activity and business decisions.

FIN 6460 - Equity Valuations**3 credit hours**

(Same as ECON 6460.) Prerequisite: FIN 3010 or FIN 6000. Focuses on the pricing of equity securities using discounted cash flow, relative valuation, and the Black-Scholes real option valuation approaches in the top-down analysis framework. Focuses on analyzing the macroeconomic environment, forecasting short-term and long-term stock market trends, performing industry analysis, identifying the key value drivers for the industry and stocks, interpreting accounting and non-accounting information necessary for valuation, establishing assumptions for equity valuation models, applying valuation quantitative models in the stock research project, and presenting equity research in a professional manner.

FIN 6550 - Real Estate Investment**3 credit hours**

Prerequisite: FIN 3010 or equivalent (e.g., FIN 6000). Development of a framework for making real estate investment decisions and for analyzing real estate investment alternatives.

FIN 6560 - Mergers and Acquisitions**3 credit hours**

(Same as ECON 6560.) Issues covered include the reasons firms merge, buyer and seller motivations, the assessment of merger prospect value, merger waves and their consequences, the concentration of economic power resulting from mergers, policies

toward mergers, the effects of takeover defenses, and the effects of mergers on the economy.

FIN 6710 - Financial Analysis

3 credit hours

Prerequisite: FIN 3010 or FIN 6000. Theory of corporate finance with applications. Techniques and problems for maximizing wealth through the application of discounted cash flow analysis. Emphasis on risk, capital budgeting, and capital structure.

FIN 6720 - Cases in Financial Management

3 credit hours

Prerequisite: FIN 6710. Applications-oriented approach to managerial problem-solving. Topics may include working capital management, capital budgeting, cost of capital estimation, lease/purchase decisions, bond refunding, and international issues.

FIN 6730 - Financial Institutions

3 credit hours

(Same as ECON 6730.) Prerequisite: FIN 3010. Focus on the common and the distinctive aspects of the provision of financial services and the management of risk associated with those services. Roles, characteristics, and operation of financial institutions, constraints that these institutions face in meeting that objective, regulatory environment within which they operate, risks they face and the management of those risks, evolution experienced during the 1980s and 1990s, and the probable course of change in the years ahead.

FIN 6740 - Bond Market Analysis

3 credit hours

Prerequisite: FIN 3810 or FIN 6000. Analyzes fixed income securities. Uncovers innovations in bond markets, preparing students for careers in bond markets. Demonstrates active portfolio management and the analysis of yield spread trades in cash and futures markets. Approximates bond price using duration and convexity. Bonds with imbedded options, such as collateralized mortgage obligations, floaters and inverse floaters, and other derivatives, are financially engineered from the underlying fixed income securities.

FIN 6750 - Advanced Corporate Finance

3 credit hours

Prerequisite: FIN 6710 or consent of instructor. Topics include ethical decision making, advanced risk analysis, advanced project analysis, advanced capital

structure concepts, valuation techniques, and cash flow analysis.

FIN 6760 - Derivatives Valuations

3 credit hours

Prerequisite: FIN 4910, senior Finance major/minor, or M.B.A. Explores and analyzes the key issues associated with theory and practice of derivatives instruments. Includes advanced topics dealing with pricing, risk management, and structuring of global derivatives products such as options, forwards, futures, swaps, caps, collars, and swaptions in the equity, foreign exchange, commodities, and interest-rate markets.

FIN 6770 - Modern Applications in Finance

3 credit hours

Prerequisites: Admission to the Master of Science in Finance program. Includes mathematical, programming, and statistical tools used in the real-world analysis and modeling of financial data; applies these tools to model asset prices and returns, to measure risk, and to construct optimized portfolios. Examines real-world problems faced by investment advisors, consultants, and investors in putting finance theory into practice.

FIN 6780 - Portfolio Analysis

3 credit hours

Prerequisites: FIN 6460 and FIN 6740. Focuses on both theoretical and practical aspects of investment analysis, security selection, and portfolio management. Topics include asset allocation, investment policy statement, mean variance optimization, contemporary asset pricing theories, equity and fixed-income portfolio strategies, managing interest rate risk and credit risk, using derivatives in portfolio management, and alternative investment.

FIN 6860 - International Financial Management

3 credit hours

Prerequisite: FIN 3010 or FIN 6000. International capital markets, exchange rate exposure, risk management, and other multinational finance issues. Essential not only for United States exporters, but also for those facing competition from abroad.

FIN 6990 - Independent Study in Finance

1 to 3 credit hours

Independent readings-based study of a particular topic in finance selected by the student and approved by the instructor. Provides an opportunity to study

special areas of interest for which regular courses are not offered.

FIN 6999 - Comprehensive Examination and Preparation

1 credit hours

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

FIN 7460 - Financial Markets

3 credit hours

(Same as ECON 6460.) Prerequisite: ECON 3210 or equivalent. Credit flows within the U.S. and the global economies, the economic and financial forces influencing the general level of interest rates and the relationship among interest rates, the characteristics of key short- and long-term financial assets, new financial instruments, derivative instruments, global financing linkages, global linkages among financial instruments and among national economies, and interest rate risk, including the measurement and means of protection.

Management and Marketing

Jill Austin, Chair

(615) 898-2736

www.mtsu.edu/mgmtmkt/

The Department of Management and Marketing offers a Master of Science degree in Management with concentrations in Not-for-Profit Management, Organizational Leadership, and Supply Chain Management. The department also offers courses in management and marketing in the Master of Business Administration degree. A graduate certificate in Health Care Management is also offered.

Business Administration, Concrete Industry Management Concentration, M.B.A.

S. Kim Sokoya, MBA Program Director
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Ayaz Ahmed, CIM Program Director
(615) 898-5715
Ayaz.Ahmed@mtsu.edu

The University offers a Master of Business Administration with a concentration in Concrete Industry Management degree which requires courses in accounting, economics, finance, information systems, management, marketing, and concrete industry management.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Applicants to the M.B.A. program must submit official transcripts of all previous college work. In addition to transcripts, applicants to the CIM concentration are also required to submit a current resume, a statement of purpose outlining career objectives, and three letters of recommendation addressing the qualification for advanced study in business and concrete industry management. Applicants may also be required to participate in an interview.

Admission to the Concrete Industry Management (CIM) concentration is limited to persons with significant experience in business in general and the concrete industry specifically. As such, the Graduate Management Admission Test (GMAT) will not be required of persons applying to this concentration. Admission is determined after a full review of all application materials and is not automatic for persons meeting the minimum required for admission to the M.B.A. In addition to the requirements outlined above, international applications must submit proof of English language proficiency that meets the University requirement.

Once admitted, all students in the Concrete Industry Management concentration will complete a series of prerequisite courses designed to assure an appropriate foundation for advanced study in business.

Degree Requirements

The Concrete Industry Management concentration is a limited enrollment, cohort degree program. In addition to meeting University requirements, all students must complete the coursework as part of their cohort.

Curriculum: Business Administration, Concrete Industry Management

Candidate must complete 36 hours in the following course of study:

Core Courses (27 hours)

- ECON 6000 - Managerial Economics **3 credit hours**
- MGMT 6600 - Organization Behavior **3 credit hours**
- MGMT 6650 - Operations Management **3 credit hours**
- ACTG 6920 - Financial Statement Analysis **3 credit hours**
- INFS 6610 - Information Systems Management and Applications **3 credit hours**
- FIN 6710 - Financial Analysis **3 credit hours**
- MKT 6800 - Marketing Management **3 credit hours**
- QM 6770 - Computer-Based Decision Modeling **3 credit hours**
- BUAD 6980 - Strategic Management **3 credit hours**

Concentration Courses (9 hours)

- MGMT 6730 - International Supply Chain Management **3 credit hours**
- CIM 6000 - Concrete Construction Sustainability **3 credit hours**
- CIM 6010 - Troubleshooting Concrete Construction **3 credit hours**

Program Notes

Students must meet the expectations of the University regarding adequate progress toward the degree. Specifically

1. students are expected to maintain a 3.00 grade point average for all graduate coursework;
2. students will complete and submit an Advancement to Candidacy form prior to the first term of their program of study;
3. students are expected to consistently enroll in and complete coursework in their area of study, making continuous progress as part of their cohort, toward attainment of the degree.

Business Administration, M.B.A.

S. Kim Sokoya, Program Director

(615) 898-2964

Kim.Sokoya@mtsu.edu

The University offers a Master of Business Administration degree which requires courses in accounting, economics, finance, information systems, management, and marketing.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

To be admitted to the M.B.A. program, a student must meet one of the following:

1. GPA x 200 + GMAT = 950* or Upper Division GPA x 200 + GMAT = 1,000*
2. International students must comply with the following provision: For undergraduate degrees from foreign institutions where a grade point average cannot be clearly established, but where that work is thought to be equivalent to domestic grades of **B** or higher, admission eligibility may be determined by the **GMAT** score. A score of at least 450 is required for unconditional admission under such circumstances. Preparatory work taken in institutions with grading systems paralleling that of most United States institutions must conform to a **B** average.

***A minimum GMAT score of 400 is required.**

Required Foundation Courses (9 hours)*

Students in the M.B. A. program are expected to have completed the following foundation courses (or equivalents) before enrolling in core courses.

- ACTG 3000 Survey of Accounting for General Business
- FIN 3010 Business Finance OR FIN 3000 Principles of Financial Management
- QM 6000 - Quantitative Methods Survey

Students are expected to begin each M.B.A. core course with appropriate baseline knowledge. This knowledge may be acquired through undergraduate or graduate coursework or by completing activities listed at the College of Business M.B.A. website (www.mtsu.edu/business/gradpro.php). Students will be assumed to have mastered the material at the site at the beginning of the related core course. Failure to prepare is the sole responsibility of the student. Appropriate undergraduate courses include BLAW 3400, ECON 2410 and ECON 2420, INFS 3100, MGMT 3610 and MGMT 3620, and MKT 3820.

In addition to the above, it is desirable that all students in the Jennings A. Jones College of Business be proficient in keyboarding and basic computer skills. Students should develop these proficiencies prior to taking Jennings A. Jones College of Business courses in which these skills are typically used. Basic computer skill may be developed by taking INFS 2200, Introduction to Microcomputing.

****Some or all of these courses may be waived by the associate dean for Graduate and Executive Education based upon an analysis of previous courses completed.***

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Deadlines for completed applications: Fall - July 1; Spring - December 1; Summer - April 1. Completed application packages received after the deadline will be evaluated based on the date received.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the GMAT examination;
3. submit official transcripts of all previous college work.

Degree Requirements

The Master of Business Administration follows a program that stresses interrelationships between functional business areas and that requires a total of 36 semester hours, at least 30 of which must be at the 6000 level.

BUAD 6980 Strategic Management is taken in lieu of a comprehensive written examination for the M.B.A. This course should be taken during the student's last semester and after completing the following courses:

ACTG 6910 or ACTG 6920, INFS 6610, QM 6770, ECON 6000, FIN 6710, MGMT 6600 and MGMT 6650, and MKT 6800 or the equivalent.

Curriculum: Business Administration

Candidate must complete 36 hours in the following course of study:

Core Courses (27 hours)

- ACTG 6910 - Accounting and Business Decisions **3 credit hours** * OR
 - ACTG 6920 - Financial Statement Analysis **3 credit hours** *
 - ECON 6000 - Managerial Economics **3 credit hours**
 - FIN 6710 - Financial Analysis **3 credit hours**
 - INFS 6610 - Information Systems Management and Applications **3 credit hours** **
 - MGMT 6600 - Organization Behavior **3 credit hours**
 - MGMT 6650 - Operations Management **3 credit hours**
 - MKT 6800 - Marketing Management **3 credit hours**
 - QM 6770 - Computer-Based Decision Modeling **3 credit hours**
 - BUAD 6980 - Strategic Management **3 credit hours** (*taken in the last semester only*)
- *Undergraduate Accounting majors may not take either ACTG 6910 or 6920, but should take another 6000-level accounting course.*
- **Undergraduate CIS majors may not take INFS 6610, but should take another 6000-level INFS course.*

Elective Cognate (6 hours)

Choose 6 hours from approved electives in same field.

Approved Elective (3 hours)

Course taken to satisfy this elective requires prior approval of the associate dean for Graduate and Executive Education.

(Requests to use an independent study course to satisfy this elective must be accompanied by a research proposal that has been approved by the supervising faculty member, appropriate department chair, and associate dean for Graduate and Executive Education.)

Program Notes

Core courses may not be satisfied by independent study.

A degree plan will be prepared when an applicant is approved for admission to the graduate business program and submitted to the College of Graduate Studies prior to the completion of 21 credit hours.

A student who has had substantial undergraduate instruction in accounting, economics, finance, information systems, management, or marketing may be required, as determined by the director, to take an alternate 6000-level course in the same area of instruction in lieu of the required graduate course.

Candidate must file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Management, Not-for-Profit Management Concentration, M.S.

Dan Morrell, Program Director

(615) 494-7758

Dan.Morrell@mtsu.edu

The Department of Management and Marketing offers the Master of Science in Management program with three concentrations: Not-for-Profit Management, Organizational Leadership, and Supply Chain Management. The Master of Science in Management enhances students' planning, communication, and ethical decision-making skills and exposes them to real world experiences that help them mature as managers. The Management M.S. program allows students to develop the skills to be promoted into higher levels of management at different types of organizations. Graduates of this program may work in a variety of positions, including mid-to upper-level management positions in corporate offices, healthcare facilities, distribution or logistics centers, manufacturing facilities, not-for-profit organizations, state or local government, and service industries such as banking, insurance, and real-estate. Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

To be admitted to the Master of Science in Management program, applicants should have

1. minimum undergraduate GPA of 2.75 on a 4.0 scale,
2. satisfactory scores on the GMAT or GRE, and
3. two years of professional experience.

Applicants without related previous experience or academic preparation may be required to complete the following prerequisite courses: MGMT 6000 (or MGMT 3610 and MGMT 3620) and ACTG 3000 (or ACTG 6000 and ACTG 6100).

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Management Admissions Test (GMAT) or the Graduate Record Examination (GRE);
3. submit official transcripts of all previous college work;
4. submit a current resume' or curriculum vita showing two years of applicable professional experience.

Degree Requirements

The Master of Science in Management with a concentration in Not-for-Profit Management requires completion of 33 credit hours.

Candidate must

1. complete a minimum of 33 semester hours as listed below. No more than 30 percent of the total degree hours dual-listed as undergraduate/graduate hours can be counted toward the degree;
2. successfully complete an applied project (MGMT 6790) in the last semester.

Curriculum: Management, Not-for-Profit Management

The Not-for-Profit Management concentration provides students with business and management skills that can be applied to not-for-profit managerial work. In addition to 12 hours of core management courses, the concentration requires 12 hours of courses in not-for-profit management, promotional strategy, and leadership and motivation. Students also elect 6 hours of courses in a professional area that relates to their career interests, or they may select 6 hours of business electives that apply to not-for-profit work.

Core Courses (15 hours)

- MGMT 6100 - Strategic Decision Making **3 credit hours**
- MGMT 6200 - Lean Project Management Principles **3 credit hours**
- MGMT 6680 - Seminar in Human Resources Management **3 credit hours**
- MGMT 6750 - Business Ethics **3 credit hours**
- MGMT 6790 - Independent Research in Management **3 credit hours**

Required Courses (12 hours)

- MGMT 6300 - Not-for-Profit Management and Governance **3 credit hours**
- MGMT 6400 - Current Issues in Not-for-Profit Management **3 credit hours**
- MGMT 6740 - Leadership and Motivation **3 credit hours**
- MKT 6810 - Promotional Strategy **3 credit hours**

Career Electives (6 hours)

In consultation with their advisors, students will select and complete 6 hours of courses in a professional area that relates to their career interests, or they may select and complete 6 hours of business electives that apply to not-for-profit work.

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Management, Organizational Leadership Concentration, M.S.

Dan Morrell, Program Director

(615) 494-7758

Dan.Morrell@mtsu.edu

The Department of Management and Marketing offers the Master of Science in Management program with three concentrations: Not-for-Profit Management, Organizational Leadership, and Supply Chain Management. The Master of Science in Management enhances students' planning, communication, and ethical decision-making skills and exposes them to real world experiences that help them mature as managers. The Management M.S. program allows students to develop the skills to be promoted into higher levels of management at different types of organizations. Graduates of this program may work in a variety of positions, including mid-to upper-level management positions in corporate offices, healthcare facilities, distribution or logistics centers, manufacturing facilities, not-for-profit organizations, state or local government, and service industries such as banking, insurance, and real-estate. Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

To be admitted to the Master of Science in Management program, applicants should have

1. minimum undergraduate GPA of 2.75 on a 4.0 scale,
2. satisfactory scores on the GMAT or GRE, and
3. two years of professional experience.

Applicants without related previous experience or academic preparation may be required to complete the following prerequisite courses: MGMT 6000 (or MGMT 3610 and MGMT 3620) and ACTG 3000 (or ACTG 6000 and ACTG 6100).

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Management admissions Test (GMAT) or the Graduate Record Examination (GRE);
3. submit official transcripts of all previous college work;
4. submit a current resume' or curriculum vita showing two years of applicable professional experience.

Degree Requirements

The Master of Science in Management with a concentration in Organizational Leadership requires completion of 33 credit hours.

Candidate must

1. complete a minimum of 33 semester hours as listed below. No more than 30 percent of the total degree hours dual-listed as undergraduate/graduate hours can be counted toward the degree;
2. successfully complete an applied project (MGMT 6790) in the last semester.

Curriculum: Management, Organizational Leadership

The Organizational Leadership concentration provides students with business and leadership skills that can be applied in a variety of leadership roles in business, government, and/or education. In addition to 12 hours of core management courses, the concentration requires 12 hours of courses in behavioral aspects of leadership, including two required courses: organizational development and leadership and motivation. Leadership concentration electives (6 hours) are selected from among the following courses: negotiation, current issues in management, and

international management. Students will also elect 6 hours of courses in a professional area that relates to their career interests.

Core Courses (15 hours)

- MGMT 6100 - Strategic Decision Making **3 credit hours**
- MGMT 6200 - Lean Project Management Principles **3 credit hours**
- MGMT 6680 - Seminar in Human Resources Management **3 credit hours**
- MGMT 6750 - Business Ethics **3 credit hours**
- MGMT 6790 - Independent Research in Management **3 credit hours**

Required Courses (12 hours)

- MGMT 6660 - Organization Development **3 credit hours**
 - MGMT 6740 - Leadership and Motivation **3 credit hours**
- Choose two from the following:**
- MGMT 6670 - Seminar in Negotiation **3 credit hours**
 - MGMT 6690 - Current Issues in Management **3 credit hours**
 - MGMT 6770 - International Management **3 credit hours**

Career electives (6 hours)

In consultation with their advisors, students will select and complete 6 hours of courses in a professional area that relates to their career interests, or they may select and complete 6 hours of business electives that apply to organizational leadership.

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Management, Supply Chain Management Concentration, M.S.

Dan Morrell, Program Director

(615) 494-7758

Dan.Morrell@mtsu.edu

The Department of Management and Marketing offers the Master of Science in Management program with three concentrations: Not-for-Profit Management, Organizational Leadership, and Supply Chain Management. The Master of Science in Management enhances students' planning, communication, and ethical decision-making skills and exposes them to real world experiences that help them mature as managers. The Management M.S. program allows students to develop the skills to be promoted into higher levels of management at different types of organizations. Graduates of this program may work in a variety of positions, including mid-to upper-level management positions in corporate offices, healthcare facilities, distribution or logistics centers, manufacturing facilities, not-for-profit organizations, state or local government, and service industries such as banking, insurance, and real-estate. Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

To be admitted to the Master of Science in Management program, applicants should have

1. minimum undergraduate GPA of 2.75 on a 4.0 scale,
2. satisfactory scores on the GMAT or GRE,
3. and two years of professional experience.

Applicants without related previous experience or academic preparation may be required to complete the following prerequisite courses: MGMT 6000 (or MGMT 3610 and MGMT 3620) and ACTG 3000 (or ACTG 6000 and ACTG 6100).

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Management Admissions Test (GMAT) or the Graduate Record Examination (GRE);
3. submit official transcripts of all previous college work;
4. submit a current resume' or curriculum vita showing two years of applicable professional experience.

Degree Requirements

The Master of Science in Management with a concentration in Supply Chain Management requires completion of 33 credit hours.

Candidate must

1. complete a minimum of 33 semester hours as listed below. No more than 30 percent of the total degree hours dual-listed as undergraduate/graduate hours can be counted toward the degree;
2. successfully complete an applied project (MGMT 6790) in the last semester.

Curriculum: Management, Supply Chain Management

The Supply Chain Management concentration provides students with business and operations management skills that can be applied to work in logistics, transportation, and supply chain management careers. In addition to 15 hours of core courses in management, the concentration requires 12 hours of courses in supply chain management, including two required courses: international supply chain management and total quality management. The concentration electives are selected from among these courses: production/operations management strategy,

distribution center management, marketing systems, and techniques in social media and internet marketing. Students will also elect 6 hours of courses in a professional area that relates to their career interests.

Core Courses (15 hours)

- MGMT 6100 - Strategic Decision Making **3 credit hours**
- MGMT 6200 - Lean Project Management Principles **3 credit hours**
- MGMT 6680 - Seminar in Human Resources Management **3 credit hours**
- MGMT 6750 - Business Ethics **3 credit hours**
- MGMT 6790 - Independent Research in Management **3 credit hours**

Required Courses (12 hours)

- MGMT 6730 - International Supply Chain Management **3 credit hours**
 - MGMT 6760 - Total Quality Management **3 credit hours**
- Choose two from the following:**
- MGMT 6700 - Production and Operations Management Strategy **3 credit hours**
 - MGMT 6550 - Distribution Center Management **3 credit hours**
 - MKT 6830 - Marketing Systems **3 credit hours**
 - MKT 6870 - Techniques in Social Media, Search Engine and Internet Marketing **3 credit hours**

Career Electives (6 hours)

In consultation with their advisors, students will select and complete 6 hours of courses in a professional area that relates to their career interests, or they may select and complete 6 hours of business electives that apply to supply chain management.

Program Notes

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Business Administration

BUAD 6980 - Strategic Management 3 credit hours

Advanced problem analysis requiring the synthesis of theory and practice gained from both the functional and managerial areas of study with emphasis on formulation, integration, and implementation of policies and strategies of the firm. This is a capstone course and must be taken after all core requirements or by consent of the director of the M.B.A. program in the last semester prior to graduation.

Leadership Studies

LEST 6000 - Creative Leadership and Collaboration 3 credit hours

(Same as MRAT 6000 .) Explores creative leadership and collaboration skills needed to undertake creative projects in entertainment, arts, and related fields. Applied concepts of participative leadership, creativity theory, group interaction, and the collaboration process in group discussions, research assignments, and realized projects.

Management

MGMT 5840 - Study Abroad 3 credit hours

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

MGMT 6000 - Management and Operations Concepts 3 credit hours

Concepts of the management functions of planning, organizing, leading, and controlling as applied to managing people in organizations. Production and operations management concepts with emphasis on using quantitative models for decision making. Prerequisite for M.B.A. program. May not be used for elective credit in graduate business degree program.

MGMT 6100 - Strategic Decision Making 3 credit hours

Prerequisite: MGMT 3610 or MGMT 6000. Managerial theory and practice of solving problems, making decisions, and developing strategies for services and/or products. Emphasis on developing practical responses to decision issues using creativity and innovation in a team environment. (This course is not open to students earning a Master of Business Administration degree.)

MGMT 6200 - Lean Project Management Principles 3 credit hours

Prerequisite: MGMT 3620, MGMT 6000, or MGMT 6650. Theory and practice of managing projects for services, products, and/or events in the context of operations management methods. Emphasis on application of lean concepts to project management.

MGMT 6300 - Not-for-Profit Management and Governance 3 credit hours

Prerequisite: MGMT 3610 or MGMT 6600 or permission of department. Focuses on the management theories and practices that impact effective management and governance of organizations in the not-for-profit sector. Emphasizes management decision making within the not-for-profit context and will be one of two core courses in the proposed Master's of Science in Management not-for-profit concentration curriculum.

MGMT 6400 - Current Issues in Not-for-Profit Management 3 credit hours

Prerequisite: MGMT 3610 or MGMT 6600 or permission of department. Current management issues that impact organizations in the not-for-profit sector. Topics include managing change/crisis management, organization culture, strategic human resource management, diversity, managing quality, resource development, accountability to stakeholders, competition among nonprofits, international issues, management issues of membership organizations and small not-for-profits, leadership challenges, managing volunteers, social entrepreneurship, and marketing.

MGMT 6510 - Current Problems in Human Resource Management and Industrial Relations 3 credit hours

Investigation of current problems. Emphasis on current theory, problems, and practices in the public

and private sector. Consideration of legal and political environment stressed as related to management policy formulation.

MGMT 6550 - Distribution Center Management
3 credit hours

Prerequisite: MGMT 3620 or MGMT 6600 or MGMT 6650. Focuses on the concepts and techniques required to manage a contemporary distribution center. Emphasizes the role of a distribution center within a supply chain and best practices leading to efficient operational performance.

MGMT 6600 - Organization Behavior
3 credit hours

Behavioral science concepts and research in the management of organizations; theories dealing with interpersonal relationships, motivation systems, group dynamics, communications, and authority related to organizational behavior, control, and structure problems.

MGMT 6650 - Operations Management
3 credit hours

Strategic and tactical decisions involved with planning, operating, and controlling the operations functions in a firm. Emphasis on problem identification and solution.

MGMT 6660 - Organization Development
3 credit hours

Approaches for effecting change in organizations. Emphasis on the individual and personal development of the student to be more effective in managing change and innovation.

MGMT 6670 - Seminar in Negotiation
3 credit hours

A structured overview of the process of negotiation in organizations and manager development of improved negotiation skills. Topics include distributive negotiations, integrative negotiations, tactics, strategies, power dynamics, alternative dispute resolution, and negotiation ethics in an organization environment.

MGMT 6680 - Seminar in Human Resources Management
3 credit hours

Focus on the responsibility of all managers with respect to the effective development of human resources. The responsibility of all functional areas in the human resource department or impinging forces

such as technology, organized labor, and government legislation examined along with the emerging concepts, problems, and theories supported by research in the field.

MGMT 6690 - Current Issues in Management
3 credit hours

Prerequisite: MGMT 6600 or permission of department. Investigates current issues in management, using recent events and emerging theoretical developments to examine relevant complexities facing practitioners.

MGMT 6700 - Production and Operations Management Strategy
3 credit hours

Focuses on operations strategy concepts and operations management as a competitive weapon. Topics include global production and operations management strategy, capacity of facilities, vertical integration, performance controls, and the importance of manufacturing for overall business strategy.

MGMT 6730 - International Supply Chain Management
3 credit hours

Principles of supply chain management and supply chain management environments. Examines integration with other companies to manage flow of resources, including materials, information, people, etc., in a global supply chain environment.

MGMT 6740 - Leadership and Motivation
3 credit hours

Issues in leadership and motivation in business organizations. An examination of the theoretical framework for leadership and motivation processes serves as foundation. Emphasis on practical issues and applications of leadership development and motivation.

MGMT 6750 - Business Ethics
3 credit hours

Impact of individual values and ethics on the management of organizations. Topics include legal and ethical aspects of dealing with organization stakeholders: stockholders, consumers, employees, and the general community. Emphasis on using ethical theory to make good business decisions.

MGMT 6760 - Total Quality Management
3 credit hours

Examines the major total quality management

philosophies; consideration of implementation issues; quality costs, off- and online tools and techniques; vendor certification.

MGMT 6770 - International Management

3 credit hours

Major issues associated with the formulation and implementation of corporate strategy for international and global operations. Emphasis on the understanding of global environmental forces surrounding international business operations and the management issues facing global organizations.

MGMT 6780 - Health Care Management

3 credit hours

An overview of the U.S. health care system, including managed care, governmental and private sector programs and policies affecting the delivery of health care (e.g., Medicare, Medicaid, and private health insurance), and legal, ethical, and budgeting issues relevant to managing health care organizations. Presents strategic and operational considerations unique to the management of health care organizations.

MGMT 6790 - Independent Research in Management

3 credit hours

Prerequisite: 21 graduate hours and/or approval of department chair. Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of an approved faculty member.

Marketing

MKT 5840 - Study Abroad

3 credit hours

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

MKT 6000 - Marketing Concepts

3 credit hours

A survey of the functions, processes, and institutions involved in the creation, promotion, pricing, and distribution of consumer and industrial goods and

services with an emphasis on the decision-making process. May not be used for elective credit in graduate business degree program.

MKT 6800 - Marketing Management

3 credit hours

An analytical managerial approach to the marketing activities of a business enterprise. Emphasis on problem solving and marketing simulation.

MKT 6810 - Promotional Strategy

3 credit hours

Promotional goals, plans, and concepts in marketing; the role of marketing communication in society; the organization, budgeting, and scheduling of promotion; innovation and the adoption process; managerial decision making in the promotional mix.

MKT 6820 - Market Behavior

3 credit hours

Behavioral science concepts and applied research relating to the process of buyer behavior. Topics include cognition, motivation, personality, group influence, social class, culture, and behavior models.

MKT 6830 - Marketing Systems

3 credit hours

An analytic, decision-oriented study of marketing channels. Problems of integrating relevant variables within the marketing system to achieve optimum returns for all members.

MKT 6840 - Marketing Seminar: Current Topics in Marketing

3 credit hours

Theoretical bases of marketing concepts, principles, and strategies; the development, acceptance, and possible future direction of emerging concepts and practices.

MKT 6850 - International Marketing Seminar

3 credit hours

Difference in market arrangements and in legal, cultural, and economic factors in different countries. Planning and organizing for international marketing operations, forecasting, and analyses; interrelationships with other functions; strategy of product pricing, promotion, and channels.

MKT 6860 - Marketing Research and Decision Making

3 credit hours

Investigates research methods for providing

marketing information to assist managers in making better decisions, particularly in identifying marketing opportunities and problems. Specifically focuses on understanding both primary and secondary research processes and developing an ability to evaluate primary and secondary sources of information.

MKT 6870 - Techniques in Social Media, Search Engine and Internet Marketing

3 credit hours

Channels used in direct marketing with an emphasis on electronic commerce; strategic differences among the channels of direct marketing and the managerial implications of each. The impact of changing technology, regulations, and privacy issues.

MKT 6880 - Sport and Entertainment Marketing

3 credit hours

Prerequisite: MKT 6000 or MKT 6800. Issues pertaining to marketing in the sport and entertainment industries. Focuses on role of sponsorship in a firm's marketing strategy.

MKT 6890 - Problems in Marketing

3 credit hours

Prerequisite: Approval of department chair. Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of an approved graduate faculty member. Not approved or substituted for core requirements. Approval of supervisory faculty member and department chair must be obtained in writing before student will be allowed to register for independent study.

MKT 6900 - Health Care Marketing

3 credit hours

The role of marketing in the delivery of health care services. Topics include the history of health care in the United States, the evolution of marketing in health care, marketing strategy and implementation in health care, and the future of health care marketing. Students will apply marketing concepts and theory to practical situations.

College of Education

Assessment, Learning, and School Improvement, Ed.D.

Rick Vanosdall, Interim Program Director

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Beginning in the Fall 2013 semester, the Ed.D. in Assessment, Learning, and School Improvement is a cohort-based doctoral program capitalizing on faculty expertise in the College of Education. The program provides a structured curriculum with early development and ongoing support for students as they work to complete their doctoral dissertation. The Ed.D. in Assessment, Learning, and School Improvement is designed to meet a specific need to develop the capacity of PreK-12 school leaders (including teacher-leaders and education leaders across the range of policy and non-profit agencies) to significantly improve student academic achievement and to meet increased accountability mandates. This degree will provide educational leaders with the knowledge and analytical skills to analyze all forms of student-learning data (formative and summative, quantitative and qualitative) in order to accurately identify areas of success as well as areas in need of specific attention to attain school improvement. Applicants with a leadership role (including school administrator, teacher-leader, policy-maker, policy advisor, staff in philanthropic and not-for-profit agencies, higher education, and educational consulting) in PreK-12 education and a master's degree in a variety of disciplines are eligible for admission. Typically, successful students will hold formal qualifications related to some area of PreK-12 educational practice with three or more years of professional experience in their specializations.

Please see the undergraduate catalog for undergraduate program information.

Admission Requirements

Admission is limited and will be based on a holistic review of test scores, past academic success, and potential for success in a rigorous doctoral program whose objective is the development of individuals who can effect immediate school improvement and student learning achievement. The following are minimum requirements for admission to the Ed.D. in Assessment, Learning, and School Improvement (although meeting these criteria does not guarantee admission to this selective program of study):

Applicants are expected to have a minimum grade point average (GPA) of 3.50 in master's coursework.

Applicants are expected to have scores on the Graduate Record Examination (GRE) that indicate capacity for success in doctoral study.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. have earned a Master's degree from an accredited institution;
2. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
3. submit official transcripts from all colleges and universities previously attended showing a grade point average (GPA) in previous academic work that indicates potential for success in advanced study (successful applicants will typically have a GPA in prior graduate work that exceeds 3.50);
4. submit official scores for the verbal, quantitative, and analytical writing measures of the Graduate Record Exam (GRE) that indicate potential for success in the Assessment, Learning, and School Improvement doctoral program. Although specific minimum scores are not set, evaluation of scores is an important factor in admission decisions and successful applicants will typically submit scores above the 50th percentile on each measure;
5. submit three letters of recommendation. Letters from professors and/or professionals should address the applicant's potential to successfully complete an Ed.D. in Assessment, Learning, and School Improvement. Letters from leaders of school districts (including directors of schools, school board members or other

educational community leaders, and colleagues who are teachers or administrators) should specifically address the applicant's ability/opportunity to lead an effort to significantly improve student learning and achievement in her/his current position;

6. submit a statement of purpose (750-1000 words) communicating your professional goals and suitability for the doctoral program in Assessment, Learning, and School Improvement. In your statement you should address how your participating in this program will result in increased student learning and achievement as measured on standardized test scores for students under your educational care and authority. You may include a brief discussion of any literature (e.g. research articles, texts—please use appropriate APA citations) that has informed your professional practice or influenced you in some way;
7. submit a current vitae including education and employment history, experience with school improvement, professional presentations and publications, awards, recognitions, etc.;
8. participate in an interview with the Assessment, Learning, and School Improvement doctoral program admission committee as part of the admissions process.

NOTE: Accepted students will be required to attest to their commitment to the cohort and to contribute the necessary quality and quantity of time and energy to ensure the success of this community of learners as each student prepares to lead an effort to significantly improve her/his school or school district.

NOTE: International students will be required to meet MTSU's English language proficiency requirements in addition to the program admission requirements.

Degree Requirements

The Doctor of Education (Ed.D.) in Assessment, Learning and School Improvement Doctoral Program requires

1. completion of the 60-credit-hour program of study;
2. completion of a minimum of one research-based article submitted for publication in a peer-reviewed professional journal;
3. completion of one research-based presentation at a regional/national educational conference;
4. mastery of academic coursework (measured by course grades and successful completion of a comprehensive examination); and
5. successful defense of a dissertation that demonstrates mastery of applied research methods in the field of education.

Curriculum: Assessment, Learning, and School Improvement

Candidate must complete a minimum of 60 hours in the following course of study:

Student Learning Core (13 hours)

- ALSI 7010 - Cognitive Learning Theory and Student Achievement **3 credit hours**
- ALSI 7020 - Implementing a Guaranteed and Viable Curriculum **3 credit hours**
- ALSI 7030 - The Effective Teaching Knowledge Base **3 credit hours**
- ALSI 7040 - Teacher Observation, Evaluation, and Improvement **3 credit hours**
- ALSI 7050 - Application and Research Seminar: Student Learning **1 credit hours**

Research Methods (9 hours)

- ALSI 7600 - Educational Statistics **3 credit hours**
- ALSI 7610 - Qualitative Research Methodologies **3 credit hours**
- ALSI 7620 - Advanced Quantitative Research Methodologies **3 credit hours** OR
- ALSI 7630 - Advanced Qualitative Research for School Improvement **3 credit hours**

Assessment Core (13 hours)

- ALSI 7210 - Assessment Literacy **3 credit hours**
- ALSI 7220 - Advanced Applications in Assessment **3 credit hours**
- ALSI 7230 - Formative Assessments and Improved Student Learning **3 credit hours**
- ALSI 7240 - Data Analysis, Learning, and School Improvement **3 credit hours**
- ALSI 7250 - Application and Research Seminar: Assessing Student Learning **1 credit hours**

Research-Based School Improvement Core (13 hours)

- ALSI 7410 - Highly Effective Schools and School Districts **3 credit hours**
- ALSI 7420 - Schools as Professional Learning Communities **3 credit hours**
- ALSI 7430 - Collaborative Teaming and Effective Schools **3 credit hours**
- ALSI 7440 - Improving Student Achievement in Core Academic Areas and Sub-Groups: Best Practices **3 credit hours**
- ALSI 7450 - Application and Research Seminar: Research-Based School Improvement **1 credit hours**

Dissertation (12 hours)

- ALSI 7640 - Dissertation Research **1-6 credit hours** (Students will enroll in dissertation research in multiple semesters for a total of 12 credits.)

Program Notes

Currently, the program admits students in successive cohorts each fall semester only. All students in the graduate program are expected to complete all coursework with their cohort as scheduled.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 30 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Literacy Studies, Ph.D.

Jwa Kim, Program Director

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The Ph.D. in Literacy Studies is an interdisciplinary program drawing on faculty from the Colleges of Education, Behavioral and Health Sciences, and Liberal Arts. The program offers a flexible framework of courses, field experiences, and research opportunities designed to provide professionals in various spheres of influence with the knowledge, skills, and abilities to effectively address the literacy and learning crisis in the United States. Applicants with master's degrees in a variety of disciplines are eligible for admission. Typically, a successful student will hold formal qualifications related to some area of PK–12 educational practice with three or more years of professional experience in their specializations.

Admission Requirements

Admissions are based on a comprehensive assessment of a candidate's qualifications including Graduate Record Examination (GRE) scores, undergraduate and graduate grade point average, letters of recommendation, prior professional experiences, and application essay.

Applicants are expected to have a minimum grade point average (GPA) of 3.50 in master's coursework.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must submit

1. application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. official transcripts certifying coursework from each college or university attended (a minimum GPA of 3.5 in master's coursework is required for admission to program);
3. a current curriculum vitae showing at least three (3) years of documented professional experience;
4. a 700 - 1000 word essay explaining how his/her background and objectives relate to the program's purpose;
5. three (3) letters of recommendation from professionals who can address the applicant's interest in literacy and potential for successfully completing a doctoral program;
6. recent GRE scores (within the last five years); preferred minimum scores are Verbal 156 (current scale) or 550 (former scale), Quantitative 144 (current scale) or 500 (former scale), and a 4.5 on Analytical Writing.

Degree Requirements

Once admitted to the Doctor of Philosophy (Ph.D.) in Literacy Studies program, candidates must complete at least 60 semester hours with at least 70 percent at the 7000 level. Candidates are required to complete and successfully defend a research-based dissertation.

Curriculum: Literacy Studies

Candidate must complete 60 hours in the following course of study:

Required Core (27 hours)

Foundations (6 hours)

- LITS 7100 - Historical Issues, Trends, and Methodologies in Literacy **3 credit hours**
- LITS 7130 - Literacy in the Socio-Cultural Context **3 credit hours**

Language and Literacy (6 hours)

- LITS 7011 - Neurobiology of Language and Literacy **3 credit hours**
- ENGL 7520 - Essentials of Linguistics **3 credit hours**

Pedagogy (6 hours)

- LITS 7110 - Models of Literacy Assessment **3 credit hours**
- LITS 7210 - Evidence-Based Methods of Literacy Development **3 credit hours** (*offered Fall only*)

Research Design and Data Analysis (6 hours)

- LITS 7140 - Research, Design and Methodology in Literacy **3 credit hours**
- PSY 7290 - Psychological Statistics: ANOVA **3 credit hours**

Practicum (3 hours)

- LITS 7200 - Practicum in Literacy Studies **1 to 3 credit hours**

Specialization Area (12 hours)

Selected with advisor:

- Reading Disabilities/Dyslexia
- Literacy Instruction and Staff Development
- Literacy Measurement and Analysis
- Administration/Policy

Electives (9 hours)

Selected with advisor

Dissertation (12 hours)

- LITS 7640 - Dissertation Research **1 to 12 credit hours** (minimum 12 hours)

Program notes

Currently, the program admits students in Fall semester only. All students in the graduate program will be expected to satisfy a residency requirement.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 30 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Assessment, Learning, and School Improvement

ALSI 7010 - Cognitive Learning Theory and Student Achievement

3 credit hours

Provides thorough knowledge base in research on ties between instructional practices and students' learning and achievement. Examines cognitive learning theory from learner perspective and draws on newest research on the best classroom and school cultures to support student learning and achievement.

ALSI 7020 - Implementing a Guaranteed and Viable Curriculum

3 credit hours

Examines the research base on collaborative teaming and applied skills in organizing, directing, and monitoring the work of teams in order to impact student learning with an emphasis on the educational leader's role in enhancing.

ALSI 7030 - The Effective Teaching Knowledge Base

3 credit hours

Examines research base of instructional practices proven to have direct, positive correlation with improved student achievement. Links this research base to national initiatives and teacher evaluation models aimed at improving teaching experience. Equips students with skills to promote adult learning.

ALSI 7040 - Teacher Observation, Evaluation, and Improvement

3 credit hours

Focuses on providing students with in-depth knowledge about research behind the concepts of teacher observation, evaluation, and improvement methods as well as applied skills in implementing these evaluative methods, with an emphasis on using these methods to improve instructional practice and ultimately student achievement.

ALSI 7050 - Application and Research Seminar: Student Learning

1 credit hours

Provides students with structure and format for reflective practice regarding student learning, including application of research knowledge base to challenges faced in K-12 educational settings.

ALSI 7210 - Assessment Literacy

3 credit hours

Focuses on assessment vocabulary and practices prevalent in North America and Tennessee. Appropriate use and interpretation of various types of formative and summative assessments, both norm-based and criterion-referenced.

ALSI 7220 - Advanced Applications in Assessment

3 credit hours

Engages students in comprehensive study of conceptual and applied aspects of assessment with a focus on the role of assessment in improving student learning. Students will focus on specific skills in developing and using assessment to influence student achievement and school improvement.

ALSI 7230 - Formative Assessments and Improved Student Learning

3 credit hours

Emphasizes the development and use of collaboratively developed, common, formative assessments for improving student achievement. Examines both the research basis behind and applications for developing multiple kinds of formative assessments and for collaboratively analyzing their results.

ALSI 7240 - Data Analysis, Learning, and School Improvement

3 credit hours

Provides students with a deep understanding of the interplay between and the connection of multiple assessment tools, data analysis, improved student learning, and school and district improvement with an emphasis on linking student achievement data to decision-making for improving student learning at every level.

ALSI 7250 - Application and Research Seminar: Assessing Student Learning

1 credit hours

Provides students with structure and format for reflective practice regarding the assessment of student learning, including application of research knowledge base to challenges faced in K-12 educational settings.

ALSI 7410 - Highly Effective Schools and School Districts

3 credit hours

Examines the research base related to the cultures

and practices that characterize highly effective schools and school districts. Stresses the process skills educational leaders need to be change agents and to apply research findings to specific educational settings with an emphasis on developing consensus for substantive change.

ALSI 7420 - Schools as Professional Learning Communities

3 credit hours

Examines the research base related to professional learning communities and their link to greater student learning and school improvement. Focuses on skills required for successful implementation of professional learning community concepts and practices at all levels to create a culture of continuous improvement.

ALSI 7430 - Collaborative Teaming and Effective Schools

3 credit hours

Provides students with the importance of collaborative teaming in order to impact student learning and implementing the best instructional practices.

ALSI 7440 - Improving Student Achievement in Core Academic Areas and Sub-Groups: Best Practices

3 credit hours

Examines the research base on best practices as well as applications for improving student achievement in specific core curricular areas (emphasis on math and literacy) and among specific subgroups (emphasis on children with disabilities, children of poverty, and children whose primary language is not English). Applies this knowledge base to designing timely, directive, and specific systems of intervention.

ALSI 7450 - Application and Research Seminar: Research-Based School Improvement

1 credit hours

Provides students with structure and format for reflective practice regarding research-based school improvement, including application of research knowledge base to challenges faced in K-12 educational settings.

ALSI 7600 - Educational Statistics

3 credit hours

Prerequisite: One undergraduate statistics course or permission of instructor. Provides students with knowledge and skills needed to understand, interpret, and apply appropriate statistical methodologies and concepts to the educational settings. A survey course

for basic statistical methods, including descriptive statistics, confidence intervals, sampling, distribution, Central Limit Theorem, logic and procedure of hypothesis testing, z-tests and t-tests of means and proportions, chi-square tests, correlation and simple regression, and one-way ANOVA. Statistical software packages such as SPSS and SAS will be utilized for data analysis. Prerequisite for ALSI 7620 and ALSI 7630.

ALSI 7610 - Qualitative Research Methodologies

3 credit hours

Introduces the five approaches and design structures of qualitative research and naturalistic inquiry. Philosophical assumptions, ethical considerations, and qualitative frameworks will be explored within the context of narrative, grounded theory, phenomenology, ethnography, and case study structures appropriate for education and leadership settings. Prerequisite to subsequent courses in advanced quantitative and qualitative methodologies.

ALSI 7620 - Advanced Quantitative Research Methodologies

3 credit hours

Prerequisites: ALSI 7600 and ALSI 7610. Provides students with advanced quantitative research methodologies that can be applied in an educational setting. Topics include power and effect size, ANOVA (One-Way Analysis of variance, Two-Way Analysis of Variance), MANOVA (Multivariate Analysis of Variance), ANCOVA (Analysis of Covariance), Factor Analysis, Multiple Regression, Logistic Regression, and ranking or Non-Parametric tests. The Statistical Package for the Social Sciences (SPSS) will be used. The course will include the study of the methodologies used in growth models.

ALSI 7630 - Advanced Qualitative Research for School Improvement

3 credit hours

Prerequisites: ALSI 7600 and ALSI 7610. Provides students with advanced qualitative research methodologies that can be applied in an educational setting. Course content focuses on conceptual issues, ordering, framing inquiry, applying appropriate approach and design, selecting and collecting data, approach-specific analysis, interpretation of data, and reporting procedures. Course tasks provide opportunities to develop skills in qualitative coding, bracketing, restorying, descriptive culture sharing, and cross-case theming.

ALSI 7640 - Dissertation Research

1-6 credit hours

Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of the dissertation. Once enrolled, students must register in at least one credit hour of dissertation research each semester until complete. Open only to students who are in the Assessment, Learning, and School Improvement Doctor of Education degree program. S/U grading.

Educational Leadership

James O. Huffman, Chair

(615) 898-2855

www.mtsu.edu/edu_leadership/

The Womack Educational Leadership Department offers the Doctor in Education (Ed.D.) in Assessment, Learning, and School Improvement.

The Specialist in Education degree (Ed.S.) is offered with majors in Administration and Supervision and Curriculum and Instruction and the Master of Education degree (M.Ed.) with majors in Administration and Supervision, Curriculum and Instruction, and Professional Counseling.

The Ed.S. in Administration and Supervision offers a specialization in instructional leader licensure (K-12 administrator license) and higher education. The Ed.S. in Curriculum and Instruction major offers a specialization in culture, cognition, and the learning process.

The M.Ed. in Administration and Supervision offers a concentration in Library Science and specializations in K-12 public schools, higher education, and nonlicensure.

The M.Ed. in Curriculum and Instruction offers a concentration in English as a Second Language and a specialization for the professional education coursework for teacher licensure (secondary education licensure path).

The M.Ed. in Professional Counseling offers concentrations in Mental Health Counseling and School Counseling.

The department offers a minor in education and library science at the graduate level, the interdisciplinary certificate program in United States Culture and Education, and a graduate certificate in College and University Teaching.

Administration and Supervision, Higher Education Specialization, M.Ed.

James Huffman, Program Director

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The Womack Educational Leadership Department offers the Specialist in Education degree (Ed.S.) with majors in Administration and Supervision as well as Curriculum and Instruction and the Master of Education degree (M.Ed.) with majors in Administration and Supervision, Curriculum and Instruction, and Professional Counseling.

The M.Ed. in Administration and Supervision offers a concentration in Library Science as well as specializations in K-12 public school, higher education, and a nonlicensure program.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Master of Education in Administration and Supervision with a specialization in higher education requires

1. a satisfactory score on the Miller Analogies Test, the Graduate Record Examination, or the Praxis II (Principles of Learning and Teaching) or a valid Tennessee Teacher license;
2. an earned bachelor's degree from an accredited university or college;
3. teacher licensure—the licensure requirements will be waived for the higher education specialization and under other special circumstances.

Students pursuing an M.Ed. degree must be fully admitted by the Educational Leadership Graduate Admissions Board prior to the completion of their initial semester of coursework.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts of all previous college work;
3. submit three letters of recommendation addressing the applicant's potential on completing the Master of Education degree in Administration and Supervision;
4. submit official scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT) or a copy of the teaching license.

Degree Requirements

Candidate must

1. complete 33 semester hours. No more than 30 percent of the total degree hours may be dually listed as undergraduate/graduate hours (see Curriculum section below for specifics);
2. successfully complete a written comprehensive examination during the semester of graduation (exam may be retaken once during a subsequent semester).

Curriculum: Administration and Supervision, Higher Education

Candidate must complete 33 hours in the following course of study:

Required Courses (9 hours)

- FOED 6020 - Educational Foundations **3 credit hours**
- FOED 6610 - Analysis and Application of Educational Research **3 credit hours**
- SPSE 6080 - Studies in Leadership **3 credit hours**

Specialized Core (12 hours)

- FOED 6580 - The College Student **3 credit hours**
- SPSE 6530 - Administration of Higher Education **3 credit hours**
- SPSE 6600 - Microcomputers in Educational Administration **3 credit hours**
- SPSE 6210 - Legal Issues in Higher Education **3 credit hours**

Electives (12 hours)

To be selected with approval of advisor

Program Notes

Students taking courses for licensure renewal, add-on endorsements, or "plus 30" upgrade on teacher licensure should register as non-degree-seeking students. Students enrolling in 6000-level courses must hold a bachelor's degree, and students enrolling in 7000-level courses must hold a master's degree. Non-degree-seeking students cannot register for 7000-level courses without departmental permission.

Candidate must

1. file a degree plan with the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the semester in which the student intends to graduate.

Administration and Supervision, K-12 Public School Specialization, M.Ed.

James Huffman, Program Director
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Jim.Huffman@mtsu.edu

Marvin Peyton, Off-Campus Coordinator
(615) 898-5710
Marvin.Peyton@mtsu.edu

The Womack Educational Leadership Department offers the Specialist in Education degree (Ed.S.) with majors in Administration and Supervision as well as Curriculum and Instruction and the Master of Education degree (M.Ed.) with majors in Administration and Supervision, Curriculum and Instruction, and Professional Counseling. The M.Ed. in Administration and Supervision offers a concentration in Library Science as well as specializations in K-12 public school, higher education, and a nonlicensure program. Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Master of Education in Administration and Supervision with a specialization in K-12 public school requires

1. a satisfactory score on the Miller Analogies Test, the Graduate Record Examination, or the Praxis II (Principles of Learning and Teaching) or a valid Tennessee Teacher license;
2. an earned bachelor's degree from an accredited university or college;
3. teacher licensure—the licensure requirements will be waived for the higher education specialization and under other special circumstances.

Students pursuing an M.Ed. degree must be fully admitted by the Educational Leadership Graduate Admissions Board prior to the completion of their initial semester of coursework.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts of previous college work;
3. submit three letters of recommendation addressing the applicant's potential for completing the Master of Education degree in Administration and Supervision;
4. submit official scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT) or a copy of the teaching license.

Degree Requirements

Candidate must

1. complete 33 semester hours. No more than 30 percent of the total degree hours may be dually listed as undergraduate/graduate hours (see Curriculum section below for specifics);
2. successfully complete a written comprehensive examination during the semester of graduation (exam may be retaken once during a subsequent semester).

Curriculum: Administration and Supervision, K-12 Public School

Candidate must complete 33 hours in the following course of study:

Required Courses (33 hours)

- FOED 6020 - Educational Foundations **3 credit hours**
- FOED 6030 - School and Community Relations **3 credit hours**
- SPSE 6010 - Organization and Administration of Public Schools **3 credit hours**
- SPSE 6040 - Supervision of Instruction **3 credit hours**
- SPSE 6050 - Instructional Leadership **3 credit hours**
- SPSE 6340 - School Finance **3 credit hours**
- SPSE 6390 - School Law **3 credit hours**
- SPSE 6400 - The Principalship **3 credit hours**
- SPSE 6430 - Introduction to Curriculum Development **3 credit hours**
- SPSE 6550 - Supervised Field Experience **3 or 6 credit hours**
- SPSE 6560 - Studies in Education: Supervision **1 to 3 credit hours**

Note:

Completion of this program will meet course requirements for Tennessee administration licensure. Additional state requirements must be met. In addition to completion of courses, students must pass the SLLA Praxis Examination to complete state licensure requirements.

This program is offered only in the off-campus cohort format. For further information contact the Womack Family Educational Leadership office prior to starting the program.

Program Notes

Students taking courses for licensure renewal, add-on endorsements, or "plus 30" upgrade on teacher licensure should register as non-degree-seeking students. Students enrolling in 6000-level courses must hold a bachelor's degree, and students enrolling in 7000-level courses must hold a master's degree. Non-degree-seeking students cannot register for 7000-level courses without departmental permission.

Candidate must

1. file a degree plan with the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the semester in which the student intends to graduate.

Administration and Supervision, Library Science Concentration, M.Ed. (Online)

Kathryn Boudreau-Henry, Program Director
(615) 898-5378

Kathryn.Boudreau-Henry@mtsu.edu

The Womack Educational Leadership Department offers a fully online, accredited (NCATE) Master's of Education degree in Administration and Supervision with a concentration in Library Science. The State of Tennessee Department of Education has approved the program for obtaining added endorsement and initial teaching license. A non-degree program as well as a non-licensure program are available

Completion of the concentration in Library Science will meet course requirements for Tennessee endorsement as a library information specialist. A passing score on the Praxis II Librarian test is required for licensure. Additional state requirements must be met for initial teacher licensure. Application for licensure should be checked in the Teacher Licensure Office. For students seeking initial licensure (library only), a student teaching experience (9 credits) is required in place of SPSE 6550 (taken twice for 6 credit hours).

Admission Requirements

Admission to the master's program in Administration and Supervision requires

1. a satisfactory score on the Miller Analogies Test, the Graduate Record Examination, or the Praxis II (Principles of Learning and Teaching) or a valid Tennessee Teacher license;
2. an earned bachelor's degree from an accredited university or college.

Students pursuing the M.Ed. degree must be fully admitted to the program prior to the completion of their initial semester of coursework.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts of previous college work;
3. submit three letters of recommendation addressing the applicant's potential for completing the Master of Education degree in Administration and Supervision;
4. submit official scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT) or a copy of the teaching license.

Degree Requirements

Once admitted to the program, candidate must

1. complete 33-36 semester hours (no more than 30 percent of the total degree hours dually listed as undergraduate/graduate hours). See Curriculum section below for specifics.
2. successfully complete a written comprehensive examination during the semester of graduation (exam may be retaken once during a subsequent semester).

Curriculum: Administration and Supervision, Library Science

This is an online program. Candidate must complete 33-36 hours in the following course of study:

Required Courses (33-36 hours)*

- LIBS 5150 - Books, Media, and Literacy for Children **3 credit hours**
- LIBS 5160 - Books, Media, and Literacy for Young People and Adults **3 credit hours**
- LIBS 6110 - School Library Administration **3 credit hours**
- LIBS 6120 - Classification and Cataloging Media and Materials **3 credit hours**
- LIBS 6170 - Basic Reference Materials **3 credit hours**
- LIBS 6200 - School Library Media Center Skills and Issues **3 credit hours**
- LIBS 6960 - Integration of Learning Theory, Curriculum, and Technology **3 credit hours**
- FOED 6610 - Analysis and Application of Educational Research **3 credit hours**
- LIBS 6130 - Principles of Librarianship **3 credit hours** OR
- LIBS 6970 - Web Based Tools and Curriculum **3 credit hours**
- SPSE 6550 - Supervised Field Experience **3 or 6 credit hours (6 credit hours)** OR
- LIBS 6511 - Directed Student Teaching (Library Science) **9 credit hours** (for initial license only)

*Note:

For students seeking initial teacher licensure, a student teaching experience (LIBS 6511) (9 semester hours) is required in place of SPSE 6550.

Program Notes

Students taking courses for licensure renewal, add-on endorsements (only if candidate holds Master's degree already), or "plus 30" upgrade on teacher licensure should register as non-degree-seeking students. Their program of study is determined in consultation with the program advisor. Students enrolling in 6000-level courses must hold a bachelor's degree, and students enrolling in 7000-level courses must hold a master's degree. Non-degree-seeking students cannot register for 7000-level courses without departmental permission.

Candidate must

1. file a degree plan with the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the semester in which the student intends to graduate.

Administration and Supervision, Nonlicensure Program, M.Ed.

James Huffman, Program Director
(615) 898-2855
Jim.Huffman@mtsu.edu

Marvin Peyton, Off-Campus Coordinator
(615) 898-5710
Marvin.Peyton@mtsu.edu

The Womack Educational Leadership Department offers the Specialist in Education degree (Ed.S.) with majors in Administration and Supervision as well as Curriculum and Instruction and the Master of Education degree (M.Ed.) with majors in Administration and Supervision, Curriculum and Instruction, and Professional Counseling.

The M.Ed. in Administration and Supervision offers a concentration in Library Science as well as specializations in K-12 public school and higher education and a nonlicensure program.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Master of Education in Administration and Supervision with a nonlicensure specialization requires

1. a satisfactory score on the Miller Analogies Test, the Graduate Record Examination, or the Praxis II (Principles of Learning and Teaching) or a valid Tennessee Teacher license;
2. an earned bachelor's degree from an accredited university or college;
3. teacher licensure--the licensure requirements will be waived for the higher education specialization and under other special circumstances.

Students pursuing an M.Ed. degree must be fully admitted by the Educational Leadership Graduate Admissions Board prior to the completion of their initial semester of coursework.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts of all previous college work;
3. submit three letters of recommendation addressing the applicant's potential for completing the Master of Education degree in Administration and Supervision;
4. submit official scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT) or a copy of the teaching license.

Degree Requirements

Candidate must

1. complete 33 semester hours. No more than 30 percent of the total degree hours may be dually listed as undergraduate/graduate hours (see Curriculum section below for specifics);
2. successfully complete a written comprehensive examination during the semester of graduation (exam may be retaken once during a subsequent semester).

Curriculum: Administration and Supervision, Nonlicensure

Candidate must complete 33 hours in the following course of study:

Required Courses (33 hours)

- SPSE 6010 - Organization and Administration of Public Schools **3 credit hours**
- FOED 6020 - Educational Foundations **3 credit hours**
- FOED 6030 - School and Community Relations **3 credit hours**
- SPSE 6040 - Supervision of Instruction **3 credit hours**
- SPSE 6390 - School Law **3 credit hours**
- SPSE 6430 - Introduction to Curriculum Development **3 credit hours**
- FOED 6610 - Analysis and Application of Educational Research **3 credit hours**
- SPSE 6640 - Microcomputers in the K-12 Educational Setting **3 credit hours**
- YOED 6680 - Issues and Trends in Teaching and Learning **3 credit hours**
- SPSE 6250 - Seminar in Curriculum Improvement **3 credit hours**

Note:

This is NOT a program for a Tennessee School Administrator license. Contact the Womack Family Educational Leadership Department for more information.

Program Notes

Students taking courses for licensure renewal, add-on endorsements, or "plus 30" upgrade on teacher licensure should register as non-degree-seeking students. Students enrolling in 6000-level courses must hold a bachelor's degree, and students enrolling in 7000-level courses must hold a master's degree. Non-degree-seeking students cannot register for 7000-level courses without departmental permission.

Candidate must

1. file a degree plan with the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the semester in which the student intends to graduate.

Curriculum and Instruction, English as a Second Language Concentration, M.Ed.

Dorothy Valcarcel Craig, Program Director
(615) 898-2855

Dorothy.Craig@mtsu.edu, www.eslatmtsu.com

The Womack Educational Leadership Department offers the Specialist in Education degree (Ed.S.) with majors in Administration and Supervision and in Curriculum and Instruction, and it offers the Master of Education degree (M.Ed.) with majors in Administration and Supervision, Curriculum and Instruction, and Professional Counseling. The M.Ed. in Curriculum and Instruction offers a concentration in English as a Second Language with several licensure options as well as a non-licensure option:

- The degree with add-on licensure endorsement in ESL (PreK-12) is designed for those candidates who already hold an initial license for teaching in Tennessee;
- The degree with initial license in ESL (PreK-12) is designed for those candidates who do not hold an initial license for teaching in Tennessee and who plan to complete the requirements for professional licensure at the initial level;
- The add-on only program may be completed for endorsement only (non-degree; licensure only);
- The M.Ed. in Curriculum and Instruction also offers a specialization for the professional education coursework for teacher licensure (Secondary Education Licensure Path) in a state-approved licensure area.

The Curriculum and Instruction program is designed to foster the development of teaching skills that result in increased pupil performance. By analyzing curriculum choices and strategies, along with best teaching practices, those who complete this program will be better equipped to provide an environment in which students engage in relevant and meaningful learning activities (Secondary Education Licensure Path) in a state-approved licensure area. Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

For admission into the master's program, a satisfactory score on the Miller Analogies Test, the Graduate Record Examination, or the Praxis II (Principles of Learning and Teaching) or a valid Tennessee Teacher license is required. Students pursuing an M.Ed. degree must be fully admitted to the program prior to the completion of their initial semester of coursework.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts of all previous college work;
3. submit three letters of recommendation addressing the applicant's potential for completing the Master of Education degree in Curriculum and Instruction;
4. submit official scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT) or a copy of the teaching license.

Degree Requirements with Add-On Endorsement in ESL or Non-Licensure Option

The Master of Education in Curriculum and Instruction with a concentration in English as a Second Language requires completion of 33 semester hours. No more than 30 percent of the total degree hours may be dually listed as undergraduate/graduate hours.

Candidate must

1. hold a bachelor's degree;
2. hold an initial Tennessee teaching license. Non-licensure students must meet entry testing requirements for graduate studies (MAT or GRE score).
3. successfully complete a written comprehensive examination during the semester of graduation (exam may be retaken once during a subsequent semester).

Curriculum: Curriculum and Instruction, English as a Second Language with Add-On Endorsement in ESL or Non-Licensure Option

Candidate must complete 33 hours in the following course of study:

Core Courses (15 hours)

- FOED 6022 - Foundations, History, and Legal Aspects of ESL and Bilingual Education **3 credit hours**
- FOED 6610 - Analysis and Application of Educational Research **3 credit hours**
- FOED 6620 - Action Research for Practitioner-Based Learning Environments **3 credit hours**
- FOED 6860 - Education and Digital Youth: Language Learning in a Participatory Culture **3 credit hours**
- SPSE 6430 - Introduction to Curriculum Development **3 credit hours**

Required Courses (18 hours)

- SPSE 6800 - Language and Linguistics for ESL Teachers **3 credit hours**
- SPSE 6820 - Second Language Acquisition: Cultural Aspects, Theory, and Research for Teachers **3 credit hours**
- SPSE 6830 - Assessment and Evaluation of English Language Learners **3 credit hours**
- SPSE 6712 - Fieldwork and Applied Research in ESL Learning Environments **3 credit hours**
- YOED 6020 - Literacy Instruction for ESL Learners **3 credit hours**
- YOED 6030 - Content Instruction for English Language Learners **3 credit hours**

Degree Requirements for Initial Licensure in ESL

The Masters of Education in Curriculum and Instruction with a concentration in English as a Second Language (with initial license) requires completion of 33 semester hours and 9 hours of Directed Student Teaching. No more than 30 percent of the total degree hours may be dually listed as undergraduate/graduate hours.

Candidates must:

1. hold a bachelor's degree;
2. meet entry testing requirements for Graduate Studies (MAT or GRE score);
3. meet requirements for admission to Teacher Education;
4. successfully complete one semester of Directed Student Teaching;
5. successfully complete a written comprehensive examination during the semester of graduation (exam may be retaken once during subsequent semester).

Curriculum: Curriculum and Instruction, English as a Second Language with Initial Licensure in ESL

Candidates must complete 42 hours in the following course of study:

Core Courses (15 hours)

- FOED 6022 - Foundations, History, and Legal Aspects of ESL and Bilingual Education **3 credit hours**
- FOED 6610 - Analysis and Application of Educational Research **3 credit hours**
- FOED 6620 - Action Research for Practitioner-Based Learning Environments **3 credit hours**
- FOED 6860 - Education and Digital Youth: Language Learning in a Participatory Culture **3 credit hours**
- SPSE 6430 - Introduction to Curriculum Development **3 credit hours**

Required Courses (18 hours)

- SPSE 6800 - Language and Linguistics for ESL Teachers **3 credit hours**
- SPSE 6820 - Second Language Acquisition: Cultural Aspects, Theory, and Research for Teachers **3 credit hours**
- SPSE 6830 - Assessment and Evaluation of English Language Learners **3 credit hours**
- SPSE 6712 - Fieldwork and Applied Research in ESL Learning Environments **3 credit hours**
- YOED 6020 - Literacy Instruction for ESL Learners **3 credit hours**
- YOED 6030 - Content Instruction for English Language Learners **3 credit hours**

Directed Student Teaching (9 hours)

English as a Second Language Add-On Endorsement (non-degree)

Candidates for the Add-On Endorsement (non-degree) program must:

1. hold a bachelor's degree;
2. hold an initial license for teaching in Tennessee.

Required Courses (18 hours)

Candidates must complete 18 hours in the following course of study. The licensure coursework may be transferred to the full degree program. Please check with current catalog for program changes and updates.

- SPSE 6712 - Fieldwork and Applied Research in ESL Learning Environments **3 credit hours**
- SPSE 6800 - Language and Linguistics for ESL Teachers **3 credit hours**
- SPSE 6820 - Second Language Acquisition: Cultural Aspects, Theory, and Research for Teachers **3 credit hours**
- SPSE 6830 - Assessment and Evaluation of English Language Learners **3 credit hours**
- YOED 6020 - Literacy Instruction for ESL Learners **3 credit hours**
- YOED 6030 - Content Instruction for English Language Learners **3 credit hours**

Program Notes

Students taking courses for licensure renewal, add-on endorsements, or "plus 30" upgrade on teacher licensure should register as non-degree-seeking students. Students enrolling in 6000-level courses must hold a bachelor's degree, and students enrolling in 7000-level courses must hold a master's degree. Non-degree-seeking students cannot register for 7000-level courses without departmental permission.

Candidates must:

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the semester in which the student intends to graduate.

Curriculum and Instruction, M.Ed.

James Huffman, Program Director

(615) 898-2855

Jim.Huffman@mtsu.edu

The Womack Educational Leadership Department offers the Specialist in Education degree (Ed.S.) with majors in Administration and Supervision as well as Curriculum and Instruction and the Master of Education degree (M.Ed.) with majors in Administration and Supervision, Curriculum and Instruction, and Professional Counseling.

The M.Ed. in Curriculum and Instruction offers a concentration in English as a Second Language and a specialization for the professional education coursework needed for teacher licensure (secondary education licensure path).

The Curriculum and Instruction program is designed to foster the development of teaching skills that result in increased pupil performance. By analyzing curriculum choices and strategies, along with best teaching practices, those who complete this program will be better equipped to provide an environment in which students engage in relevant and meaningful learning activities.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Master of Education in Curriculum and Instruction program requires

1. an earned bachelor's degree from an accredited university or college;
2. a satisfactory score on the Miller Analogies Test, the Graduate Record Examination, or the Praxis II (Principles of Learning and Teaching) or a valid Tennessee Teacher license;
3. teacher licensure—the licensure requirements may be waived in special circumstances.

Students pursuing an M.Ed. degree must be fully admitted to the program prior to the completion of their initial semester of coursework.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts of all previous college work;
3. submit three letters of recommendation addressing the applicant's potential for completing the Master of Education degree in Curriculum and Instruction;
4. submit official scores on the Graduate Record Examination (GRE), Miller Analogies Test (MAT), or Praxis II or a copy of the teaching license.

Degree Requirements

Once admitted to the program, candidate must

1. complete 33 semester hours with no more than 30 percent of the total degree hours dually listed as undergraduate/graduate hours (see specifics in Curriculum section below);
2. successfully complete a written comprehensive examination during the semester of graduation (exam may be retaken once during a subsequent semester).

Curriculum: Curriculum and Instruction

Candidate must complete 33 hours in the following course of study:

Required Courses (9 hours)

- FOED 6020 - Educational Foundations **3 credit hours**
- FOED 6610 - Analysis and Application of Educational Research **3 credit hours**
- SPSE 6430 - Introduction to Curriculum Development **3 credit hours**

Specialized Core (18 hours)

- YOED 6680 - Issues and Trends in Teaching and Learning **3 credit hours**
- SPSE 6140 - Teacher Leadership for School Improvement **3 credit hours**
- SPSE 6250 - Seminar in Curriculum Improvement **3 credit hours**
- SPSE 6450 - Elementary and Middle School Curriculum **3 credit hours** OR
- SPSE 6480 - Instructional Excellence in Secondary Schools **3 credit hours**
- SPSE 6640 - Microcomputers in the K-12 Educational Setting **3 credit hours**
- FOED 6630 - Educational Tests and Measurements **3 credit hours**

Electives (6 hours)

To be selected with approval of advisor

Program Notes

Students taking courses for licensure renewal, add-on endorsements, or "plus 30" upgrade on teacher licensure should register as non-degree-seeking students. Students enrolling in 6000-level courses must hold a bachelor's degree, and students enrolling in 7000-level courses must hold a master's degree. Non-degree-seeking students cannot register for 7000-level courses without departmental permission.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the semester in which the student intends to graduate.

Curriculum and Instruction, Secondary Education Licensure Path Specialization, M.Ed.

James Huffman, Program Director

(615) 898-2855

Jim.Huffman@mtsu.edu

The Womack Educational Leadership Department offers the Specialist in Education degree (Ed.S.) with majors in Administration and Supervision as well as Curriculum and Instruction, and the Master of Education degree (M.Ed.) with majors in Administration and Supervision, Curriculum and Instruction, and Professional Counseling.

The M.Ed. in Curriculum and Instruction offers a concentration in English as a Second Language and a specialization for the professional education coursework needed for teacher licensure (secondary education licensure path).

The Curriculum and Instruction program is designed to foster the development of teaching skills that result in increased pupil performance. By analyzing curriculum choices and strategies, along with best teaching practices, those who complete this program will be better equipped to provide an environment in which students engage in relevant and meaningful learning activities.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Master of Education in Curriculum and Instruction with a specialization in secondary education licensure path requires

1. an earned bachelor's degree from an accredited university or college;
2. a satisfactory score on the Miller Analogies Test, the Graduate Record Examination, or the Praxis II (Principles of Learning and Teaching) or a valid Tennessee Teacher license;
3. teacher licensure—the licensure requirements may be waived in special circumstances.

Students pursuing an M.Ed. degree must be fully admitted to the program prior to the completion of their initial semester of coursework.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts of all previous college work;
3. submit three letters of recommendation addressing the applicant's potential for completing the Master of Education degree in Curriculum and Instruction;
4. submit official scores on the Graduate Record Examination (GRE), Miller Analogies Test (MAT), or Praxis II or a copy of the teaching license.

Degree Requirements

Once admitted to the program, candidate must

1. complete 33 semester hours with no more than 30 percent of the total degree hours dually listed as undergraduate/graduate hours (see specifics in Curriculum section below);
2. successfully complete a written comprehensive examination during the semester of graduation (exam may be retaken once during a subsequent semester).

Curriculum: Curriculum and Instruction, Secondary Education Licensure Path

Candidate must complete 33 hours in the following course of study:

Required Courses (9 hours)

- FOED 6020 - Educational Foundations **3 credit hours**
- FOED 6610 - Analysis and Application of Educational Research **3 credit hours**
- SPSE 6430 - Introduction to Curriculum Development **3 credit hours**

Specialized Core (24-30 hours)

- SPSE 6480 - Instructional Excellence in Secondary Schools **3 credit hours**
- SPSE 6640 - Microcomputers in the K-12 Educational Setting **3 credit hours**
- YOED 6680 - Issues and Trends in Teaching and Learning **3 credit hours**
- SPSE 6140 - Teacher Leadership for School Improvement **3 credit hours**
- FOED 6630 - Educational Tests and Measurements **3 credit hours**
- SPED 6800 - Exceptional Children and Youth **3 credit hours**
- READ 5460 - Content Literacy **3 credit hours**
- YOED 5510 - The Teaching Internship, Grades 7-12 **3 to 9 credit hours**

Program Notes

Students taking courses for licensure renewal, add-on endorsements, or "plus 30" upgrade on teacher licensure should register as non-degree-seeking students. Students enrolling in 6000-level courses must hold a bachelor's degree, and students enrolling in 7000-level courses must hold a master's degree. Non-degree-seeking students cannot register for 7000-level courses without departmental permission.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the semester in which the student intends to graduate.

Professional Counseling, Clinical Mental Health Counseling Concentration, M.Ed.

Christopher Quarto, Program Director

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The Womack Educational Leadership Department offers the Specialist in Education degree (Ed.S.) with majors in Administration and Supervision and in Curriculum and Instruction, and it offers the Master of Education degree (M.Ed.) with majors in Administration and Supervision, Curriculum and Instruction, and Professional Counseling. The M.Ed. in Professional Counseling offers concentrations in Clinical Mental Health Counseling and School Counseling. The goal of the Clinical Mental Health Counseling concentration is to prepare students to provide professional counseling services to children and adolescents or adults in mental health-related settings. Students are offered preparation to diagnose and treat select mental and emotional disorders and to promote optimal mental health.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Students apply separately to the College of Graduate Studies and the Professional Counseling program. Admission to the Professional Counseling program is not automatic for students meeting minimum admission requirements.

Admissions decisions for the Professional Counseling program will be made after reviewing all materials and determining the applicant's capacity, suitability, and preparation for graduate study in this area.

Successful applicants for the Master of Education in Professional Counseling with a concentration in Clinical Mental Health Counseling typically have demonstrated the following:

1. 3.00 or higher undergraduate GPA (If an applicant's GPA is lower than 3.00, Professional Counseling faculty will consider applicant's academic performance during the last 60 hours of his or her undergraduate program);
2. Completion of undergraduate courses in basic statistics and abnormal psychology (with minimum grades of B in both courses);
3. A combined Verbal + Quantitative score of 291 (current scale) or 900 (former scale) or higher on the GRE with scores on both the Verbal and Quantitative measures of the test above 146 and 140 respectively (current scale) or 400 (former scale);
4. Three positive references on Professional Counseling recommendation form;
5. A written essay/statement of purpose on the supplemental application form in which the applicant's reason for pursuing a master's degree in Professional Counseling with a concentration in Clinical Mental Health Counseling is congruent with the focus/emphasis of the program;
6. Resume that includes name, address, and phone number of applicant; school applicant attended and applicant's major, minor, and grade point average; honors and awards; and employment and volunteer experiences;
7. If invited, participation in a half-day interview within the first six (6) hours of coursework (invitation based on how the applicant compares to other applicants in relation to the previous six requirements). The interview is conducted by Professional Counseling faculty, a practicing mental health professional, and school counselor. Applicant must receive a positive recommendation from the faculty and counselors for program admission.

Note: Meeting minimum requirements for program admission does not guarantee admission, as applicants are selected on a competitive basis.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Application materials for Summer/Fall admission must be submitted by March 1; October 1 is the deadline for Spring admission.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts of all previous college work;
3. submit official scores on the Graduate Record Examination (GRE);
4. submit a current resume;
5. complete and submit a Professional Counseling Program supplemental application. This is available online at www.mtsu.edu/edu_leadership/. A copy of this application is also available in the Section XVI: Program Forms at the end of the program handbook at www.mtsu.edu/edu_leadership/professional_counseling/docs/Handbook.1.15.11.pdf;
6. submit recommendation forms that are specific to the counseling program. These are available at www.mtsu.edu/edu_leadership/professional_counselingadmssion/ (Adobe pdf format). If possible, two of the recommendations should come from faculty who can attest to the applicant's academic abilities. The third can come from someone who has either supervised the applicant's work, has been a colleague, or has known him/her for at least three years (other than family).

Professional Counseling faculty will review all completed application files (all of the above), and if minimal requirements are met, will arrange with the applicant for participation in an admissions interview in March or October. The admissions committee consists of Professional Counseling faculty members and at least one practicing mental health professional and school counselor.

Following the admissions interview, Professional Counseling faculty will make admissions decisions. The following are considered in the decision-making process:

1. input from regular, adjunct, and affiliate program faculty (if the applicant has taken or is currently taking classes);
2. input from practitioners who served on the admissions committee;
3. each applicant's potential success in forming effective interpersonal relationships in individual and small-group contexts;
4. each applicant's aptitude for graduate-level study, including technological competence and computer literacy;
5. each applicant's career goals and objectives and their relevance to the program; and
6. each applicant's openness to self-examination and personal and professional self-development.

Applicants will be formally notified of the admission decision by the College of Graduate Studies within 30 days of the admissions interview. If accepted into the Professional Counseling program, the applicant must within two weeks notify the program coordinator of his/her intention to enter the program.

Degree Requirements

The Master of Education in Professional Counseling degree with a concentration in Clinical Mental Health Counseling requires completion of 61 semester hours.

Candidates must successfully complete the Counselor Preparation Comprehensive Examination (may be taken no more than twice).

Curriculum: Professional Counseling, Clinical Mental Health Counseling

Candidate must complete 61 hours in the following course of study:

Prerequisites/Corequisites

- PSY 3020 - Basic Statistics for Behavioral Science with a minimum grade of B (or an equivalent undergraduate statistics course taken at another accredited educational institution)
- PSY 3230 - Abnormal Psychology with a minimum grade of B (or an equivalent undergraduate abnormal psychology course taken at another accredited educational institution)

Professional Counseling Core Courses (31 hours)

- COUN 6110 - Introduction to Professional Counseling **3 credit hours**
- COUN 6150 - Career Counseling **3 credit hours**
- COUN 6170 - Group Counseling and Psychotherapy **3 credit hours**
- COUN 6180 - Laboratory in Group Counseling and Psychotherapy **1 credit hours**
- COUN 6210 - Multicultural Counseling **3 credit hours**
- COUN 6230 - Legal and Ethical Issues in Counseling **3 credit hours**
- COUN 6260 - Pre-Practicum in Counseling **3 credit hours**
- COUN 6270 - Practicum in Counseling **3 credit hours**
- COUN 6410 - Development Across the Lifespan **3 credit hours**
- COUN 6830 - Theories and Techniques of Counseling **3 credit hours**
- COUN 6840 - Measurement and Appraisal in Counseling **3 credit hours**

Clinical Mental Health Counseling Courses (24 hours)

- COUN 5655 - Foundations of Clinical Mental Health Counseling **3 credit hours**
- COUN 6520 - Psychopharmacology **3 credit hours**
- COUN 6540 - Internship: Clinical Mental Health Counseling **3 credit hours** (two semesters, **6 credit hours**)
- COUN 6765 - Diagnosis and Treatment Planning in Counseling **3 credit hours**
- COUN 6820 - Family Therapy: Evaluation and Treatment Planning **3 credit hours**
- COUN 7520 - Assessment and Treatment of Addictions **3 credit hours**
- PSY 6615 - Basic and Applied Research Methods in Psychology **3 credit hours** OR
- COUN 6610 - Introduction to Counseling Research **3 credit hours**

Mental Health Counseling Specialty Area (6 hours)

Select one:

Child/Adolescent Counseling Specialty

- PSY 6080 - Interventions with Children and Adolescents **3 credit hours**
- COUN 6885 - Play Therapy: Theory and Practice **3 credit hours**

Adult Counseling Specialty

- COUN 6800 - Topics in Adult Counseling **3 credit hours**
- COUN 6810 - Adult Counseling **3 credit hours**

Program Notes

A 100-hour combined practicum in a mental health setting and the MTSU Center for Counseling and Psychological Services is required. In addition, a 600-hour internship in a mental health setting is required.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

Professional Counseling, School Counseling Concentration, M.Ed.

Virginia Dansby, Program Director

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Ginny.Dansby@mtsu.edu

The Womack Educational Leadership Department offers the Specialist in Education degree (Ed.S.) with majors in Administration and Supervision and in Curriculum and Instruction, and it offers the Master of Education degree (M.Ed.) with majors in Administration and Supervision, Curriculum and Instruction, and Professional Counseling. The M.Ed. in Professional Counseling offers concentrations in Clinical Mental Health Counseling and School Counseling. The School Counseling concentration is developmental with a prevention/intervention focus. Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Students apply separately to the College of Graduate Studies and Professional Counseling program. Admission to the School Counseling program is not automatic for students meeting minimum admission requirements. Admissions decisions for the School Counseling Program will be made after reviewing all materials and determining the applicant's capacity, suitability, and preparation for graduate study in this area.

Successful applicants for the Master of Education in Professional Counseling with a concentration in School Counseling typically have demonstrated the following:

1. a 3.00 or higher undergraduate grade point average (If an applicant's GPA is lower than 3.00 then Professional Counseling faculty will consider applicant's academic performance during the last 60 hours of his or her undergraduate program);
2. a combined Verbal + Quantitative score of 291 (current scale) or 900 (former scale) or higher on the GRE with scores on both the Verbal and Quantitative measures of the test above 146 and 140 respectively (current scale) or 400 (former scale);
3. Three positive references on Professional Counseling recommendation form;
4. a written essay/statement of purpose on the supplemental application form in which the applicant's reason for pursuing a master's degree in Professional Counseling with a concentration in School Counseling is congruent with the focus/emphasis of the program;
5. resume that includes name, address, and phone number of applicant; school applicant attended and applicant's major, minor, and grade point average; honors and awards; and employment and volunteer experiences;
6. if invited, participation in a half-day interview within the first six (6) hours of coursework (invitation based on how the applicant compares to other applicants in relation to the other requirements). The interview is conducted by Professional Counseling faculty and a practicing mental health counselor and school counselor. Applicant must receive a positive recommendation from the faculty and counselors for program admission.

Note: Meeting minimum requirements for program admission does not guarantee admission, as applicants are selected on a competitive basis.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Application materials for Summer/Fall admission must be submitted by March 1; October 1 is the deadline for Spring admission.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts of all previous college work;
3. submit official scores on the Graduate Record Examination (GRE);
4. submit a current resume;

5. complete and submit a Professional Counseling Program supplemental application. This is available online at www.mtsu.edu/edu_leadership/. A copy of this application is also available in the Section XVI: Program Forms at the end of the program handbook at www.mtsu.edu/edu_leadership/professional_counseling/docs/Handbook.4.12.13.pdf;
6. submit recommendation forms that are specific to the counseling program. These are available at www.mtsu.edu/edu_leadership/ (Adobe pdf format). If possible, two of the recommendations should come from faculty who can attest to the applicant's academic abilities. The third can come from someone who has **either** supervised the applicant's work, has been a colleague, or has known him/her for at least three years (other than family).

Professional Counseling faculty will review all completed application files (all of the above) and, if minimal requirements are met, will arrange with the applicant for participation in an admissions interview in March or October. The admissions committee consists of Professional Counseling faculty members and at least one practicing mental health professional and school counselor.

Following the admissions interview, Professional Counseling faculty will make admissions decisions. The following are considered in the decision-making process:

1. input from regular, adjunct, and affiliate program faculty (if the applicant has taken or is currently taking classes);
2. input from practitioners who served on the admissions committee;
3. each applicant's potential success in forming effective interpersonal relationships in individual and small-group contexts;
4. each applicant's aptitude for graduate-level study, including technological competence and computer literacy;
5. each applicant's career goals and objectives and their relevance to the program; and
6. each applicant's openness to self-examination and personal and professional self-development.

Applicants will be formally notified of the admission decision by the College of Graduate Studies within 30 days of the admissions interview.

If accepted into the Professional Counseling program, the applicant must within two weeks notify the program coordinator of his/her intention to enter the program.

Degree Requirements

The Master of Education in Professional Counseling degree with a concentration in School Counseling requires completion of 49 semester hours. No more than 30 percent of the total degree hours may be dually listed as undergraduate/graduate hours.

Candidates must successfully complete the Counselor Preparation Comprehensive Examination (may be taken no more than twice).

Curriculum: Professional Counseling, School Counseling

Candidate must complete 49 hours in the following course of study:

Prerequisites/Corequisites

PSY 3020 - Basic Statistics for Behavioral Science with a minimum grade of C (or an equivalent undergraduate statistics course taken at another accredited educational institution)

An exceptional child course such as one of the following:

SPED 3010 - Characteristics and Teaching of Diverse Learners

PSY 4250 or PSY 5250 - Psychology of Exceptional Children

SPED 6800 - Exceptional Children and Youth

ELED 5201 - Observation and Participation: Grades 1-6 (with a minimum grade of B) or a teaching license

Professional Counseling Core Courses (31 hours)

- COUN 6110 - Introduction to Professional Counseling **3 credit hours**
- COUN 6150 - Career Counseling **3 credit hours**
- COUN 6170 - Group Counseling and Psychotherapy **3 credit hours**
- COUN 6180 - Laboratory in Group Counseling and Psychotherapy **1 credit hours**
- COUN 6210 - Multicultural Counseling **3 credit hours**
- COUN 6230 - Legal and Ethical Issues in Counseling **3 credit hours**
- COUN 6260 - Pre-Practicum in Counseling **3 credit hours**
- COUN 6270 - Practicum in Counseling **3 credit hours**
- COUN 6410 - Development Across the Lifespan **3 credit hours**
- COUN 6830 - Theories and Techniques of Counseling **3 credit hours**
- COUN 6840 - Measurement and Appraisal in Counseling **3 credit hours**

School Counseling Courses (18 hours)

- COUN 6160 - Foundations of School Counseling **3 credit hours**
- COUN 6610 - Introduction to Counseling Research **3 credit hours**
- COUN 6890 - Consultation **3 credit hours**
- COUN 6920 - Internship: Secondary School Counseling **1 to 6 credit hours**
- COUN 6930 - Internship: Elementary School Counseling **1 to 6 credit hours**
- An approved graduate elective **3 credit hours**

Program Notes

Students are required to complete a 100-hour practicum and two 300-hour internships in elementary and high school settings. An additional 60 hours of school experience for persons not licensed to teach are also required. Students seeking Tennessee school counseling licensure must obtain a positive recommendation from the professional counseling faculty at the end of their programs. Coursework completion is not a guarantee of the recommendation for licensure.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

School Counseling Candidates Seeking Tennessee School Counseling Licensure

All candidates seeking licensure as a school counselor in Tennessee must take and pass the Praxis II Specialty Area Test in School Guidance and Counseling (per State Department of Education criteria). This test is taken when the student is near the end of the master's program.

Students who hold a master's degree in an area other than school counseling who seek to take classes to obtain licensure as a school counselor in Tennessee must be accepted into the School Counseling program in order to do so. This admission is not automatic. Successful applicants will generally meet the same criteria as other School Counseling program applicants, as described above.

These applicants should take the following steps:

1. consult with the School Counseling program coordinator regarding what additional coursework is needed for licensure;
2. apply to the College of Graduate Studies under the category of "Addition of School Counseling License to Previous Master's";
3. submit all application materials, as described in Application Procedures, to the College of Graduate Studies;
4. attend the half-day interview if invited to do so.

Administration and Supervision, Ed.S.

James Huffman, Program Director
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The Womack Educational Leadership Department offers the Specialist in Education degree (Ed.S.) with majors in Administration and Supervision as well as Curriculum and Instruction and the Master of Education degree (M.Ed.) with majors in Administration and Supervision, Curriculum and Instruction, and Professional Counseling.

The Ed.S. in Administration and Supervision offers specializations in instructional leader licensure program (K-12 Administrator license) and higher education.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission into the Educational Specialist in Administration and Supervision program requires

1. a satisfactory score on the Miller Analogies Test, the Graduate Record Examination, or the Praxis II (Principles of Learning and Teaching) or a valid Tennessee Teacher license;
2. an earned master's degree from an accredited university or college;
3. teacher licensure—the licensure requirements will be waived for the specialization in higher education as well as under other special circumstances.

NOTE: Students pursuing an Ed.S. degree must be fully admitted to the program prior to the completion of their initial semester of coursework.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts of all previous college work;
3. submit three letters of recommendation addressing the applicant's potential for completing the Educational Specialist degree in Administration and Supervision;
4. submit official scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT) or a copy of the teaching license.

Degree Requirements

Candidate must

1. complete a minimum of 30 semester hours with a minimum of 15 semester hours at the 7000 level (see Curriculum section below for specifics);
2. successfully complete a written comprehensive examination or oral presentation of research project during the semester of graduation (exam may be retaken once during a subsequent semester).

Curriculum: Administration and Supervision

Candidate must complete 30 hours in the following course of study:

Required Courses (12 hours)

- SPSE 7200 - Administrative Behavior: Theory into Practice **3 credit hours**
- FOED 7610 - Directed Individual Educational Research **3 credit hours**

Select either research path

- SPSE 7010 - Educational Research Methodology **3 credit hours**
- FOED 7610 - Directed Individual Educational Research **3 credit hours**

or the practicum path

- SPSE 7190 - Professional Field Experience **6 credit hours**

Specialized Core (12 hours)

Selected with an advisor with at least 3 hours at the 7000 level

Electives (6 hours)

Selected with advisor

Program Notes

Students taking courses for licensure renewal, add-on endorsements, or "plus 30" upgrade on teacher licensure should register as non-degree-seeking students. Students enrolling in 6000-level courses must hold a bachelor's degree, and students enrolling in 7000-level courses must hold a master's degree. Non-degree-seeking students cannot register for 7000-level courses without departmental permission.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Administration and Supervision, Higher Education Specialization, Ed.S.

James Huffman, Program Director

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The Womack Educational Leadership Department offers the Specialist in Education degree (Ed.S.) with majors in Administration and Supervision as well as Curriculum and Instruction and the Master of Education degree (M.Ed.) with majors in Administration and Supervision, Curriculum and Instruction, and Professional Counseling. The Ed.S. in Administration and Supervision offers specializations in higher education and instructional leader licensure (K-12 administrator license).

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission into the Educational Specialist in Administration and Supervision with a specialization in higher education program requires

1. a satisfactory score on the Miller Analogies Test, the Graduate Record Examination, or the Praxis II (Principles of Learning and Teaching) or a valid Tennessee Teacher license;
2. an earned master's degree from an accredited university or college;
3. teacher licensure—the licensure requirements will be waived for the specialization in higher education as well as under other special circumstances.

NOTE: Students pursuing an Ed.S. degree must be fully admitted to the program prior to the completion of their initial semester of coursework.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts of all previous college work;
3. submit three letters of recommendation addressing the applicant's potential for completing the Educational Specialist degree in Administration and Supervision;
4. submit official scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT) or a copy of the teaching license.

Degree Requirements

Candidate must

1. complete a minimum of 30 semester hours with a minimum of 15 semester hours at the 7000 level (see Curriculum section below for specifics);
2. successfully complete a written comprehensive examination or oral presentation of research project during the semester of graduation (exam may be retaken once during a subsequent semester).

Curriculum: Administration and Supervision, Higher Education

Candidate must complete 30 hours in the following course of study:

Required Courses (12 hours)

- SPSE 7200 - Administrative Behavior: Theory into Practice **3 credit hours**
- FOED 7060 - Seminar in Educational Foundations **3 credit hours**

Select either research path

- SPSE 7010 - Educational Research Methodology **3 credit hours**
- FOED 7610 - Directed Individual Educational Research **3 credit hours**

or the practicum path

- SPSE 7190 - Professional Field Experience **6 credit hours**

Specialized Core (12 hours)

Select with an advisor with at least 3 hours at the 7000 level

Electives (6 hours)

Selected with advisor

Program Notes

Students taking courses for licensure renewal, add-on endorsements, or "plus 30" upgrade on teacher licensure should register as non-degree-seeking students. Students enrolling in 6000-level courses must hold a bachelor's degree, and students enrolling in 7000-level courses must hold a master's degree. Non-degree-seeking students cannot register for 7000-level courses without departmental permission.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Administration and Supervision, Instructional Leader Licensure Program Specialization, Ed.S.

James Huffman, Program Director
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Marvin.Peyton@mtsu.edu

The Womack Educational Leadership Department offers the Specialist in Education degree (Ed.S.) with majors in Administration and Supervision as well as Curriculum and Instruction and the Master of Education degree (M.Ed.) with majors in Administration and Supervision, Curriculum and Instruction, and Professional Counseling. The Ed.S. in Administration and Supervision offers specializations in higher education and instructional leader licensure program (K-12 administrator license). Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission into the Educational Specialist in Administration and Supervision with a specialization in instructional leader licensure (K-12 administrator license) program requires

1. a satisfactory score on the Miller Analogies Test, the Graduate Record Examination, or the Praxis II (Principles of Learning and Teaching) or a valid Tennessee Teacher license;
2. an earned master's degree from an accredited university or college;
3. teacher licensure—the licensure requirements will be waived for the specialization in higher education as well as under other special circumstances.

NOTE: Students pursuing an Ed.S. degree must be fully admitted to the program prior to the completion of their initial semester of coursework.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts of all previous college work;
3. submit three letters of recommendation addressing the applicant's potential for completing the Educational Specialist degree in Administration and Supervision;
4. submit official scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT) or a copy of the teaching license.

Degree Requirements

Candidate must

1. complete a minimum of 30 semester hours with a minimum of 15 semester hours at the 7000 level (see Curriculum section below for specifics);
2. successfully complete a written comprehensive examination or oral presentation of research project during the semester of graduation (exam may be retaken once during a subsequent semester).

Curriculum: Administration and Supervision, Instructional Leader Licensure

Candidate must complete 33 hours in the following course of study:

Required Courses (33 hours)

- FOED 6030 - School and Community Relations **3 credit hours**
- FOED 7060 - Seminar in Educational Foundations **3 credit hours**
- FOED 7610 - Directed Individual Educational Research **3 credit hours**
- SPSE 6010 - Organization and Administration of Public Schools **3 credit hours**
- SPSE 6050 - Instructional Leadership **3 credit hours**
- SPSE 6340 - School Finance **3 credit hours**
- SPSE 6390 - School Law **3 credit hours**
- SPSE 7010 - Educational Research Methodology **3 credit hours**
- SPSE 7040 - Seminar in Supervision **3 credit hours**
- SPSE 7150 - Curriculum Study and Instructional Design **3 credit hours**
- SPSE 7200 - Administrative Behavior: Theory into Practice **3 credit hours**

NOTE:

This coursework meets program licensure requirements only. Students in the program must also take the SLLA Praxis examination to complete state licensure requirements. The program is offered only in the off-campus cohort format. For further information, contact the Womack Family Educational Leadership Department PRIOR to starting the program.

Program Notes

Students taking courses for licensure renewal, add-on endorsements, or "plus 30" upgrade on teacher licensure should register as non-degree students. Students enrolling in 6000-level courses must hold a bachelor's degree, and students enrolling in 7000-level courses must hold a master's degree. Non-degree-seeking students cannot register for 7000-level courses without departmental permission.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Curriculum and Instruction, Culture, Cognition, and the Learning Process Specialization, Ed.S.

Barbara Young, Program Director
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The Womack Educational Leadership Department offers the Specialist in Education degree (Ed.S.) with majors in Administration and Supervision as well as Curriculum and Instruction and the Master of Education degree (M.Ed.) with majors in Administration and Supervision, Curriculum and Instruction, and Professional Counseling.

The Ed.S. in Curriculum and Instruction major offers a specialization in Culture, Cognition, and the Learning Process. This online degree program provides an opportunity to consider the impact and influence that cultural circumstances and mental processes have on learning and teaching in general. Onsite options are available for some courses.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Educational Specialist in Curriculum and Instruction with a specialization in culture, cognition and the learning process requires

1. a satisfactory score on the Miller Analogies Test, the Graduate Record Examination, or the Praxis II (Principles of Learning and Teaching) or a valid Teacher license;
2. an earned master's degree from an accredited university or college;
3. a grade point average (GPA) in previous academic work that reflects potential for success in the Ed.S.;
4. a valid teaching license. The licensure requirement may be waived under special circumstances.

NOTE: Students pursuing an Ed.S. degree must be fully admitted to the program prior to the completion of their initial semester of coursework.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit three letters of recommendation;
3. submit official scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT) or copy of a valid Teaching license;
4. submit official transcripts of all previous college work.

Degree Requirements

Once admitted to the program, candidate must

1. complete 30 semester hours, with a minimum of 15 at the 7000 level (see specifics in Curriculum section below);
2. successfully complete a written comprehensive examination or research project during the semester of graduation (exam may be retaken once during a subsequent semester).

Curriculum: Curriculum and Instruction, Culture, Cognition, and the Learning Process

Candidate must complete 30 hours in the following course of study:

Required Core (15 hours)

- FOED 7060 - Seminar in Educational Foundations **3 credit hours**
 - FOED 7610 - Directed Individual Educational Research **3 credit hours**
 - SPSE 7010 - Educational Research Methodology **3 credit hours** *
 - SPSE 7020 - Classroom Management: Methods and Models **3 credit hours**
 - SPSE 7170 - Learning Theories and the Educational Process **3 credit hours**
- *Note: SPSE 7010 is a prerequisite to FOED 7610*

Specialized Core (12 hours)

- SPSE 7710 - Historical and Social Contexts of Multicultural Education **3 credit hours**
- SPSE 7720 - Brain-Based Teaching and Learning in the Classroom **3 credit hours**
- SPSE 7730 - Human Diversity in a Variety of Learning Environments **3 credit hours**
- FOED 7080 - Contributions of Psychology to Education **3 credit hours**

Elective (3 hours)

Choose one from the following:

- FOED 6211 - Educational Psychology for Classroom Teachers **3 credit hours**
- FOED 6850 - Cultural Issues in Education **3 credit hours**
- SPSE 7130 - The Curriculum: Structures and Functions **3 credit hours**

Program Notes

Students taking courses for licensure renewal, add-on endorsements, or "plus 30" upgrade on teacher licensure should register as non-degree-seeking students. Students enrolling in 6000-level courses must hold a bachelor's degree, and students enrolling in 7000-level courses must hold a master's degree. Non-degree-seeking students cannot register for 7000-level courses without departmental permission.

Candidates must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the semester in which the student intends to graduate.

Curriculum and Instruction, Ed.S.

James Huffman, Program Director
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The Womack Educational Leadership Department offers the Specialist in Education degree (Ed.S.) with majors in Administration and Supervision as well as Curriculum and Instruction and the Master of Education degree (M.Ed.) with majors in Administration and Supervision, Curriculum and Instruction, and Professional Counseling.

The Ed.S. in Administration and Supervision offers specializations in higher education and instructional leader licensure (K-12 administrator license). The Ed.S. in Curriculum and Instruction major offers a specialization in culture, cognition, and the learning process.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Admission to the Educational Specialist in Curriculum and Instruction programs requires

1. a satisfactory score on the Miller Analogies Test, the Graduate Record Examination, or the Praxis II (Principles of Learning and Teaching) or a valid Tennessee Teacher license;
2. an earned master's degree from an accredited university or college;
3. a grade point average (GPA) in previous academic work that reflects potential for success in the Ed.S.;
4. a valid teaching license. The licensure requirement may be waived under special circumstances.

NOTE: *Students pursuing an Ed.S. degree must be fully admitted to the program prior to the completion of their initial semester of coursework.*

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit three letters of recommendation;
3. submit official scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT) or copy of valid Tennessee Teacher License.
4. submit official transcripts of all previous college work.

Degree Requirements

Once admitted to the program, candidate must

1. complete 30 semester hours, with a minimum of 15 at the 7000 level (see specifics in Curriculum section below);
2. successfully complete a written comprehensive examination or oral presentation of research project during the semester of graduation (exam may be retaken once during a subsequent semester).

Curriculum: Curriculum and Instruction

Candidate must complete 30 hours in the following course of study:

Required Courses (12 hours)

- SPSE 7130 - The Curriculum: Structures and Functions **3 credit hours**
- FOED 7060 - Seminar in Educational Foundations **3 credit hours**

Select either research path

- SPSE 7010 - Educational Research Methodology **3 credit hours**
- FOED 7610 - Directed Individual Educational Research **3 credit hours**

or practicum path

- SPSE 7190 - Professional Field Experience **6 credit hours**

Specialized Core (12 hours)

Selected with approval of advisor (at least 3 hours must be at 7000 level)

Electives (6 hours)

Selected in consultation with advisor

Program Notes

Students taking courses for licensure renewal, add-on endorsements, or "plus 30" upgrade on teacher licensure should register as non-degree-seeking students. Students enrolling in 6000-level courses must hold a bachelor's degree, and students enrolling in 7000-level courses must hold a master's degree. Non-degree-seeking students cannot register for 7000-level courses without departmental permission.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 credit hours;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

Graduate Minor

Education Minor

There are two patterns of minors from which a candidate may choose:

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

Library Science Minor

There are two patterns of minors from which a candidate may choose:

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

College and University Teaching Certificate

Jim Huffman, Program Director

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This certificate program offered by the Womack Educational Leadership Department has as its central goal, the preparation of students to competently assume the duties of a faculty member in an institution of higher education upon the completion of their doctoral studies. To accomplish this goal, this program includes instruction and experiences that offer preparation to develop future faculty members who

- are able to apply appropriate instructional techniques to meet specific learning goals;
- are able to effectively and independently instruct a class as instructor of record, including developing a syllabus, preparing course-appropriate learning activities, and evaluating student performance;
- are able to demonstrate understanding of the interrelationship between scholarship, teaching, and research for college and university faculty members;
- are skilled with technology in the classroom, distance and e-learning, presentation techniques, and instructional design; and
- will have a verifiable credential documenting preparation for and skill in teaching at the college/university level.

Admission Requirements

Admission to the College and University Teaching certificate program requires

1. an earned bachelor's degree from an accredited university or college;
2. an acceptable grade point average in all college work taken.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. be fully admitted to the College of Graduate Studies;
2. be fully admitted to a terminal graduate degree program at MTSU;
3. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
4. submit official transcripts of all previous college work.

Certificate Requirements

Once admitted to the program, candidates for the graduate certificate in College and University Teaching must

1. meet all of the retention and graduation requirements of the College of Graduate Studies at MTSU;
2. complete 12 hours of graduate courses (see Curriculum section below for specifics);
3. maintain a cumulative graduate grade point average of 3.00 in courses leading to the certificate;
4. successfully complete a minimum of four (4) approved workshops delivered by the Learning, Teaching, and Innovative Technologies Center or another center approved by the College of Graduate Studies. One of these workshops must have an e-learning or online teaching focus.
5. create a teaching portfolio that will be reviewed by a faculty panel who must approve the portfolio.

Curriculum: College and University Teaching

Candidate must complete 12 hours in the following course of study:

Major Field Course (3 hours)

- SPSE 7550 - Instructional Development in Higher Education **3 credit hours**

Electives (6 hours)

College teaching methodology courses selected from the following list or substitution of a discipline-specific course may be requested:

- SPSE 6210 - Legal Issues in Higher Education **3 credit hours** OR
- SPSE 7210 - Legal Issues in Higher Education **3 credit hours**
- FOED 6520 - Problems of Evaluation in Higher Education **3 credit hours** OR
- FOED 7520 - Problems of Evaluation in Higher Education **3 credit hours**
- FOED 6570 - Issues in Higher Education **3 credit hours** OR
- FOED 7570 - Issues in Higher Education **3 credit hours**
- FOED 6580 - The College Student **3 credit hours** OR
- FOED 7580 - The College Student **3 credit hours**

Teaching Practicum (3 hours)

- FOED 7560 - Seminar in College Teaching **3 credit hours**
NOTE: If available, a program-specific teaching practicum may be substituted for FOED 7560.

Program Notes

Students may transfer up to six (6) credit hours of approved coursework into the certificate program.

The time limit for use of credit toward the certificate is six years from the date of enrollment in the earliest course applied toward the certificate, including transferred courses.

With the approval of their doctoral program director, students may count up to 9 hours from the certificate program toward their Ph.D. degree requirements.

Award of this certificate is concurrent with and contingent upon award of the terminal degree.

Candidate must file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the semester in which candidate intends to graduate.

United States Culture and Education Certificate

James Huffman, Program Director

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This interdisciplinary certificate program offered through the Womack Educational Leadership Department has as its central goal to provide international students an opportunity to complete a short-term academic program of study that allows them to gain an understanding of American culture and to benefit from the opportunity to take courses in their area of interest at a leading U.S. university.

Admission Requirements

Admission to the United States Culture and Education certificate program requires

1. the student to be an international student who has met the English-language proficiency requirements of the University;
2. an earned bachelor's degree;
3. an acceptable grade point average in all college work taken.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official transcripts of all previous college work.

Certificate Requirements

Once admitted to the program, candidate must

1. meet all of the retention and graduation requirements of the College of Graduate Studies at MTSU;
2. complete 12 hours of graduate courses (see Curriculum section below for specifics);
3. maintain a cumulative graduate grade point average of 3.00 in courses leading to the certificate.

Curriculum: United States Culture and Education

Candidate must complete 12 hours in the following course of study:

Major Field Course (3 hours)

- FOED 5500 - Understanding U.S. Culture and Education **3 credit hours**

Electives (9 hours)

Students enrolled in the certificate program may select elective courses in their field of study or courses that meet their needs/interests from any department or program, subject to normal program and course restrictions (e.g., prerequisites). Emphasis will be on selection of courses that meet the academic degree requirements or interests of the international student.

Program Notes

The time limit for use of credit toward the certificate is six years from the date of enrollment in the earliest course applied toward the certificate, including transferred courses.

Candidate must file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the semester in which the student intends to graduate.

Counseling

COUN 5201 - Directed Public School Experience for Non-teachers

3 credit hours

Prerequisite: Permission of department. Open only to School Counseling students or applicants. Includes 40 hours of observation and participation in a public elementary school with directed assignments for School Counseling students who have no teaching experience. Background check required before participation.

COUN 5655 - Foundations of Clinical Mental Health Counseling

3 credit hours

Prerequisites: PSY 1410 and 3230 or equivalent. History, roles, and duties of the professional mental health counselor. Managed care and third party reimbursement issues, administration and supervision of mental health services, and other salient issues relating to the role of the professional mental health counselor.

COUN 6110 - Introduction to Professional Counseling

3 credit hours

An introductory study of the counseling profession. Basic educational, historical, philosophical and psychological foundations of counseling as well as specific traits and skills of professional counselors. Beginning level concepts and skills required for certification and licensure.

COUN 6150 - Career Counseling

3 credit hours

Prerequisites: COUN 6840 and COUN 6260 or permission of department. History, theory, and issues related to career development, career choice, and career education. Demonstration of the ability to teach career information seeking behavior and decision-making skills.

COUN 6160 - Foundations of School Counseling

3 credit hours

History, foundations, philosophy, and principles of developmental school counseling; roles and functions of school counselors, including professional and personal requirements.

COUN 6170 - Group Counseling and Psychotherapy

3 credit hours

Prerequisites: COUN 6830, COUN 6260, or permission of instructor. Corequisite: COUN 6180. Group process, ethics, and techniques. Application of counseling theory, group procedures, sociometrics, and group dynamics to interpersonal relations, mental health, school, and industrial settings. Supervised experience. Liability insurance required prior to enrollment.

COUN 6180 - Laboratory in Group Counseling and Psychotherapy

1 credit hours

Taken in conjunction with COUN 6170. Students will experience group processes as members of a growth group during the first half of the semester and will demonstrate group skills as leaders of group session(s) during the second half of the semester.

COUN 6210 - Multicultural Counseling

3 credit hours

A theoretical and skill development course related to the field of Professional Counseling. Information provided to strengthen multicultural awareness, knowledge, and skills in the competencies necessary to create helping relationships with ethnically and culturally diverse clients.

COUN 6220 - Organization and Administration of School Counseling Services

3 credit hours

Prerequisite: COUN 6160. Organizing, administering, and managing the various components of a developmental school guidance and counseling program.

COUN 6230 - Legal and Ethical Issues in Counseling

3 credit hours

Legal, ethical, and professional issues pertaining to the practice of school and mental health counseling.

COUN 6260 - Pre-Practicum in Counseling

3 credit hours

Prerequisite: COUN 6830 or permission of instructor. Introduces basic communication skills, techniques, and process involved in working with clients in a counseling relationship; extensive role-play practice with peer and faculty feedback. Liability insurance required prior to enrollment.

COUN 6270 - Practicum in Counseling**3 credit hours**

Prerequisites: COUN 6170, COUN 6180, COUN 6230, COUN 6260, COUN 6830; permission of instructor. Practical supervised experience in individual and group counseling in a school setting and MTSU Psychological Services Center; audio and/or video taping of sessions for peer and faculty feedback.

COUN 6410 - Development Across the Lifespan**3 credit hours**

Theories and characteristics of human development covering the lifespan.

COUN 6520 - Psychopharmacology**3 credit hours**

Biochemical, neurophysiological, and neuroanatomical basis; emphasis on drugs used in investigating and treating psychological disorders.

COUN 6540 - Internship: Clinical Mental Health Counseling**3 credit hours**

Prerequisites: COUN 6270 and permission of the Mental Health Counseling program coordinator. Minimum of 900 supervised internship hours in a mental health setting. May be repeated; enrollment must be continuous.

COUN 6610 - Introduction to Counseling Research**3 credit hours**

Prerequisite: PSY 3020. Research in education and psychology, research strategies, research ethics, research writing and reporting. Planning, implementing, and writing an approved scholarly research proposal.

COUN 6765 - Diagnosis and Treatment Planning in Counseling**3 credit hours**

Prerequisites: PSY 3230/PSY 5230 and COUN 6270 or equivalent; COUN 6410 recommended. Development of skills in the diagnosis and treatment of select mental disorders across the life span. Treatment planning strategies using empirically based treatment interventions. Examines effect of mental disorders on normal development.

COUN 6800 - Topics in Adult Counseling**3 credit hours**

Overview of salient issues in the counseling profession related to working with adult clients.

Introduction to topics such as spirituality, intimate partner violence, gerontological counseling and working with couples in counseling. Other topics may be added as relevant issues emerge in counseling literature.

COUN 6810 - Adult Counseling**3 credit hours**

Analysis of common issues encountered when counseling adults. Development of case conceptualization, treatment planning, and counseling intervention skills. Examines counseling as a process.

COUN 6820 - Family Therapy: Evaluation and Treatment Planning**3 credit hours**

Examination of evaluation and intervention procedures of major models of family therapy. Emphasis on ethical issues for practitioners of family therapy.

COUN 6830 - Theories and Techniques of Counseling**3 credit hours**

Survey of leading counseling theories, including applications of theories to case studies. Demonstration and practice of specific techniques.

COUN 6840 - Measurement and Appraisal in Counseling**3 credit hours**

Individual and group approaches to measurement and appraisal in counseling. Psychometric properties of tests and how to select, administer, and/or interpret aptitude, achievement, intelligence, personality, performance, and interest tests for use in counseling-related activities.

COUN 6885 - Play Therapy: Theory and Practice**3 credit hours**

Prerequisites: Permission of instructor and COUN 6260. Covers theory and techniques of play therapy useful to both the school counselor and school psychologist and to the practitioner in community practice. Includes a practicum experience using play therapy with young children in play therapy lab. Liability insurance required prior to enrollment.

COUN 6890 - Consultation**3 credit hours**

Prerequisite: COUN 6270 and permission of instructor. Course must be taken prior to or concurrent with the first internship (COUN 6920

or COUN 6930). Theory and practice of consultation as a useful technique in the helping professions. Applied experiences in schools and other settings. Liability insurance required prior to enrollment.

COUN 6900 - Assessment of School Counseling Area Licensing Competencies
1 to 2 credit hours

For the advanced student who by exceptional prior training or experience believes coursework for competence mastery is unnecessary in one or more of the licensing areas. All credit earned may be applied to a Master of Education degree in Professional Counseling. May be repeated ten times.

COUN 6910 - Independent Research: Counseling
1 to 9 credit hours

Prerequisite: Permission of instructor. Individualized empirical research and library research approved by the instructor.

COUN 6920 - Internship: Secondary School Counseling
1 to 6 credit hours

Prerequisite: COUN 6270. Actual experience in the counseling, consulting, coordinating services to adolescents, teachers, and parents. Requires 300 hours in the schools, with at least 40 percent in direct service. Liability insurance required prior to enrollment.

COUN 6930 - Internship: Elementary School Counseling
1 to 6 credit hours

Prerequisite: COUN 6270. Actual experience in the school providing counseling, consulting, coordinating services to children, teachers, and parents. Requires 300 hours in the schools, with at least 40 percent in direct service. Liability insurance required prior to enrollment.

COUN 7520 - Assessment and Treatment of Addictions
3 credit hours

Systematic analysis of the addictional phenomena with particular emphasis on dynamics and behavioral manifestations. Alcohol, street and prescription drugs, gambling, TV, religion, politics, and sex as aberrational forms of altering consciousness explored. Causation, clinical diagnostics, and treatment procedures as well as prevention addressed in detail.

Foundations of Education

FOED 5500 - Understanding U.S. Culture and Education

3 credit hours

Serves as an introduction to U.S. culture and higher education in the U.S. for international students. Emphasis on various topics that beginning students new to the U.S. need to know in order to be successful in academic, research, or business programs in the U.S.

FOED 6020 - Educational Foundations

3 credit hours

Assists educational personnel in developing contexts and concepts in which educational problems and issues may be understood through awareness of findings in humanistic and behavioral studies.

FOED 6022 - Foundations, History, and Legal Aspects of ESL and Bilingual Education

3 credit hours

Emphasizes the impact of history of education in terms of legislation and education initiatives which target and address the needs of second language learners in public school classrooms.

FOED 6030 - School and Community Relations
3 credit hours

The reciprocal relationship of the two and the skills necessary for analyzing problems and utilizing data and technical skills in planning effective school-community relations programs.

FOED 6211 - Educational Psychology for Classroom Teachers

3 credit hours

Examination of physical, social, emotional, and mental development of humans from birth to maturity. Basic theories of learning including behaviorism, constructivism, and humanism plus theories of motivating and facilitating learning processes in classroom settings.

FOED 6520 - Problems of Evaluation in Higher Education

3 credit hours

Introduction to testing theory, design, and construction. Use of the evaluation process and instruments; instructions, advising, and research situations.

FOED 6570 - Issues in Higher Education**3 credit hours**

Higher education in America and its historical, philosophical, political, and sociological background, development, and relationships. Current trends and problems, particularly those relating to the financial and legal aspects.

FOED 6580 - The College Student**3 credit hours**

The changing nature of the college student with emphasis on institutional efforts to provide for the development of the student.

FOED 6610 - Analysis and Application of Educational Research**3 credit hours**

Qualitative and quantitative research applicable to the field of education. Both producers and consumers of educational research with a literature review presented to support possible solutions to significant hypotheses or problems.

FOED 6620 - Action Research for Practitioner-Based Learning Environments**3 credit hours**

Examination of action research processes as related and applied to practitioner-required and work-based settings. Design and implementation of an IRB-approved action research study related to a selected learning environment.

FOED 6630 - Educational Tests and Measurements**3 credit hours**

Basic concepts in educational measurement and evaluation; evaluation as a part of the teaching-learning process; utilization of evaluation for instructional improvement.

FOED 6850 - Cultural Issues in Education**3 credit hours**

Explores our unique American multiculturalism and fosters exploration of teaching for diversity while promoting unity. Explores basic components of multicultural education and aids educators in developing awareness, understanding, and sensitivity to the needs and interests of ethnic and cultural groups.

FOED 6860 - Education and Digital Youth: Language Learning in a Participatory Culture**3 credit hours**

Examines the impact of digital media and the current school-aged population of English language learners. Emphasis on language learning and instruction using a variety of online media, developing multiple literacies, and designing appropriate language and content instruction using appropriate web tools.

FOED 6999 - Comprehensive Examination and Preparation**1 credit hours**

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

FOED 7060 - Seminar in Educational Foundations**3 credit hours**

Opportunities to think reflectively and critically on the historical, philosophical, and psychological foundations of education and attendant implications.

FOED 7080 - Contributions of Psychology to Education**3 credit hours**

Concepts and generalizations of the various theories of psychology and their relationships to education in such areas as motivation, retention, evaluation, discipline, capacity, practice, understanding, transfer-creative thinking, problem solving, and methods of instruction.

FOED 7520 - Problems of Evaluation in Higher Education**3 credit hours**

Introduction to testing theory, design, and construction. Use of the evaluation process and instruments; instructions, advising, and research situations.

FOED 7560 - Seminar in College Teaching**3 credit hours**

Development of the student with focus on teaching and learning.

FOED 7570 - Issues in Higher Education**3 credit hours**

Higher education in America and its historical, philosophical, political, and sociological background, development, and relationships. Current trends and problems, particularly those relating to the financial and legal aspects.

FOED 7580 - The College Student**3 credit hours**

The changing nature of the college student with emphasis on institutional efforts to provide for the development of the student.

FOED 7610 - Directed Individual Educational Research**3 credit hours**

Prerequisite: SPSE 7010. It is recommended that this class be taken the semester following enrollment in SPSE 7010. Culmination of research sequence (FOED 6610 and SPSE 7010) which requires studying a professional educational problem through completing and presenting a research project.

FOED 7611 - Research Internship**1 to 3 credit hours**

Prerequisite: FOED 7610. Must be taken each semester (not including summer) until research is completed. Completion of the research problem begun in FOED 7610. Students should continue to register for FOED 7611 each semester until completion. S/U grading.

FOED 7640 - Ed.S. Thesis Research**1 to 6 credit hours****FOED 7999 - Comprehensive Examination and Preparation****1 credit hours**

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

Library Science**LIBS 5150 - Books, Media, and Literacy for Children****3 credit hours**

Materials suitable for PreK-8 children including a study of reading skills, recreational reading, non-fiction, criteria for evaluating, selecting, and integrating Common Core and other national standards into classroom uses.

LIBS 5160 - Books, Media, and Literacy for Young People and Adults**3 credit hours**

Materials suitable for young adults and adults, including recreational reading, non-fiction, criteria for evaluating and selecting, Web-based materials, and integrating Common Core and other national standards into classroom uses. Simplified procedures for cataloging books and non-print materials, cataloging routines, and web-based systems. Library of Congress practices including RDA.

LIBS 6110 - School Library Administration**3 credit hours**

Encompasses the administration and supervision of the modern school library media center and its program. Employs the AASL standards and initiates exploration of school improvement and teaching for learning.

LIBS 6120 - Classification and Cataloging Media and Materials**3 credit hours**

Simplified procedures for cataloging books and non-print materials, cataloging routines, and web-based systems. Library of Congress practices including RDA.

LIBS 6130 - Principles of Librarianship**3 credit hours**

Presents the broad field of library service and librarianship as a profession. Emphasis on the place of the library in the instructional program of the school and on administrative details.

LIBS 6170 - Basic Reference Materials**3 credit hours**

Evaluation and use of basic reference materials to teach AASL, specified literacy skills, the reference selection process, emerging technologies for reference, search strategies.

LIBS 6180 - Library Science Practicum PreK-6
3 credit hours

Prerequisite: 12 hours of library science. Provides an opportunity to observe successful materials specialists/librarians at work and to participate in actual operations. Teaching experiences based on Common Core and AASL standards mandatory. A supervised field placement in a school library. Seminar opportunities provided for discussion and reflection.

LIBS 6190 - Library Science Practicum 7-12
3 credit hours

Prerequisite: 12 hours of library science. Provides an opportunity to observe successful materials specialists/librarians at work and to participate in actual operations. Teaching experiences based on Common Core and AASL standards mandatory. A supervised field placement in a school library. Seminar opportunities provided for discussion and reflection.

LIBS 6200 - School Library Media Center Skills and Issues
3 credit hours

Prerequisites: LIBS 6110 (LIBS 5150 already taken or concurrently with LIBS 6200). In-depth examination and practice of all aspects of school library media centers. Special emphasis on teaching for learning based on Common Core and AASL standards. Includes assessment of student performance in the library, research into current issues, strategic planning, and advocacy.

LIBS 6511 - Directed Student Teaching (Library Science)
9 credit hours

Prerequisites: All required Library Science courses; FOED 6610; must meet all requirements for admission to teacher education. A full-time, full semester of supervised teaching experience in a public school library. Provides an opportunity to observe successful materials specialists/librarians at work and to participate in actual operations followed by seminar opportunities for exchange of ideas.

LIBS 6960 - Integration of Learning Theory, Curriculum, and Technology
3 credit hours

(Same as SPSE 6960.) Discussion and examination of technology-based learning materials and adaptation to classroom instruction and individual learning styles/needs. Design, creation, and

production of technology-based learning materials that reflect professional standards, good design principles, understanding of curriculum design, and audience needs.

LIBS 6970 - Web Based Tools and Curriculum
3 credit hours

(Same as SPSE 7970.) Prerequisite: LIBS 6960 or SPSE 6960. Synthesis of design, creation, and production of instructional curriculum integrating Internet and technology-based tools throughout. Includes analysis and reflection on the curriculum created. Mentor project is completed during the semester.

LIBS 6999 - Comprehensive Examination and Preparation
1 credit hours

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

School Personnel Service Education

SPSE 5210 - General Methods Including Audio-Visual

3 credit hours
A general course.

SPSE 5220 - Technology in Teaching
3 credit hours

Prerequisite: Admission to Teacher Education Program. Use of selected hardware and software in the teaching/learning process. Design and creation of inexpensive teaching and learning materials.

SPSE 5260 - Problems in Education
1 to 3 credit hours

Opportunity for individuals or groups to work on problems related to their individual topics. Credit to be determined at the time of scheduling.

SPSE 6000 - Professional Negotiations
3 credit hours

Concepts and principles of operating a school district under the master contract. Special emphasis on the laws of various states relative to the professional negotiations process.

SPSE 6010 - Organization and Administration of Public Schools

3 credit hours

Basic concepts, principles, and practices in local, state, and federal organization and administration of education.

SPSE 6040 - Supervision of Instruction

3 credit hours

Development and purposes of supervision involving principles and techniques for organization and facilitation of programs at the school and system level.

SPSE 6050 - Instructional Leadership

3 credit hours

Research on student learning, effective teaching, and effective schools. Attention given to processes for promoting school improvement.

SPSE 6080 - Studies in Leadership

3 credit hours

Roles, responsibilities understandings, and behavior patterns in effective administrative and supervisory personnel. Developing sensitivity to individuals, the nature and structures of groups, and the problems of communication within and among groups and individuals.

SPSE 6090 - Seminar: Conducting Program for School Improvement

3 credit hours

Emphasizes motivation, identification of needs and goals, planning and organization, and utilization of various resources as components of successful school improvement programs.

SPSE 6120 - Professional Internship

9 credit hours

Requires approval of departmental chair and agreement of superintendent of the school district. May be substituted for SPSE 6040, SPSE 6600, and SPSE 6400. Educational administration and supervision experiences learned in the school setting under the supervision of a sponsoring mentor. Internship in cooperating school systems.

SPSE 6140 - Teacher Leadership for School Improvement

3 credit hours

Assessing standard teaching practices, analyzing the relationship between effective teaching and effective schools, and developing strategies for instructional

and school improvement. Includes experiences to help students become more reflective in their daily teaching.

SPSE 6210 - Legal Issues in Higher Education

3 credit hours

The legal framework as it pertains to higher education and its operations. Special attention given to rights of students as well as professors. Law cases, constitutional provisions, attorney general's opinions, rules and regulations of the Tennessee Board of Regents, Tennessee Board of Trustees, and the Tennessee Higher Education Commission studied and discussed.

SPSE 6250 - Seminar in Curriculum Improvement

3 credit hours

For the advanced major in curriculum development utilizing small group or seminar approach. Issues and research in curriculum improvement analyzed critically.

SPSE 6310 - Supervising Student Teachers

3 credit hours

Administration and supervision of student teaching.

SPSE 6330 - Elementary and Middle School Principalship

3 credit hours

The organization and administration of elementary and middle schools with emphasis on current practices, trends, and problems.

SPSE 6340 - School Finance

3 credit hours

State, local, and federal financing of education; includes taxation trends, school funds, and apportionment; evaluation of equalization plans; state bond loan programs; development and administration of school budgets; education and economy.

SPSE 6380 - Secondary School Administration

3 credit hours

Organization and administration of the modern high school with emphasis on current practices and problems.

SPSE 6390 - School Law

3 credit hours

Legal framework within which public schools operate. Special attention given to the legal rights and liabilities of school personnel and school board members. School laws, case laws, constitutional provisions,

attorneys' general rulings, and regulations of the State Board of Education emphasized.

SPSE 6400 - The Principalship
3 credit hours

Organization and administration of the modern K-12 school with emphasis on current practices and problems.

SPSE 6430 - Introduction to Curriculum Development
3 credit hours

Opportunity to study, discuss, and evaluate modern practices and procedures in curriculum development and reorganization in schools and school systems.

SPSE 6450 - Elementary and Middle School Curriculum
3 credit hours

Concepts, processes, and skills related to curriculum development and evaluation.

SPSE 6480 - Instructional Excellence in Secondary Schools
3 credit hours

Development of creative approaches for secondary classroom teaching in order to stimulate creative and critical thinking abilities of students.

SPSE 6500 - Studies in Education: Administration
1 to 3 credit hours

Individual or small group study and/or research in educational administration which provides an opportunity for in-depth study and specialization for majors. To be structured for student needs by teacher. Repeatable up to six hours.

SPSE 6520 - Studies in Education: Curriculum
1 to 3 credit hours

Individual or small group study and/or research in the area of curriculum development. To be structured for student needs by teacher. Repeatable up to six hours.

SPSE 6530 - Administration of Higher Education
3 credit hours

Complexity of the structure of higher education (national, regional, state, and local) and how it is organized. Attention given to the interrelationships of the institution and its internal and external constituencies.

SPSE 6540 - Overview of Higher Education
3 credit hours

Higher education in America. Attention given to its historical, philosophical, political, and sociological background, development, and relationships. Includes current trends and problems, particularly those which relate to the financial and legal aspects of higher education.

SPSE 6550 - Supervised Field Experience
3 or 6 credit hours

Designed to provide direct field experience in appropriate areas of school operation which will meet specific needs related to such individual matters as career plans, position changes (principals, supervisors, superintendent, curriculum directors, librarians, etc.), or needed competencies. May be repeated up to a maximum of six hours.

SPSE 6560 - Studies in Education: Supervision
1 to 3 credit hours

Individual or small group study and/or research in the area of supervision of instruction. To be based on individual needs and structured by teacher. Repeatable up to six hours.

SPSE 6590 - Independent Study in Higher Education
1 to 3 credit hours

A practicum in higher education. Course will vary to meet the needs of individual students who are interested in making a specialized study of current problems in the field of higher education.

SPSE 6600 - Microcomputers in Educational Administration
3 credit hours

Offers preparation for incorporating microcomputer technology into the school work-place. Student designs a model school administrative unit by applying the microcomputer skills and understanding acquired.

SPSE 6640 - Microcomputers in the K-12 Educational Setting
3 credit hours

Offers preparation for incorporating microcomputer technology into the K-12 school environment. Student designs a computer-assisted instruction project by applying the microcomputer skills and understanding acquired.

SPSE 6712 - Fieldwork and Applied Research in ESL Learning Environments

3 credit hours

Prerequisites: Program admission and YOED 6020. A field-based course for English as a Second Language teachers. Application of fieldwork and case study research in an ESL classroom. Examines issues, professionalism, and challenges. Ten hours of fieldwork in an ESL learning environment required.

SPSE 6715 - Applied Research and Practice in Teaching English as an International Language

3 credit hours

Provides opportunities for examination of current research, principles, and effective practices in teaching English as an International Language (EIL). Examines specific EIL methods, strategies, and techniques appropriate for teaching EIL in a variety of learning settings. Content and course activities include the development and implementation of standards-based lessons and application of methods for teaching EIL. Applied research and fieldwork in an EIL setting required.

SPSE 6800 - Language and Linguistics for ESL Teachers

3 credit hours

Elements of structure of language in the context of second language learners in the PreK-12 classroom. Sound systems, cognitive processes, aspects of language and psychology of learning English as a second language when the learner is non-literate in the first language. Required for the add-on endorsement in ESL.

SPSE 6810 - Grammar for the ESL Classroom

3 credit hours

Examines the constructs of the English grammar system. Explores grammatical metalanguage, lexicon, approaches to teaching grammar and language, and classroom applications for ESL classrooms. Presents information regarding the grammatical form and meaning as related to teaching and learning for second language learners in the K-12 environment.

SPSE 6820 - Second Language Acquisition: Cultural Aspects, Theory, and Research for Teachers

3 credit hours

Focus on specific theories and research pertaining to second language acquisition for the PreK-12 classroom teacher. Emphasis on cultural aspects and applications appropriate for English as a Second

Language students in today's linguistically diverse public school classrooms.

SPSE 6830 - Assessment and Evaluation of English Language Learners

3 credit hours

Examines the role of assessment in the education of linguistically diverse students in the PreK-12 classroom. Focus on formal and informal methods of assessing language proficiency, state and national testing initiatives, test preparation, and interpretation of test results. Fieldwork required.

SPSE 6900 - Online Learning and Instructional Design

3 credit hours

Assessment of effectiveness and efficiency of various learning systems and learning modules. Stresses need for systematic approaches to instruction. Practice in stating behavioral objectives, motivation, adaptation, evaluation, and systems assessment in which media are utilized as integral parts of learning modules.

SPSE 6910 - Problems in Learning Resources

3 credit hours

Consideration of recent developments in curriculum, teaching, physical facilities, and innovations in library service and media utilization. Includes participation in projects such as media and materials for handicapped, educational TV, library skills, graphic communication, library activities for specific subjects or groups, and individualization of instruction.

SPSE 6920 - Automation of Library Processes

3 credit hours

Application of data processing and computerization techniques to acquisitions, cataloging, circulation, and business operations of libraries and media centers. Includes an examination of newer developments such as MARC, facsimile transmission, and automated retrieval of data. Basic technical courses recommended prior to taking this course.

SPSE 6960 - Integration of Learning Theory, Curriculum, and Technology

3 credit hours

(Same as LIBS 6960.) Discussion and examination of technology-based learning materials and adaptation to classroom instruction and individual learning styles/needs. Design, creation, and production of technology-based learning materials that reflect professional standards, good design principles,

understanding of curriculum design, and audience needs.

SPSE 6999 - Comprehensive Examination and Preparation

1 credit hours

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

SPSE 7000 - Professional Negotiations

3 credit hours

Concepts and principles of operating a school district under the master contract. Special emphasis on the laws of various states relative to the professional negotiations process.

SPSE 7010 - Educational Research Methodology

3 credit hours

Designing research studies, including development of understandings, as well as skills and techniques needed in gathering, structuring, interpreting and presenting data required for educational research. SPSE 7010 is a prerequisite for enrollment in FOED 7610, which is recommended to be taken the following semester.

SPSE 7020 - Classroom Management: Methods and Models

3 credit hours

Introduction, examination, and practice in approaches to classroom management through evaluation within a diverse setting. Research on classroom management and discipline within the classroom presented for analysis and interpretation. General topics include theories/models of discipline, management, organization, teacher behaviors, individual differences, and legal issues that impact the teaching and learning environment. Emphasis placed on importance of informed decision making and reflection in relation to classroom management and evaluation.

SPSE 7040 - Seminar in Supervision

3 credit hours

Identification and investigation of the problems of supervision and research; experimentation in the use of supervisory techniques.

SPSE 7050 - School Business Management

3 credit hours

Reading, discussion, and problem solving in the field of business administration.

SPSE 7080 - Studies in Leadership

3 credit hours

Roles, responsibilities understandings, and behavior patterns in effective administrative and supervisory personnel. Developing sensitivity to individuals, the nature and structures of groups, and the problems of communication within and among groups and individuals.

SPSE 7090 - Seminar: Conducting Program for School Improvement

3 credit hours

Emphasizes motivation, identification of needs and goals, planning and organization, and utilization of various resources as components of successful school improvement programs.

SPSE 7100 - The Junior Community College

3 credit hours

History, philosophy, organization, administration, current developments, and problems in two-year colleges.

SPSE 7110 - Readings in Educational Administration

3 credit hours

Review of the research literature on the social and political processes involved in the development and implementation of public policy and legislation relating to education at the national, state, and local levels.

SPSE 7120 - Professional Internship

9 credit hours

Requires approval of departmental chair and agreement of superintendent of the school district. May be substituted for SPSE 6040, SPSE 6600, and SPSE 6400. Educational administration and supervision experiences learned in the school setting under the supervision of a sponsoring mentor. Internship in cooperating school systems.

SPSE 7130 - The Curriculum: Structures and Functions

3 credit hours

Scope, sequence, organization, and priorities involved in the development of "continuity of educational experience" from kindergarten through grades 13-14.

SPSE 7150 - Curriculum Study and Instructional Design

3 credit hours

Readings in current research relative to basic and emerging ideas of curriculum development and instructional design.

SPSE 7160 - Practicum in Curriculum Development

3 credit hours

Principles and practices of curriculum construction applied through simulated and field experiences.

SPSE 7170 - Learning Theories and the Educational Process

3 credit hours

Examines the historical and current learning theoretical principles, concepts, and research findings as related to education in a variety of settings. Focuses on cognitive, behavioral, constructivist, and humanistic learning theorists, theories and applications.

SPSE 7180 - Qualitative Evaluation and Research Methods

3 credit hours

Theoretical factors, methodological approaches, and frameworks related to evaluating and conducting qualitative research. Students required to identify specific problems and apply qualitative concepts and procedures related to classroom practice.

SPSE 7190 - Professional Field Experience

6 credit hours

Provides direct field experience in appropriate areas of education in collaboration with the University, the school mentor, and the student.

SPSE 7200 - Administrative Behavior: Theory into Practice

3 credit hours

An exploration of the relevant new developments in the field of educational administration, including recent concepts and research.

SPSE 7210 - Legal Issues in Higher Education

3 credit hours

The legal framework as it pertains to higher education and its operations. Special attention given to rights of students as well as professors. Law cases, constitutional provisions, attorney general's opinions, rules and regulations of the Tennessee Board of Regents, Tennessee Board of Trustees, and the

Tennessee Higher Education Commission studied and discussed.

SPSE 7220 - Advanced Educational Technology

3 credit hours

Advanced teaching strategies using technology with online instruction, distance learning tools, computer simulations, applets, webpage construction, presentation software, streaming-videos and multimedia applications. Explores how technology tools support teaching and research in both K-12 and college level learning environments.

SPSE 7250 - Seminar in Curriculum Improvement

3 credit hours

For the advanced major in curriculum development utilizing small group or seminar approach. Issues and research in curriculum improvement analyzed critically.

SPSE 7280 - Ethnographic Methods and Analysis

3 credit hours

Formative theoretical models of ethnography with emphasis on paradigms of thinking, applications, and methods of analysis. Focus on ethical considerations, fieldwork, and related issues present in the naturalistic research environment.

SPSE 7320 - Educational Facilities and Transportation Services

3 credit hours

Development of competencies in the areas of school plant planning, maintenance and utilization, financing, analysis of transportation, survey of school plant, site selection, and educational specifications.

SPSE 7500 - Studies in Education: Administration

1 to 3 credit hours

Individual or small group study and/or research in educational administration which provides an opportunity for in-depth study and specialization for majors. To be structured for student needs by teacher. Repeatable up to six hours.

SPSE 7520 - Studies in Education: Curriculum

1 to 3 credit hours

Individual or small group study and/or research in the area of curriculum development. To be structured for student needs by teacher. Repeatable up to six hours.

SPSE 7530 - Administration of Higher Education

3 credit hours

Complexity of the structure of higher education

(national, regional, state, and local) and how it is organized. Attention given to the interrelationships of the institution and its internal and external constituencies.

SPSE 7540 - Overview of Higher Education
3 credit hours

Higher education in America. Attention given to its historical, philosophical, political, and sociological background, development, and relationships. Includes current trends and problems, particularly those which relate to the financial and legal aspects of higher education.

SPSE 7550 - Instructional Development in Higher Education
3 credit hours

Addresses effective college teaching, instructional strategies, and use of technology in teaching at the higher education level.

SPSE 7560 - Studies in Education: Supervision
1 to 3 credit hours

Individual or small group study and/or research in the area of supervision of instruction. To be based on individual needs and structured by teacher. Repeatable up to six hours.

SPSE 7590 - Independent Study in Higher Education
1 to 3 credit hours

A practicum in higher education. Course will vary to meet the needs of individual students who are interested in making a specialized study of current problems in the field of higher education.

SPSE 7710 - Historical and Social Contexts of Multicultural Education
3 credit hours

Explores the history of multicultural education, social policy, equity issues and legislation from the settling of America to the current national education initiatives that impact classrooms. Examines the relationship between societal influences, equity issues, and classroom practice in light of the cultural milieu and challenges existing in today's classrooms.

SPSE 7720 - Brain-Based Teaching and Learning in the Classroom
3 credit hours

Focuses on applying brain-based learning principles in the classroom. Examines standard educational

practices today in light of what we now know about the brain.

SPSE 7730 - Human Diversity in a Variety of Learning Environments
3 credit hours

Diversity issues such as race, ethnicity, and culture covered through issues that impact society in general and classroom dynamics (teaching/learning) in particular.

SPSE 7900 - Online Learning and Instructional Design
3 credit hours

Assessment of effectiveness and efficiency of various learning systems and learning modules. Stresses need for systematic approaches to instruction. Practice in stating behavioral objectives, motivation, adaptation, evaluation, and systems assessment in which media are utilized as integral parts of learning modules.

SPSE 7970 - Web Based Tools and Curriculum
3 credit hours

(Same as LIBS 6970.) Prerequisite: LIBS 6960 or SPSE 6960. Synthesis of design, creation, and production of instructional curriculum integrating Internet and technology-based tools throughout. Includes analysis and reflection on the curriculum created. Mentor project is completed during the semester.

Youth Education

YOED 5020 - Residency I: Grades K-12
6 credit hours

Prerequisites: Admission to teacher education program; successful completion of YOED 2500, YOED 3000, YOED 3300 with a grade of B or better; overall grade point average maintained at a minimum of 2.75; grade point average in the major at a minimum of 2.50; and senior standing. A school-based clinical experience in a problem-based learning format in art, drama, music, or physical education.

YOED 5030 - Residency I: Grades 7-12
9 credit hours

Prerequisites: Admission to teacher education program; successful completion of YOED 2500, YOED 3000, YOED 3300 with a grade of B or better; overall grade point average maintained at a minimum of 2.75; grade point average in the major at a minimum of 2.5; and senior standing. A school-based

clinical experience in a problem-based learning format.

YOED 5110 - Directed Teaching, Grades 7-12
9 to 12 credit hours

Prerequisites: All required professional education courses; appropriate special methods course(s); admission to teacher education. A full-day, full-semester supervised teaching experience in a public school classroom. Pass/Fail.

YOED 5400 - Residency II
12 credit hours

Prerequisites: Admission to teacher education program; successful completion of YOED 2500, YOED 3000, YOED 3300, YOED 4020, or YOED 4040 with grade of B or better; passing score(s) on the specialty area exam(s) of Praxis II; overall grade point average maintained at a minimum of 2.75; grade point average in the major at a minimum of 2.50; and senior standing. A full-day, full-semester supervised teaching experience in a public school classroom. Pass/Fail

YOED 5510 - The Teaching Internship, Grades 7-12
3 to 9 credit hours

Directed field experience which will meet specific needs related to individual needed competencies. Applicant must meet all prerequisites for directed teaching.

YOED 6020 - Literacy Instruction for ESL Learners
3 credit hours

Analysis and application of strategies, instructional methods, and techniques appropriate for developing and implementing literacy instruction for ESL learners in the classroom. Focus on research-based literacy methods and standards-based instruction for varying levels of English proficiency and newly-arriving immigrant students. Fieldwork required.

YOED 6030 - Content Instruction for English Language Learners
3 credit hours

Focuses on analysis and application of strategies, instructional methods, and techniques appropriate for developing and implementing content-area instruction for ESL learners in the classroom. Focus on state and nationally adopted models and methods for integrated language and standards-based content instruction. Fieldwork required.

YOED 6100 - Aviation Workshop
4 credit hours

(Same as AERO 6100.) A first course in aerospace education; provides an overview of aerospace historically and in the future. A workshop course that meets eight hours per day and includes an aircraft flight, field trips, and an overnight stay.

YOED 6110 - International Aerospace Education Seminar-Europe and the Mideast
3 credit hours

Acquaints teachers with aerospace implications on an international scale. Outstanding international points of interest in six or more countries visited. Offered in July Term of the summer.

YOED 6111 - International Aerospace Education Seminar-The Americas
3 credit hours

Acquaints teachers with aerospace implications on an international scale. Outstanding international points of interest in six or more countries visited. Offered in July Term of the summer.

YOED 6112 - International Aerospace Education Seminar-The Far East
3 credit hours

Acquaints teachers with aerospace implications on an international scale. Outstanding international points of interest in six or more countries visited. Offered in July Term of the summer.

YOED 6540 - Problems in Aerospace Education
1 to 3 credit hours

(Same as AERO 6540.) Content varies with needs of individual students who are interested in making a specialized study of current problems in the field of aerospace education.

YOED 6680 - Issues and Trends in Teaching and Learning
3 credit hours

Emphasis on examining current issues and trends in teaching and learning.

YOED 6700 - Advanced Aviation Workshop
4 credit hours

(Same as AERO 6700.) Builds on prior experiences in aviation/aerospace. Essential for the prospective teacher or aerospace education courses at any level. A workshop that meets eight hours per day and includes an aircraft flight, field trips, and overnight stay.

YOED 6999 - Comprehensive Examination and Preparation

1 credit hours

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

Elementary and Special Education

Amy Childre, Chair

(615) 898-2680

www.mtsu.edu/elementary/

The Department of Elementary and Special Education offers the Master of Education degree with majors in Curriculum and Instruction, Literacy, and Special Education as well as graduate minors in Curriculum and Instruction, Reading, and Special Education.

The major in Curriculum and Instruction offers concentrations in Early Childhood Education, Elementary School Education, and Middle School Education. Specializations in initial licensure and inclusion education are also available. Concentrations in Mildly/Moderately Disabled Students, Preschool Disabled Students, and Severely/Profoundly Disabled Students are available through the Special Education major. The Specialist in Education degree is offered with a major in Curriculum and Instruction and a concentration in Elementary Education.

The department also offers the Master of Education in Advanced Studies in Teaching and Learning through the Regents Online Degree Program (RODP).

Advanced Studies in Teaching and Learning, Early and Middle Childhood Literacy: Reading-Language Arts Concentration, M.Ed.

Beverly Boulware, Program Director
(615) 904-8243

Beverly.Boulware@mtsu.edu

The Master of Education in Advanced Studies in Teaching and Learning (M.Ed.) with a concentration in Early and Middle Childhood Literacy: Reading-Language Arts is offered through the Regent's Online Degree Program (RODP) and is delivered following the standard protocol established for the delivery of RODP courses and programs. The mission of this program is to provide advanced professional preparation in the area of reading and language arts for practicing teachers.

Admission Requirements

Students seeking admission to the Master of Education program are expected to score at least 380 on the Miller Analogies Test or 281 (current scale) or 700 (former scale) on the Graduate Record Examination or the minimum on a National Teachers Examination that meets Tennessee licensure standards. Candidates must hold a current teaching license.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Record Examination (GRE), Principles of Learning and Teaching Exam (PRAXIS II), or Miller Analogies Test (MAT);
3. submit official transcripts of all previous college work.

Degree Requirements

The major in Advanced Studies in Teaching and Learning with a Childhood Literacy: Reading-Language Arts concentration requires completion of a total of 33 hours.

Students must maintain a portfolio throughout the M.Ed. program.

Candidates must successfully complete a written comprehensive exam to be taken in the last semester of coursework (may be taken no more than twice).

Curriculum: Advanced Studies in Teaching and Learning, Childhood Literacy: Reading-Language Arts

Candidate must complete 33 hours in the following course of study:

Required Courses (15 hours)

- ASTL 6700 - Portfolio Development **3 credit hours**
- ASTL 6701 - Teacher as Learner **3 credit hours**
- ASTL 6721 - Theory and Foundation of Developmental Literacy (Literacy I) **3 credit hours**
- ASTL 6703 - Knowledge of the Learner **3 credit hours**
- ASTL 6723 - Understanding and Implementing Best Practices in Teaching Beginning Literacy (Literacy II) **3 credit hours**

Specialized Core (18 hours)

- ASTL 6705 - Assessment of Learning **3 credit hours**
- ASTL 6706 - Learning Strategies/Instructional Strategies **3 credit hours**
- ASTL 6725 - Understanding and Implementing Best Practices for Continued Literacy Growth in the Middle Grades (Literacy III) **3 credit hours**
- ASTL 6726 - Diagnosing Literacy Problems K-8 (Literacy IV) **3 credit hours**
- ASTL 6709 - Action Research **3 credit hours**
- ASTL 6729 - Remediation of Literacy Problems K-8 (Literacy V) **3 credit hours**

Program Notes

For more information, refer to the RODP website at www.rodop.org.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to the completion of 21 semester hours credit;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

Curriculum and Instruction, Early Childhood Education Concentration, M.Ed.

Suzette Gilbert, Program Director
(615) 898-2322

Suzette.Gilbert@mtsu.edu

The Department of Elementary and Special Education offers the Master of Education degree with a major in Curriculum and Instruction. The major in Curriculum and Instruction offers concentrations in Early Childhood Education, Elementary School Education, and Middle School Education. A specialization in inclusion education is available as is a specialization leading to initial licensure.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Students seeking admission to the Master of Education program are expected to score at least 386 on the Miller Analogies Test or 281 (current scale) or 700 (former scale) on the Graduate Record Examination or the minimum on a National Teachers Examination that meets Tennessee licensure standards.

Applicant must

1. have at least a 2.75 undergraduate GPA for full admission and 2.50 undergraduate GPA for conditional admission;
2. have elementary teaching licensure, the attainment of which may require additional undergraduate courses prior to the completion of the degree;
3. have an initial conference with an appropriate graduate advisor in the Department of Elementary and Special Education.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Record Examination (GRE), Principles of Learning and Teaching Exam (PRAXIS II), or Miller Analogies Test (MAT);
3. submit official transcripts of all previous college work.

Degree Requirements

The Master of Education in Curriculum and Instruction with a concentration in Early Childhood Education requires completion of a total of 33 hours. Candidates must successfully complete a written comprehensive to be taken in the last semester of coursework (may be taken no more than twice).

Curriculum: Curriculum and Instruction, Early Childhood Education Concentration

Candidate must complete 33 hours in the following course of study:

Required Courses (9 hours)

- ELED 6010 - The Teacher as Reflective Practitioner **3 credit hours**
- ELED 6340 - Introduction to Educational Research **3 credit hours**
- ELED 6370 - Education and Ethno-Cultural Diversity **3 credit hours**

Specialized Core (12 hours)

See advisor for selection. Cognates include curriculum and instruction, research, mathematics, literacy, special education, and English language learners.

Electives (12 hours)

To be selected within the range of specialized courses or with the consent of the advisor.

Program Notes

Any course requiring admission to Teacher Education may require observations, case studies, or other time in K-6 classes.

Candidate must

1. file a degree plan in the College of Graduate Studies before completion of 21 semester hours credit;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which candidate intends to graduate.

Curriculum and Instruction, Elementary School Education Concentration, M.Ed.

Suzette Gilbert, Program Director
(615) 898-2322

Suzette.Gilbert@mtsu.edu

The Department of Elementary and Special Education offers the Master of Education degree with a major in Curriculum and Instruction. The major in Curriculum and Instruction offers concentrations in Early Childhood Education, Elementary School Education, and Middle School Education. A specialization in inclusion education is available as is a specialization leading to initial licensure.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Students seeking admission to the Master of Education program are expected to score at least 380 on the Miller Analogies Test or 281 (current scale) or 700 (former scale) on the Graduate Record Examination or the minimum on a National Teachers Examination that meets Tennessee licensure standards.

Applicant must

1. have at least a 2.75 undergraduate GPA for full admission and 2.50 undergraduate GPA for conditional admission;
2. have elementary teaching licensure, the attainment of which may require additional undergraduate courses prior to the completion of the degree;
3. have an initial conference with an appropriate graduate advisor in the Department of Elementary and Special Education.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Record Examination (GRE), Principles of Learning and Teaching Exam (PRAXIS II), or Miller Analogies Test (MAT);
3. submit official transcripts of all previous college work.

Degree Requirements

The Master of Education in Curriculum and Instruction with a concentration in Elementary Education requires completion of a total of 33 hours. Candidates must successfully complete a written comprehensive to be taken in the last semester of coursework (may be taken no more than twice).

Curriculum: Curriculum and Instruction, Elementary School Education Concentration

Candidate must complete 33 hours in the following course of study:

Required Courses (9 hours)

- ELED 6010 - The Teacher as Reflective Practitioner **3 credit hours**
- ELED 6340 - Introduction to Educational Research **3 credit hours**
- ELED 6370 - Education and Ethno-Cultural Diversity **3 credit hours**

Specialized Core (12 hours)

See advisor for selection. Cognates include curriculum and instruction, research, mathematics, literacy, special education, and English language learners.

Electives (12 hours)

To be selected within the range of specialized courses or with the consent of the advisor.

Program Notes

Any course requiring admission to Teacher Education may require observations, case studies, or other time in K-6 classes.

Candidate must

1. file a degree plan in the College of Graduate Studies before completion of 21 semester hours credit;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

Curriculum and Instruction, Elementary School Education, Inclusion Education Specialization, M.Ed.

Suzette Gilbert, Program Director
(615) 898-2322

Suzette.Gilbert@mtsu.edu

The Department of Elementary and Special Education offers the Master of Education degree with a major in Curriculum and Instruction. The major in Curriculum and Instruction offers concentrations in Early Childhood Education, Elementary School Education, and Middle School Education. A specialization in inclusion education is available as is a specialization leading to initial licensure.

Admission Requirements

Students seeking admission to the Master of Education program are expected to score at least 386 on the Miller Analogies Test or 700 (former scale) or 281 (current scale) on the Graduate Record Examination or the minimum on a National Teachers Examination that meets Tennessee licensure standards.

Applicant must

1. have at least a 2.75 undergraduate GPA for full admission and 2.50 undergraduate GPA for conditional admission;
2. have elementary teaching licensure, the attainment of which may require additional undergraduate courses prior to the completion of the degree;
3. have an initial conference with an appropriate graduate advisor in the Department of Elementary and Special Education.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Record Examination (GRE), Principles of Learning and Teaching Exam (PRAXIS II), or Miller Analogies Test (MAT);
3. submit official transcripts of all previous college work.

Degree Requirements

The Master of Education in Curriculum and Instruction with an inclusion education specialization requires completion of 33 hours. Candidate must successfully complete a written comprehensive to be taken in the last semester of coursework (may be taken no more than twice).

Curriculum: Curriculum and Instruction, Elementary School Education, Inclusion Education

Candidate must complete 33 hours in the following course of study:

Required Courses (9 hours)

- ELED 6010 - The Teacher as Reflective Practitioner **3 credit hours**
- ELED 6340 - Introduction to Educational Research **3 credit hours**
- ELED 6370 - Education and Ethno-Cultural Diversity **3 credit hours**

Specialized Core (9 hours)

- ELED 6400 - Teaching the Special Needs Learner in the Heterogeneous Classroom **3 credit hours**
- SPED 6710 - Action Research in Special Education **3 credit hours**
- SPED 6380 - Collaborative and Consulting Skills in Special Education **3 credit hours**
- See advisor for course selection **3 credit hours**

Specialization Courses (15 hours)

Choose Track I or Track II:

Track I

Add-on endorsement in Special Education: Modified K-12 (if licensed in Elementary Education K-8)*

- SPED 6020 - Overview of Special Education **3 credit hours**
- SPED 6300 - Theoretical Perspectives on High Incidence Disabilities **3 credit hours**
- SPED 6310 - Issues in Assessment of High Incidence Disabilities **3 credit hours**
- SPED 6330 - Theories of Instruction for High Incidence Disabilities **3 credit hours**
- SPED 5240 - Methods and Techniques of Behavior Management **3 credit hours**
**Transcript analysis required for those seeking add-on endorsement in either Elementary or Special Education*

Track II

Add-on endorsement in Special Education: Modified K-8 (if licensed in Special Education K-12)*

- ELED 6090 - Creating Learning Environments for Young Children **3 credit hours**
- ELED 6200 - The Classroom as Community **3 credit hours**
- ELED 6390 - STEM Education in the Elementary School **3 credit hours**
- ELED 6450 - Current Trends and Issues in the Elementary School **3 credit hours**
- ELED 6620 - Assessment of Teaching and Learning **3 credit hours**
**Transcript analysis is required for those seeking add-on endorsement in either Elementary or Special Education.*

Note:

A specialized teaching practicum will be required for those students with less than two years of documented successful teaching in either elementary or special education:

- SPED 5260 - Problems in Special Education A-Z **1 to 3 credit hours** (Add-on endorsement in Special Education)
- ELED 5260 - Problems in Elementary Education **1 to 3 credit hours** (Add-on endorsement in Elementary Education)

Program Notes

Any course requiring admission to Teacher Education may require observations, case studies, or other time in K-6 classes.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to completion of 21 semester hours credit;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

Curriculum and Instruction, Initial Licensure - Grades 4-8 Specialization, M.Ed.

Tracey Huddleston, Program Director
(615) 898-2680

Tracey.Huddleston@mtsu.edu

The Department of Elementary and Special Education offers the Master of Education degree with a major in Curriculum and Instruction. The major in Curriculum and Instruction offers concentrations in Early Childhood Education, Elementary School Education, and Middle School Education. A specialization in inclusion education is available as is a specialization leading to initial licensure and initial licensure: grades 4-8. Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Students seeking admission to the Master of Education program are expected to score at least 380 on the Miller Analogies Test or 281 (current scale) or 700 (former scale) on the Graduate Record Examination or the minimum on a National Teachers Examination that meets Tennessee licensure standards.

Applicant must

1. have at least a 2.75 undergraduate GPA for full admission and 2.50 undergraduate GPA for conditional admission;
2. have elementary teaching licensure, the attainment of which may require additional undergraduate courses prior to the completion of the degree;
3. have an initial conference with an appropriate graduate advisor in the Department of Elementary and Special Education.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Record Examination (GRE), Principles of Learning and Teaching Exam (PRAXIS II), or Miller Analogies Test (MAT);
3. submit official transcripts of all previous college work.

Degree Requirements

The Master of Education in Curriculum and Instruction with an initial licensure: grades 4-8 specialization is a 48-hour program that includes a nine-hour internship. These candidates must meet requirements for admission to teacher education and internship in addition to the traditional graduate admission requirements.

Candidates must successfully complete a written comprehensive exam to be taken in the last semester of coursework (may be taken no more than twice).

Curriculum: Curriculum and Instruction, Initial Licensure - Grades 4-8

Candidate must complete 48 hours in the following course of study:

Required Courses (9 hours)

- ELED 6340 - Introduction to Educational Research **3 credit hours**
- ELED 6370 - Education and Ethno-Cultural Diversity **3 credit hours**
- ELED 6580 - Effective Management Practices for the Elementary Classroom **3 credit hours**

Specialized Core (9 hours)

- ELED 6500 - The Science of Learning and Teaching **3 credit hours**
- ELED 6260 - Problems in Elementary Education **1 to 3 credit hours**
- ELED 6560 - Assessment **3 credit hours**

Specialized Courses (21 hours)

All courses require admission to Teacher Education.

- READ 5460 - Content Literacy **3 credit hours**
- 15 hours of content courses (5000-6000 level)
Choose one based on content area:
- ELED 6510 - Language Arts **3 credit hours**
- ELED 6530 - Teaching Social Studies **3 credit hours**
- ELED 6540 - Teaching Science **3 credit hours**
- ELED 6550 - Teaching Mathematics **3 credit hours**

Specialized Required Internship (9 hours)

- ELED 5510 - The Teaching Internship, Grades 1-8 **9 credit hours**

Program Notes

Any course requiring admission to Teacher Education may require observations, case studies, or other time in 4-8 classes.

Candidate must

1. file a degree plan in the College of Graduate Studies before completion of 21 semester hours credit;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

Curriculum and Instruction, Initial Licensure Specialization, M.Ed.

Tracey Huddleston, Program Director

(615) 898-2680

Tracey.Huddleston@mtsu.edu

The Department of Elementary and Special Education offers the Master of Education degree with a major in Curriculum and Instruction. The major in Curriculum and Instruction offers concentrations in Early Childhood Education, Elementary School Education, and Middle School Education. A specialization in inclusion education is available as is a specialization leading to initial licensure.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Students seeking admission to the Master of Education program are expected to score at least 380 on the Miller Analogies Test or 281 (current scale) or 700 (former scale) on the Graduate Record Examination or the minimum on a National Teachers Examination that meets Tennessee licensure standards.

Applicant must

1. have at least a 2.75 undergraduate GPA for full admission and 2.50 undergraduate GPA for conditional admission;
2. have elementary teaching licensure, the attainment of which may require additional undergraduate courses prior to the completion of the degree;
3. have an initial conference with an appropriate graduate advisor in the Department of Elementary and Special Education.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Record Examination (GRE), Principles of Learning and Teaching Exam (PRAXIS II), or Miller Analogies Test (MAT);
3. submit official transcripts of all previous college work.

Degree Requirements

The Master of Education in Curriculum and Instruction with an initial licensure specialization is a 48-hour program that includes a nine-hour internship. These candidates must meet requirements for admission to teacher education and internship in addition to the traditional graduate admission requirements.

Candidates must successfully complete a written comprehensive exam to be taken in the last semester of coursework (may be taken no more than twice).

Curriculum: Curriculum and Instruction, Initial Licensure

Required Courses (9 hours)

- ELED 6340 - Introduction to Educational Research **3 credit hours**
- ELED 6580 - Effective Management Practices for the Elementary Classroom **3 credit hours**
- YOED 6030 - Content Instruction for English Language Learners **3 credit hours**

Specialized Core (9 hours)

- ELED 6370 - Education and Ethno-Cultural Diversity **3 credit hours** OR
- SPED 6800 - Exceptional Children and Youth **3 credit hours**
- ELED 6500 - The Science of Learning and Teaching **3 credit hours**
- See advisor for additional course selection

Specialized Courses (21 hours)

All courses require admission to Teacher Education.

- READ 5130 - Literacy Assessment **3 credit hours**
- READ 6520 - Teaching Reading **3 credit hours**
- ELED 6510 - Language Arts **3 credit hours**
- ELED 6530 - Teaching Social Studies **3 credit hours**
- ELED 6540 - Teaching Science **3 credit hours**
- ELED 6550 - Teaching Mathematics **3 credit hours**
- ELED 6560 - Assessment **3 credit hours**

Specialized Required Internship (9 hours)

Requires admission to Teacher Education

- ELED 5510 - The Teaching Internship, Grades 1-8 **9 credit hours**

Program Notes

Any course requiring admission to Teacher Education may require observations, case studies, or other time in K-6 classes.

Candidate must

1. file a degree plan in the College of Graduate Studies before completion of 21 semester hours credit;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

Curriculum and Instruction, Middle School Education Concentration, M.Ed.

Suzette Gilbert, Program Director
(615) 898-2322

Suzette.Gilbert@mtsu.edu

The Department of Elementary and Special Education offers the Master of Education degree with a major in Curriculum and Instruction. The major in Curriculum and Instruction offers concentrations in Early Childhood Education, Elementary School Education, and Middle School Education. A specialization in inclusion education is available as is a specialization leading to initial licensure.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Students seeking admission to the Master of Education program are expected to score at least 380 on the Miller Analogies Test or 281 (current scale) or 700 (former scale) on the Graduate Record Examination or the minimum on a National Teachers Examination that meets Tennessee licensure standards.

Applicant must

1. have at least a 2.75 undergraduate GPA for full admission and 2.50 undergraduate GPA for conditional admission;
2. have elementary teaching licensure, the attainment of which may require additional undergraduate courses prior to the completion of the degree;
3. have an initial conference with an appropriate graduate advisor in the Department of Elementary and Special Education.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Record Examination (GRE), Principles of Learning and Teaching Exam (PRAXIS II), or Miller Analogies Test (MAT);
3. submit official transcripts of all previous college work.

Degree Requirements

The Master of Education in Curriculum and Instruction with a concentration in Middle School Education requires completion of 33 hours. Candidates must successfully complete a written comprehensive to be taken in the last semester of coursework (may be taken no more than twice).

Curriculum: Curriculum and Instruction, Middle School Education Concentration

Candidate must complete 33 hours in the following course of study:

Required Courses (9 hours)

- ELED 6010 - The Teacher as Reflective Practitioner **3 credit hours**
- ELED 6340 - Introduction to Educational Research **3 credit hours**
- ELED 6370 - Education and Ethno-Cultural Diversity **3 credit hours**

Specialized Core (12 hours)

See advisor for selection. Cognates include curriculum and instruction, research, mathematics, literacy, special education, and English language learners.

Electives (12 hours)

To be selected within the range of specialized courses or with the consent of the advisor.

Program Notes

Any course requiring admission to Teacher Education may require observations, case studies, or other time in K-6 classes.

Candidate must

1. file a degree plan in the College of Graduate Studies before completion of 21 semester hours credit;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

Literacy, M.Ed.

Alyson Bass, Program Director

(615) 898-2146

Alyson.Bass@mtsu.edu

The Department of Elementary and Special Education offers the Master of Education degree with a major in Literacy that leads to the Literacy endorsement, Reading Specialist, PreK-12.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Students seeking admission to the Master of Education program are expected to score at least 380 on the Miller Analogies Test or 281 (current scale) or 700 (former scale) on the Graduate Record Examination or the minimum on a National Teachers Examination that meets Tennessee licensure standards.

Candidates must hold a current teaching license. Three years successful classroom experience as a licensed teacher and the PRAXIS 10300 are required to add the Reading Specialist endorsement.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Record Examination (GRE), Principles of Learning and Teaching Exam (PRAXIS II), or Miller Analogies Test (MAT);
3. submit official transcripts of all previous college work.

Degree Requirements

The Master of Education in Literacy requires completion of a total of 33 hours. Candidates must successfully complete a written comprehensive to be taken in the last semester of coursework (may be taken no more than twice).

Curriculum: Literacy

Candidate must complete 33 hours in the following course of study:

Required Core (27 hours)

- READ 6000 - Foundations of Literacy **3 credit hours** *
 - READ 6710 - Adolescent Literacy **3 credit hours** *
 - READ 6720 - Instructional Tools in Literacy **3 credit hours** *
 - READ 6730 - Curriculum and Supervision of Literacy Instruction **3 credit hours** *
 - READ 6750 - Research in Literacy **3 credit hours** *
 - READ 6760 - Early Literacy **3 credit hours** *
 - ELED 6000 - Teaching Writing **3 credit hours** *
 - ELED 6380 - Empowerment Through Literacy **3 credit hours** *
 - ELED 6620 - Assessment of Teaching and Learning **3 credit hours** *
- *required for licensure***

Additional Requirement for Licensure (3 hours)

- READ 6790 - Literacy Practicum **3 to 6 credit hours**

Elective Course (3 hours)

Selected from the following:

- READ 5130 - Literacy Assessment **3 credit hours**
- READ 5460 - Content Literacy **3 credit hours**
- READ 6120 - Current Issues in Literacy Instruction **1 to 3 credit hours**
- DYST 6000 - Introduction to Dyslexia and Other Reading Difficulties **3 credit hours**
- DYST 6010 - Identifying Students with Dyslexia and Other Reading Difficulties **3 credit hours**
- DYST 6011 - Interventions for Dyslexia and Other Reading Difficulties **3 credit hours**
- DYST 6020 - Adolescents with Dyslexia and Other Literacy Difficulties **3 credit hours**
- ELED 6330 - Play **3 credit hours**
- ELED 6370 - Education and Ethno-Cultural Diversity **3 credit hours**
- ELED 6400 - Teaching the Special Needs Learner in the Heterogeneous Classroom **3 credit hours**
- ELED 6500 - The Science of Learning and Teaching **3 credit hours**
- LIBS 5150 - Books, Media, and Literacy for Children **3 credit hours**
- LIBS 5160 - Books, Media, and Literacy for Young People and Adults **3 credit hours**

Program Notes

Any course requiring admission to Teacher Education may require observations, case studies, or other time in K-6 classes.

Candidate must

1. file a degree plan in the College of Graduate Studies after having completed 21 semester hours credit;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

Special Education, Mildly/Moderately Disabled Students Concentration, M.Ed.

Lesley Craig-Unkefer, Program Director
(615) 898-2687

Lesley.Craig-Unkefer@mtsu.edu

The Department of Elementary and Special Education offers the Master of Education degree with a major in Special Education and concentrations in Mildly/Moderately Disabled Students, Preschool Disabled Students, and Severely/Profoundly Disabled Students.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Students seeking admission to the Master of Education program must have an undergraduate GPA of 2.75 or higher or a minimum of twelve hours in special education at the graduate level with a GPA of 3.00 or higher.

Applicants must take the Miller Analogies Test (and obtain a minimum score of 385) or the Graduate Record Exam (obtaining scores on the Verbal and Quantitative measures which normally exceed 146 and 140 respectively [current scale] or 400 [former scale] with a total combined score that normally exceeds 286 [current scale] or 800 [former scale]).

Applicants must have a teaching license in special education for admission to the program in Special Education with a concentration in Mildly/Moderately Disabled Students. Candidates without the appropriate license may be admitted to the graduate program as non-degree-seeking students. Once licensure requirements are met, candidate may reapply for admission to the program in special education. A candidate not licensed in special education may apply for a waiver to the license requirement by signing a waiver form stating that he/she wishes to receive a master's degree in special education without a license to teach.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT);
3. submit official transcripts of all previous college work.

Degree Requirements

The Master of Education in Special Education requires completion of a total of 33 hours. Candidate must successfully complete a written comprehensive examination to be taken in the last semester of coursework (may be taken no more than twice).

Curriculum: Special Education, Mildly/Moderately Disabled Students

Candidate must complete 33 hours in the following course of study:

Required Core (9 hours)

- SPED 6780 - Issues in Special Education **3 credit hours**
- FOED 6610 - Analysis and Application of Educational Research **3 credit hours**
- SPED 6710 - Action Research in Special Education **3 credit hours**

Concentration Courses (15 hours)

- SPED 6300 - Theoretical Perspectives on High Incidence Disabilities **3 credit hours**
- SPED 6310 - Issues in Assessment of High Incidence Disabilities **3 credit hours**
- SPED 6330 - Theories of Instruction for High Incidence Disabilities **3 credit hours**
- SPED 6360 - Transition Education and Services for Exceptional Learners **3 credit hours**
- SPED 6380 - Collaborative and Consulting Skills in Special Education **3 credit hours**

Restricted/Specialized Electives (9 hours)

To be selected with consent of advisor or the following if seeking licensure:

- SPED 5240 - Methods and Techniques of Behavior Management **3 credit hours**
- SPED 5280 - Assistive Technology in Special Education **3 credit hours**
- SPED 6020 - Overview of Special Education **3 credit hours**

Specialized Teaching Practicum

(3 hours for licensure - can be waived with two years documented successful teaching in special education)

- SPED 5260 - Problems in Special Education A-Z **1 to 3 credit hours** (Modified)
NOTE for initial licensure students: Additional coursework may be required in math and/or reading following a detailed transcript evaluation for students seeking initial teaching licensure in special education.

Program Notes

Any course requiring admission to Teacher Education may require observations, case studies, or other time in K-6 classes.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to completion of 21 semester hours credit;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

Master's in Special Education-Non-Licensed

Persons who do not hold a license in special education but wish to work toward a master's degree in special education with a concentration in Mildly/Moderately Disabled Students may ask for an exception to the license prerequisite. This would allow the individual to complete a master's degree, but the degree would not lead to licensure. Persons who complete this degree will not be licensed to teach special education upon completion of the degree.

Special Education, Preschool Disabled Students Concentration, M.Ed.

Lesley Craig-Unkefer, Program Director

(615) 898-2687

Lesley.Craig-Unkefer@mtsu.edu

The Department of Elementary and Special Education offers the Master of Education degree with a major in Special Education and concentrations in Mildly/Moderately Disabled Students, Preschool Disabled Students, and Severely/Profoundly Disabled Students.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Students seeking admission to the Master of Education program must have an undergraduate GPA of 2.75 or higher or a minimum of twelve hours in special education at the graduate level with a GPA of 3.00 or higher.

Applicants must take the Miller Analogies Test (and obtain a minimum score of 385) or the Graduate Record Exam (obtaining scores on the Verbal and Quantitative measures that normally exceed 146 and 140 respectively [current scale] or 400 [former scale] with a total combined score that normally exceeds 286 [current scale] or 800 [former scale]).

Applicants must have a teaching license in special education, early childhood education, or elementary education for admission to the program in preschool. Candidates without the appropriate license may be admitted to the graduate program as non-degree-seeking students. Once licensure requirements are met, the candidate may reapply for admission to the program in special education. A candidate not licensed in special education may apply for a waiver to the license requirement by signing a waiver form stating that he/she wishes to receive a master's degree in special education without a license to teach.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT);
3. submit official transcripts of all previous college work.

Degree Requirements

The major in Special Education with a concentration in Preschool Disabled Students requires completion of a total of 33 hours. Candidate must successfully complete a written comprehensive examination to be taken in the last semester of coursework (may be taken no more than twice).

Curriculum: Special Education, Preschool Disabled Students

Candidate must complete 33 hours in the following course of study:

Required Core (6 hours)

- FOED 6610 - Analysis and Application of Educational Research **3 credit hours**
- SPED 6710 - Action Research in Special Education **3 credit hours**

Concentration Courses (15 hours)

- SPED 6900 - Characteristics of Preschool Children with Disabilities **3 credit hours**
- SPED 6910 - Developmental Assessment **3 credit hours**
- SPED 6920 - Laboratory Experience I **3 credit hours**
- SPED 6930 - Methods of Working with Children Who Are Developmentally Delayed **3 credit hours**
- SPED 6950 - Laboratory Experience II **3 credit hours**

Concentration Courses if Seeking Licensure (15 hours)

- SPED 6900 - Characteristics of Preschool Children with Disabilities **3 credit hours**
- SPED 6910 - Developmental Assessment **3 credit hours**
- SPED 6930 - Methods of Working with Children Who Are Developmentally Delayed **3 credit hours**
- SPED 6380 - Collaborative and Consulting Skills in Special Education **3 credit hours**
- SPED 6720 - Promoting Family-Professional Partnerships in Special Education **3 credit hours**

Restricted/Specialized Electives (9–15 hours)

To be selected with consent of advisor or the following if seeking licensure:

- SPED 5240 - Methods and Techniques of Behavior Management **3 credit hours**
- SPED 5280 - Assistive Technology in Special Education **3 credit hours**
- SPED 6020 - Overview of Special Education **3 credit hours**

Specialized Teaching Practicum (6 hours for licensure)

- SPED 6920 - Laboratory Experience I **3 credit hours**
- SPED 6950 - Laboratory Experience II **3 credit hours**

Note for Initial Licensure Students

NOTE for initial licensure students: Additional coursework may be required in math and/or reading following a detailed transcript evaluation for students seeking initial teaching licensure in special education.

Program Notes

Any course requiring admission to Teacher Education may require observations, case studies, or other time in K-6 classes.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to completion of 21 semester hours credit;

2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

Special Education, Severely/Profoundly Disabled Students Concentration, M.Ed.

Lesley Craig-Unkefer, Program Director
(615) 898-2687

Lesley.Craig-Unkefer@mtsu.edu

The Department of Elementary and Special Education offers the Master of Education degree with a major in Special Education and concentrations in Mildly/Moderately Disabled Students, Preschool Disabled Students, and Severely/Profoundly Disabled Students.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Students seeking admission to the Master of Education program must have an undergraduate GPA of 2.75 or higher or a minimum of twelve hours in special education at the graduate level with a GPA of 3.00 or higher.

Applicants must take the Miller Analogies Test (and obtain a minimum score of 385) or the Graduate Record Exam (obtaining scores on the Verbal and Quantitative measures which normally exceed 146 and 140 respectively [current scale] or 400 [former scale] with a total combined score which normally exceeds 286 [current scale] or 800 [former scale]).

Applicants must have a teaching license in special education for admission to the Special Education with a concentration in Severely/Profoundly Disabled Students program. Candidates without the appropriate license may be admitted to the graduate program as non-degree-seeking students. Once licensure requirements are met, the candidate may reapply for admission to the program in special education. A candidate not licensed in special education may apply for a waiver to the license requirement by signing a waiver form stating that he/she wishes to receive a master's degree in special education without a license to teach.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT);
3. submit official transcripts of all previous college work.

Degree Requirements

The Master of Education in Special Education with a concentration in Severely/Profoundly Disabled Students requires completion of a total of 33 hours. Candidate must successfully complete a written comprehensive examination to be taken in the last semester of coursework (may be taken no more than twice).

Curriculum: Special Education, Severely/Profoundly Disabled Students

Candidate must complete 33 hours in the following course of study:

Required Core (9 hours)

- SPED 6780 - Issues in Special Education **3 credit hours**
- FOED 6610 - Analysis and Application of Educational Research **3 credit hours**
- SPED 6710 - Action Research in Special Education **3 credit hours**

Concentration Courses (15 hours)

- SPED 6380 - Collaborative and Consulting Skills in Special Education **3 credit hours**
- SPED 6410 - Characteristics and Teaching of Learners with Low Incidence Disabilities **3 credit hours**
- SPED 6910 - Developmental Assessment **3 credit hours**
- SPED 6360 - Transition Education and Services for Exceptional Learners **3 credit hours**
- SPED 6720 - Promoting Family-Professional Partnerships in Special Education **3 credit hours**

Restricted/Specialized Electives (9 hours)

To be selected with consent of advisor or the following if seeking licensure:

- SPED 5240 - Methods and Techniques of Behavior Management **3 credit hours**
- SPED 5280 - Assistive Technology in Special Education **3 credit hours**
- SPED 6020 - Overview of Special Education **3 credit hours**

Specialized Teaching Practicum (3 hours for licensure)

(3 hours for licensure - can be waived with two years documented successful teaching in special education)

- SPED 5260 - Problems in Special Education A-Z **1 to 3 credit hours**

Note:

Note for initial licensure students: *Additional coursework may be required in math and/or reading following a detailed transcript evaluation for students seeking initial teaching licensure in special education.*

Program Notes

Any course requiring admission to Teacher Education may require observations, case studies, or other time in K-6 classes.

Candidate must

1. file a degree plan in the College of Graduate Studies after having completed 21 semester hours credit;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

Special Education Master's-Non-Licensed

Persons who do not hold a license in special education but wish to work toward a master's degree in Special Education with a concentration in Severely/Profoundly Disabled Students may ask for an exception to the license

prerequisite. This would allow the individual to complete a master's degree but the degree would not lead to licensure. Persons who complete this degree will not be licensed to teach special education upon completion of the degree.

Curriculum and Instruction, Elementary Education Concentration, Ed.S.

Kathleen Burriss, Program Director
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The Department of Elementary and Special Education offers the Specialist in Education degree with a major in Curriculum and Instruction and a concentration in Elementary Education.

Please see undergraduate catalog for information regarding undergraduate programs.

Admission Requirements

Students seeking admission to the Specialist in Education program are expected to score at least 397 on the Miller Analogies Test or 291 (current scale) or 800 (former scale) on the Graduate Record Examination.

Applicant must

1. hold a master's degree;
2. have a minimum of three years teaching experience in an elementary setting;
3. have an initial conference with an appropriate graduate advisor in the Department of Elementary and Special Education.

Application Procedures

All application materials are to be submitted to the College of Graduate Studies.

Applicant must

1. submit an application with the appropriate application fee (online at www.mtsu.edu/graduate/apply.php);
2. submit official scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT);
3. submit official transcripts of all previous college work.

Degree Requirements

The Specialist in Education in Curriculum and Instruction with a concentration in Elementary Education requires completion of a total of 30 hours.

Candidate must

1. successfully complete a thesis pertaining to an area of emphasis within the scope of elementary education;
2. successfully complete an oral defense.

Curriculum: Curriculum and Instruction, Elementary Education

Candidate must complete 30 hours in the following course of study:

Required Core (9 hours)

- ELED 7250 - From Policy to Practice in American Public Schools **3 credit hours**
- ELED 7340 - Introduction to Educational Research **3 credit hours** (Optional)
- ELED 7350 - Introduction to Qualitative Methods **3 credit hours**

Specialized Courses (9 hours)

- ELED 6470 - Designing and Implementing Problem Based Learning **3 credit hours**
- ELED 7380 - Internship **3 credit hours**
- ELED 7640 - Ed.S. Thesis Research **1 to 6 credit hours**

Cognate (12 hours)

Four courses (12 hours) may be identified outside the Curriculum and Instruction major. A candidate may choose four courses (12 hours) in the curriculum and instruction discipline. Electives include:

Research

- ELED 6350 - Introduction to Qualitative Methods **3 credit hours**
- ELED 6640 - Thesis: Elementary Education **1 to 3 credit hours**
- PSY 6280 - Psychological Statistics: Regression **3 credit hours** AND
- PSY 6281 - Psychological Statistics: Regression Lab **0 credit hours**
- PSY 6290 - Psychological Statistics: ANOVA **3 credit hours** AND
- PSY 6291 - Psychological Statistics: ANOVA Lab **0 credit hours**

English as Second Language

- YOED 6020 - Literacy Instruction for ESL Learners **3 credit hours**
- SPSE 6800 - Language and Linguistics for ESL Teachers **3 credit hours**
- SPSE 6810 - Grammar for the ESL Classroom **3 credit hours**
- SPSE 6820 - Second Language Acquisition: Cultural Aspects, Theory, and Research for Teachers **3 credit hours**

Special Education

Inclusion track for students seeking licensure

- SPED 5240 - Methods and Techniques of Behavior Management **3 credit hours**
- SPED 6300 - Theoretical Perspectives on High Incidence Disabilities **3 credit hours**
- SPED 6310 - Issues in Assessment of High Incidence Disabilities **3 credit hours**
- SPED 6330 - Theories of Instruction for High Incidence Disabilities **3 credit hours**

Literacy

- READ 6710 - Adolescent Literacy **3 credit hours**
- READ 6730 - Curriculum and Supervision of Literacy Instruction **3 credit hours**
- READ 6760 - Early Literacy **3 credit hours**
- READ 6790 - Literacy Practicum **3 to 6 credit hours**

Math

- MATH 6100 - Mathematics for Teachers **3 credit hours**
- MATH 6320 - Mathematical Problem Solving **3 credit hours**
Choose two:
- MATH 6330 - Algebra for Teachers **3 credit hours**

- MATH 6340 - Geometry for Teachers **3 credit hours**
- MATH 6350 - Probability and Statistics for Teachers **3 credit hours**

Program Notes

Any course requiring admission to Teacher Education may require observations, case studies, or other time in K-6 classes. Requirements for licensure should be checked in the Teacher Licensing Office.

Candidate must

1. file a degree plan in the College of Graduate Studies prior to completion of 21 semester hours credit;
2. file a Notice of Intent to Graduate form in the College of Graduate Studies within the first two weeks of the term in which the student intends to graduate.

Curriculum and Instruction Minor

The Curriculum and Instruction minor does not meet licensure requirements in elementary education.

Students desiring a graduate minor in Curriculum and Instruction in Early Childhood, Elementary School Education, or Middle School Education should complete 18 semester hours in elementary education.

Curriculum

Required Courses (12 hours):

- ELED 6090 - Creating Learning Environments for Young Children **3 credit hours**
- ELED 6100 - The Early Adolescent Learner **3 credit hours**
- ELED 6200 - The Classroom as Community **3 credit hours**
- ELED 6620 - Assessment of Teaching and Learning **3 credit hours**

Electives (6 hours):

Chosen in consultation with advisor

Reading Minor

A minor is available in Reading, the content of which is determined through collaborative consultation with the student's major advisor and the advisor for Reading.

Special Education Minor

This does not meet licensure requirements in Special Education.

Students desiring a minor at the graduate level in Special Education must complete 18 semester hours in Special Education to include

- SPED 6020 - Overview of Special Education **3 credit hours**
- SPED 6800 - Exceptional Children and Youth **3 credit hours**
- 12 additional semester hours of 6000 courses in Special Education.

Dyslexic Studies

DYST 6000 - Introduction to Dyslexia and Other Reading Difficulties

3 credit hours

Prerequisite: Permission of the instructor. Overview of the history and science of dyslexia and other reading disabilities. Examines the value of integrating insights from the cognitive psychology and neuroscience into diagnostic, therapeutic, and instructional models of literacy. Explores the etiology and prevalence of reading disabilities and addresses current issues in assessment and intervention.

DYST 6010 - Identifying Students with Dyslexia and Other Reading Difficulties

3 credit hours

Prerequisites: Permission of the instructor and DYST 6000. Details the profile of dyslexia and other reading disabilities. Develops competency in choosing appropriate testing batteries for identification, administering valid and reliable measures, and interpreting and communicating the results. Outlines how to use assessment data to plan instruction and monitor progress.

DYST 6011 - Interventions for Dyslexia and Other Reading Difficulties

3 credit hours

Prerequisites: Permission of instructor and DYST 6000. Details the elements of intervention for children with dyslexia and other reading disabilities. Increases competency in identifying and implementing effective interventions based on student skills and characteristics. Covers evidence-based interventions in phonemic awareness, phonics, fluency, vocabulary, comprehension, and writing.

DYST 6012 - Multisensory Teaching Strategies with Practicum

4 credit hours

Prerequisite: Permission of the department and bachelor's degree or advanced degree in the education field. Focuses on the multisensory teaching of reading, spelling, and handwriting as well as advanced skills such as syllabication and structural analysis. Participants learn theory and teaching strategies and then apply this knowledge while tutoring a student twice a week for ten weeks. Students will submit two videotapes of lesson and supporting materials to the instructor for critique.

DYST 6020 - Adolescents with Dyslexia and Other Literacy Difficulties

3 credit hours

Prerequisite: Permission of instructor and bachelor's degree or advanced degree in the education field. Overview of literacy difficulties faced by adolescents with particular emphasis on dyslexia. Develops competency in assessing and planning for literacy instruction, within and beyond the general education classroom setting in middle and high school.

DYST 6999 - Comprehensive Examination and Preparation

1 credit hours

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

DYST 7000 - Introduction to Dyslexia and Other Reading Difficulties

3 credit hours

Prerequisite: Permission of the instructor. Overview of the history and science of dyslexia and other reading disabilities. Examines the value of integrating insights from the cognitive psychology and neuroscience into diagnostic, therapeutic, and instructional models of literacy. Explores the etiology and prevalence of reading disabilities and addresses current issues in assessment and intervention.

DYST 7010 - Identifying Students with Dyslexia and Other Reading Difficulties

3 credit hours

Prerequisites: Permission of the instructor and DYST 7000. Details the profile of dyslexia and other reading disabilities. Develops competency in choosing appropriate testing batteries for identification, administering valid and reliable measures, and interpreting and communicating the results. Outlines how to use assessment data to plan instruction and monitor progress.

DYST 7011 - Interventions for Dyslexia and Other Reading Difficulties

3 credit hours

Prerequisites: Permission of the instructor and DYST 7000. Details the elements of intervention for children with dyslexia and other reading disabilities. Increases

competency in identifying and implementing effective interventions based on student skills and characteristics. Covers evidence-based interventions in phonemic awareness, phonics, fluency, vocabulary, comprehension, and writing.

Early Childhood Education

ECE 5300 - Preschool Practicum 3 credit hours

Prerequisites: CDFS 2350 or ECE 2350, CDFS or ECE 3310, CDFS 4370 or ECE 4370 permission of instructor. Corequisite: ECE 5301. Advanced information and skills working with three- and four-year-olds. Lab interaction with children; planning and implementation of curriculum. Laboratory plus two-hour seminar per week.

ECE 5301 - Preschool Practicum Lab 0 credit hours

Corequisite: ECE 5300.

ECE 5330 - Primary Practicum 3 credit hours

Prerequisites: ECE 4300, 4380; ELED 3050; admission to teacher education. Advanced knowledge and skills in working with kindergarten and primary age students. Consists of field experiences in the appropriate development and implementation of curriculum in kindergarten and one other primary grade. Laboratory and two-hour seminar per week.

ECE 5331 - Primary Practicum Lab 0 credit hours

Corequisite: ECE 5301.

ECE 5350 - Parenting 3 credit hours

Developing knowledge and understanding of parenting and parent/child interaction theories. Examination and development of parent education programs.

ECE 5360 - Administering Early Childhood Programs 3 credit hours

Prerequisites: Admission to teacher education; ECE 4300 or ECE 4380; or permission of instructor. Examines diverse early care and education settings and their influence on child development. Emphasis on program planning and administration in early childhood settings. One hour per week of observation required.

ECE 5370 - Effective Instruction (Birth-5 years) 3 credit hours

Prerequisites: CDFS 2350 or ECE 2350, CDFS or ECE 3310, or permission of instructor. A comprehensive exploration of the knowledge and skills necessary for designing and implementing curricula appropriate for programs serving children birth to five years.

ECE 5380 - Infant and Toddler Practicum 3 credit hours

Prerequisites: CDFS 2350 or ECE 2350, CDFS or ECE 3310, and 4370/ECE 5370 or permission of instructor. Corequisite: ECE 5381. Advanced information and skills in working with infants and toddlers (birth to three years). Lab participation involving interactions with children as well as planning and implementing curriculum required. Laboratory and a two-hour seminar per week.

ECE 5381 - Infant and Toddler Practicum Lab 0 credit hours

Corequisite: ECE 5380.

Elementary Education

ELED 5201 - Observation and Participation: Grades 1-6

3 credit hours

Directed laboratory experiences for teachers desiring to add an endorsement to their certificates. Includes language arts, math, science, social studies, art, and music.

ELED 5260 - Problems in Elementary Education 1 to 3 credit hours

A problem-oriented course, on or off campus, planned and designed for individuals, school faculty, school systems, or other professional groups that will provide opportunities for in-service education related to assessed needs. Credit toward a degree limited to six semester hours.

ELED 5510 - The Teaching Internship, Grades 1-8 9 credit hours

A supervised internship available only to those with at least one year of paid teaching experience in the major in which endorsement is sought. Applicants must meet all prerequisites for student teaching.

ELED 6000 - Teaching Writing 3 credit hours

An in-depth exploration of students' efforts to become

writers. Presents theoretical and practical strategies for establishing an effective writing environment based on current research.

ELED 6010 - The Teacher as Reflective Practitioner

3 credit hours

Articulates the role of and explores the varied dimensions of the process of reflective teaching as it may be utilized by the elementary, special education, reading, or secondary teacher. Prerequisite for all Curriculum and Instruction (Early Childhood Education, Elementary School Education, and Middle School Education) candidates.

ELED 6030 - The Early Childhood Practitioner, K-4
3 credit hours

Emphasis on the emerging theories which have influenced current programs.

ELED 6090 - Creating Learning Environments for Young Children

3 credit hours

Prerequisite: ELED 6010. In-depth analysis of social, emotional, language, and cognitive variables that impact young children's learning and allow teachers to plan and maintain proactive environments. Required for those students wishing to concentrate in Early Childhood Education.

ELED 6100 - The Early Adolescent Learner
3 credit hours

Prerequisite: ELED 6010. Reflects on the early adolescent while focusing on the student-centered school environment and the appropriately well-balanced curriculum. Required for those students wishing to concentrate in Middle School Education.

ELED 6130 - Current Issues in Elementary Language Arts

1 credit hours

Prerequisite: ELED 6010. Overview of current issues surrounding the teaching of language arts.

ELED 6140 - Current Issues in Elementary Social Studies

1 credit hours

Prerequisite: ELED 6010. Overview of current issues and trends surrounding the teaching of social studies. Topics will vary from semester to semester.

ELED 6170 - The Multi-Age Classroom

1 credit hours

Prerequisite: ELED 6010. Examines the basic alternatives and tools that have been shown to be effective in multi-age classrooms in both primary and middle grades.

ELED 6180 - Research and Advanced Methods in Elementary School Mathematics

3 credit hours

Explores knowledge and methods needed to effectively teach elementary school mathematics in relation to current research on mathematical pedagogy. Reflects upon teaching in comparison to the current literature on best practices in order to effectively implement these strategies.

ELED 6190 - Current Issues in Elementary Science
1 credit hours

Prerequisite: ELED 6010. Investigates current issues relating to the study and teaching of elementary school science. Topics will vary from semester to semester.

ELED 6200 - The Classroom as Community
3 credit hours

Prerequisite: ELED 6010. Explores the classroom community with respect to definitions and practice. Teachers will reflect on how their beliefs and attitudes influence practice. Required for all students.

ELED 6252 - Technologies that Invite and Adapt: Teaching and Learning in a Media World

3 credit hours

Explores content and technologies available to teachers of elementary and middle school children. Focuses on the adaptation of existing technologies to enhance student learning

ELED 6253 - Web-Based Multimedia Development for Elementary and Middle School

3 credit hours

The design, development, and implementation of knowledge-based multimedia learning environments for elementary and middle school students.

ELED 6260 - Problems in Elementary Education
1 to 3 credit hours

A problems course offering an opportunity to study, discuss, and evaluate current problems in elementary education from a K-6 perspective.

ELED 6290 - Inquiry in the Classroom**3 credit hours**

An in-depth study of the inquiry process as it relates to teachers in the classroom. Theory and practice combine as teachers engage in their own research to improve classroom instruction.

ELED 6330 - Play**3 credit hours**

Content provides educators with the social, emotional, and cognitive benefits of play for children's learning and development.

ELED 6340 - Introduction to Educational Research**3 credit hours**

Research methodologies in education. Rationalistic and naturalistic paradigms explored with respect to problem statements and literature reviews. At the 7000 level, students will broaden the scope of their research to include original data collection, analysis, and interpretation.

ELED 6350 - Introduction to Qualitative Methods**3 credit hours**

An overview of qualitative research methods in the field of education. ELED 7350 offers candidates field experience to collect data for analysis and interpretation.

ELED 6360 - Interpreting Data for Decision Making**3 credit hours**

Prerequisite: ELED 6340. Introduces various ways to collect, analyze, and interpret rationalistic data.

ELED 6370 - Education and Ethno-Cultural**Diversity****3 credit hours**

Explores the ethno-cultural issues, concepts, and theories that impact teaching practice. Course content linked to students' (anticipated) professional needs and interests. Prior professional, cross-cultural, or international experience welcomed. Exposes participants to social dimensions of ethno-cultural diversity that increasingly impact pedagogy.

ELED 6380 - Empowerment Through Literacy**3 credit hours**

Introduction of power structures in the country as a whole and in schools. Language structures; how language and literacy play a role in defining identities of power.

ELED 6390 - STEM Education in the Elementary School**3 credit hours**

Prerequisite: ELED 6010. Explores research and current trends in science, technology, engineering, and mathematics (STEM) in the elementary school classroom. Reflection upon the importance of teaching and integrating the STEM disciplines.

ELED 6400 - Teaching the Special Needs Learner in the Heterogeneous Classroom**3 credit hours**

Prerequisite: ELED 6010 (prerequisite requirement for elementary education majors only). Helps develop skills, beliefs, and attitudes necessary for effectively incorporating and teaching special needs learners in a heterogeneous classroom.

ELED 6450 - Current Trends and Issues in the Elementary School**3 credit hours**

Explores current issues and trends in the elementary school. Reflection upon the impact for teachers, students, and learning outcomes.

ELED 6460 - Contemporary Literacies**3 credit hours**

Examines contemporary aspects of literacy education in many genres. Attention given to current research along with the principles of teaching reading and writing using a variety of literacy frameworks.

ELED 6470 - Designing and Implementing Problem Based Learning**3 credit hours**

Provides a template for designing, implementing, and assessing problem-based learning in K-8 classrooms.

ELED 6480 - Problem-Based Learning: Teacher as Mentor**3 credit hours**

Knowledge, skills, and dispositions needed to effectively communicate, assess, and mentor teacher candidates.

ELED 6500 - The Science of Learning and Teaching**3 credit hours**

Explores educational theory, classroom management and learning environments. Candidates use both theory and data to inform practice.

ELED 6510 - Language Arts**3 credit hours**

Explores language learning and teaching. Introduces various theories about cognition, language, and language learning, including second language acquisition and various strategies for teaching language arts. Public school practicum required.

ELED 6530 - Teaching Social Studies**3 credit hours**

Prerequisite: Valid teaching license or acceptance into the teacher education program. Introduces students to philosophy and need for teaching social studies in the K-6 classroom and to a variety of instructional strategies for teaching social studies.

ELED 6540 - Teaching Science**3 credit hours**

Prerequisites: Admission to the teacher education program; ELED 6500. Introduces students to various philosophies for teaching science in the K-6 classroom and to a variety of instructional strategies for teaching science.

ELED 6550 - Teaching Mathematics**3 credit hours**

Prerequisites: Admission to teacher education program or a valid teaching license; ELED 6500. Orientation to the teaching strategies and materials appropriate for teaching mathematics in grades K-6. Emphasis on using a constructivist approach.

ELED 6560 - Assessment**3 credit hours**

Prerequisite: Admission to teacher education program. Explores evaluation and assessment of children in grades K-6.

ELED 6570 - Methods of Curriculum Integration**3 credit hours**

Prerequisite: Acceptance into graduate studies and the initial licensure program. Acquaints students with the philosophy and need to teach mathematics, English/language arts, social studies, and science in the elementary classroom; familiarizes students with a variety of instructional strategies for teaching these content areas in an integrated approach.

ELED 6580 - Effective Management Practices for the Elementary Classroom**3 credit hours**

Prerequisite: Completion of a minimum of 6 graduate hours or acceptance in the Initial Licensure Program.

Introduces students to classroom and instructional strategies to build, adjust, and maintain an effective classroom learning environment.

ELED 6620 - Assessment of Teaching and Learning**3 credit hours**

Prerequisite: ELED 6010 (or taken concurrently with ELED 6010 by Elementary Education major only). Familiarizes teachers with assessment techniques that focus on the complex relationship between learning and instruction. Required for all students.

ELED 6630 - Digital Learning in a Digital Age**3 credit hours**

Provides graduate candidates practice and skills related to digital literacy, the nine elements of digital citizenship, and twenty-first century readiness. Candidates examine the personal and ethical implications of individual actions in digital space.

ELED 6640 - Thesis: Elementary Education**1 to 3 credit hours**

Prerequisite: Six semester hours of 6000-level courses in elementary education. Supervised in-depth study on an individual basis of an area of elementary education.

ELED 6999 - Comprehensive Examination and Preparation**1 credit hours**

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

ELED 7220 - Seminar in Elementary Education**3 credit hours**

Explores contemporary issues in education as they relate to the individual teacher, the school as an institution, the school clientele, and the community. Allows the student to adjust individual educational philosophy to a changing society and schools; gives contiguity to other educational experiences.

ELED 7250 - From Policy to Practice in American Public Schools**3 credit hours**

The effect of public policy on educational practices.

Emphasis on exploring policy variations within the educational practices in the U.S. and around the world with a particular emphasis on elementary education.

**ELED 7260 - Problems in Elementary Education
1 to 6 credit hours**

Prerequisite: Nine semester hours of graduate-level courses in elementary education.

**ELED 7290 - Inquiry and Problem-Based Learning
3 credit hours**

An in-depth study of the inquiry process as it relates to teachers in the classroom. Theory and practice combine as teachers engage in their own research to improve classroom instruction.

**ELED 7340 - Introduction to Educational Research
3 credit hours**

Prerequisite: Six semester hours of 7000-level courses in elementary education. Supervised in-depth study on an individual basis of an area of elementary education.

**ELED 7350 - Introduction to Qualitative Methods
3 credit hours**

An overview of qualitative research methods in the field of education. ELED 7350 offers candidates field experience to collect data for analysis and interpretation.

**ELED 7360 - Interpreting Data for Decision Making
3 credit hours**

Prerequisite: ELED 7340. Design, data collection, and analyses for various approaches within quantitative research. Lab work using SPSS statistical package required.

**ELED 7380 - Internship
3 credit hours**

Prerequisites: Enrollment in Ed.S. Curriculum and Instruction program; good academic standing; completion of at least 12 hours of coursework. Field-based experience selected by student in collaboration with program advisor. Purpose is to expand the student's world view of a career connected to curriculum and instruction issues across a spectrum of disciplines.

**ELED 7460 - Contemporary Literacies
3 credit hours**

Examines contemporary aspects of literacy education in many genres. Attention given to current research

along with the principles of teaching reading and writing using a variety of literacy frameworks

**ELED 7640 - Ed.S. Thesis Research
1 to 6 credit hours**

Prerequisite: Six semester hours of 7000-level courses in elementary education. Supervised, in-depth study on an individual or group basis of an area of elementary education. Student may register two semesters for three hours credit each semester or for six hours credit one semester. Open only to post-master's degree students.

Literacy Studies

LITS 7340 - Literature Review and Readings in Literacy

1 to 6 credit hours

Prerequisites: PSY 7280 and LITS 7140 or equivalents. Supervised literature review and readings on topics of current importance in literacy studies. Topics and requirements obtained from individual faculty in the Literacy Studies Ph.D. program or from affiliated faculty. May be repeated for a total of 6 credits

LITS 7350 - Research Seminar in Literacy

1 to 6 credit hours

Prerequisite: LITS 7340 or equivalent. Supervised research in the literacy studies area. Student will conduct a research project in his or her area of interest in the field of literacy studies. Topics and requirements will be obtained from individual faculty in the Literacy Studies Ph.D. program or from affiliated faculty. May be repeated for a total of 6 credits.

Reading

READ 5130 - Literacy Assessment

3 credit hours

Prerequisite: A reading methods or literacy course. The modification of assessment and instruction for the resolution of reading problems in the elementary classroom.

READ 5460 - Content Literacy

3 credit hours

Emphasis on teaching reading in content subjects such as mathematics, science, and social studies in upper elementary, middle school, and secondary schools. Specific suggestions for activities and lesson

strategies included. (Available on permission-of-department basis only.)

READ 6000 - Foundations of Literacy

3 credit hours

Prerequisite: A reading methods or literacy course. Planning and developing a reading program through extensive reading in the field and seminar participation. Special emphasis on the reading process.

READ 6120 - Current Issues in Literacy Instruction

1 to 3 credit hours

Specific issues and trends affecting reading instruction in today's classrooms. Repeatable up to three hours of various topics.

READ 6160 - Intercultural Perspectives in Literacy

3 credit hours

Pedagogical issues and strategies involved in integrating international perspectives into the classroom literacy curriculum.

READ 6520 - Teaching Reading

3 credit hours

Prerequisites: Admission to the teacher education program; ELED 6500 and ELED 6510 may be taken concurrently. Introduces students to the various philosophies for teaching reading in the K-6 classroom and to a variety of instructional strategies for teaching reading.

READ 6710 - Adolescent Literacy

3 credit hours

Approaches to effective literacy enhancement in middle and secondary school programs. Suggestions for meeting the literacy needs of typical and atypical adolescent literacy learners.

READ 6720 - Instructional Tools in Literacy

3 credit hours

Prerequisite: READ 6000 or permission of instructor. Formal and informal tools to document and define a reading difficulty as well as approaches/strategies to overcome such difficulties.

READ 6730 - Curriculum and Supervision of Literacy Instruction

3 credit hours

The role of the reading specialist. Focuses on preparing reading specialists to work with students and adults in school settings. Planning in-service

presentations, grant writing, critiquing materials, and effective reading programs explored.

READ 6750 - Research in Literacy

3 credit hours

Prerequisite: READ 6000, its equivalent, or permission of the instructor. An investigation of significant research related to reading with emphasis on classroom practices, group analysis, and individual study. (Available on permission-of-department basis only.)

READ 6760 - Early Literacy

3 credit hours

A methods course that concentrates on beginning reading and emergent literacy issues in developing reading and writing.

READ 6790 - Literacy Practicum

3 to 6 credit hours

Prerequisite: READ 6720 or equivalent. A supervised practice in teaching children with various types of reading and learning problems. Student may enroll for 3 hours credit or 6 hours credit in a single semester. May be repeated for up to 6 credits; however, only 3 credits may apply toward the degree.

READ 6999 - Comprehensive Examination and Preparation

1 credit hours

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

Special Education

SPED 5240 - Methods and Techniques of Behavior Management

3 credit hours

Overview of various approaches to behavior management. Application of various approaches in different special education settings. Basis of evaluation of various behavior change techniques.

SPED 5260 - Problems in Special Education A-Z
1 to 3 credit hours

A problem-oriented course, on or off campus, planned and designed for individuals, a school faculty, school

system, or other professional groups that will provide opportunities for pre- or in-service education related to assessed needs. Not more than 6 semester hours credit in independent study (SPED 6840) and/or problems (SPED 5260) can be applied toward a degree or licensure.

SPED 5280 - Assistive Technology in Special Education

3 credit hours

Prerequisite: Permission of instructor. Introduces students to adaptive/assistive technologies. The technologies will range from low-tech to high-tech and apply to the needs of school-aged students with disabilities. Includes assessing and supporting needs through the delivery of adaptive/assistive technologies.

SPED 5320 - Directed Teaching in Special Education (Comprehensive)

9 credit hours

Prerequisites: ELED 3150; SPED 6200, SPED 6800; full admission to Directed Teaching. A full-day, ten-week supervised teaching experience in a public classroom. Pass/Fail.

SPED 5350 - Directed Teaching in Special Education (Modified)

9 to 12 credit hours

Prerequisites: ELED 3150; READ 4015 or 4035; SPED 6200 and SPED 6800; full admission to directed teaching. A full-day, ten-week supervised teaching experience in a public classroom. Pass/Fail.

SPED 5510 - Teaching Internship: Special Education

9 credit hours

A supervised teaching experience. Available only to those with at least one year of paid teaching experience in the major in which endorsement is sought. Applicants must meet all prerequisites for student teaching. Pass/Fail.

SPED 6020 - Overview of Special Education

3 credit hours
Theories and techniques of providing instruction to exceptional individuals. Designed for individuals without prior specialized experience and/or course work in special education. Not for degree credit.

SPED 6300 - Theoretical Perspectives on High Incidence Disabilities

3 credit hours

Reviews the various perspectives on mild/moderate disabling conditions from a historical perspective. Viability of each perspective examined. Implications of each for assessment and intervention considered.

SPED 6310 - Issues in Assessment of High Incidence Disabilities

3 credit hours

Prerequisite: SPED 6300. A variety of tests and assessment tools within the various theoretical frameworks they represent. Considers the development of diagnostic batteries based on such tests. Particular attention given to the significance of the theoretical perspectives in selecting and interpreting data collected.

SPED 6330 - Theories of Instruction for High Incidence Disabilities

3 credit hours

Prerequisite: SPED 6310. A variety of instructional approaches within the various theoretical frameworks from which each evolved. Considers the development and evaluation of IEPs through an integration of learner characteristics, instructional approaches, and educational needs.

SPED 6360 - Transition Education and Services for Exceptional Learners

3 credit hours

Prerequisite: Admission to Special Education: Modified program or permission of department. Addresses the knowledge and skills needed to develop and implement effective transition planning from school to adult life. Offers preparation for successful transition from elementary grades, career preparation education, and eventual transition to adult life. Explores a variety of tools, supports, and classroom strategies for creating successful transitions in preparation for adult life.

SPED 6380 - Collaborative and Consulting Skills in Special Education

3 credit hours

Assistance in developing skills needed for consulting with parents, students, teachers, administrators, and others in the development and implementation of individualized education programs for disabled students.

SPED 6410 - Characteristics and Teaching of Learners with Low Incidence Disabilities
3 credit hours

In-depth survey for professionals who will work with school age students who receive services in Special Education in one or more of the categories characterized as low incidence. Emphasis on cognitive, motor, social, communicative, behavioral, and physical characteristics of this population. Advanced methods and techniques for instructing low incidence populations.

SPED 6500 - Anatomy and Physiology of the Eye
3 credit hours

Examines structures of the eye and visual system and diseases/conditions that affect vision. Considers various screening instruments to use for making referrals to eye specialists. Attention given to administration and interpretation of screening instruments.

SPED 6510 - Introduction to Braille and Communication Skills for the Visually Impaired
3 credit hours

Offers teachers and professionals who work with visually impaired and blind students skills and competencies in reading and writing braille.

SPED 6520 - Advanced Braille and Communication Skills for the Visually Impaired
3 credit hours

Prerequisite: SPED 6510. Reinforces and extends skills learned in SPED 6510. Formatting textbooks and trade books required by visually impaired students in schools. Emphasis placed on learning to use abacus, slate and stylus, and correction slate. Transcription according to Library of Congress standards.

SPED 6530 - Educational Procedures for the Visually Impaired
3 credit hours

Presents students with roles and responsibilities of the teacher of the visually impaired, including adaptations of curriculum, environment, equipment, and methods. Available resources at local, state, and national levels. Particular attention given to the decision-making processes required, such as type of reading medium required for specific tasks, use of low-vision aids, appropriateness of various types of modifications, and adaptations of regular curriculum.

SPED 6540 - Advanced Educational Procedures for the Visually Impaired
3 credit hours

Necessary skills to conduct functional vision assessments of students of normal intelligence as well as those with multiple disabilities. Assessing communication skills for the visually impaired.

SPED 6550 - Orientation and Mobility for the Classroom Teacher
3 credit hours

Basic orientation and mobility techniques to teach visually impaired students to enable them to move around the school environment safely. Included are concept development, protective techniques, basic and advanced sighted guide techniques, and the use of tactual maps.

SPED 6560 - Nature and Needs of the Visually Impaired
3 credit hours

Insights into problems associated with visual loss and its impact on individuals, family relations, and seeing populations. Also addresses advantages and limitations of adaptations and specialized instruction, equipment, devices, and aids. Examines the role and effect of various organizations and professionals on services for visually impaired persons.

SPED 6570 - Practicum in Special Education (Vision)
3 credit hours

Understanding of eye conditions that result in visual disabilities and their implications; training in determining most appropriate modifications. Experiences in assessment of functional vision of students with visual disabilities and multiple disabilities; designed to facilitate application of these skills in real-life experiences with visually impaired and blind learners.

SPED 6700 - Introduction to Autism Spectrum Disorders
3 credit hours

In-depth survey of students with Autism Spectrum Disorders. Focus on promoting learning and collaborative problem-solving approaches that facilitate effective family-professional partnerships and educational programming for this population.

SPED 6710 - Action Research in Special Education

3 credit hours

Prerequisite: FOED 6610 or equivalent. Presents skills necessary to conduct classroom research for the purpose of improving learning opportunities for diverse learners.

SPED 6720 - Promoting Family-Professional Partnerships in Special Education

3 credit hours

Understanding the concerns and needs of parents of children who have special needs. Also presents strategies and techniques for working effectively with parents.

SPED 6730 - Methods of Instruction for Students with Autism Spectrum Disorders

3 credit hours

Overview of methods of instruction for students with Autism Spectrum Disorders. Emphasis on instructional content in a variety of settings. Focuses on evaluation of instructional progress and how the teacher plays an active role in skill acquisition and development.

SPED 6740 - Affective Education in the Classroom

3 credit hours

Theoretical basis for the role of the school in providing instruction in the affective domain. Emphasis on the translation of theories of emotional/social development into educational strategies.

SPED 6780 - Issues in Special Education

3 credit hours

Analysis of current issues in the field. Emphasis on the analysis of relevant research.

SPED 6800 - Exceptional Children and Youth

3 credit hours

Introduction to problems in identification, etiology, and educational treatment of mentally retarded, gifted, physically and emotionally challenged, learning disabled, and culturally disadvantaged children and youth.

SPED 6840 - Independent Study: Special Education

1 to 3 credit hours

Prerequisite: Consent of the advisor. Enables students to develop and conduct a study based on individual professional interests. No more than 6 semester hours credit in Independent Study (SPED

6840) and/or Problems (SPED 5260) can be applied toward a degree or licensure.

SPED 6860 - Characteristics and Needs of the Gifted Child

3 credit hours

Characteristics, needs, psychological and educational considerations, and identification procedure for gifted children.

SPED 6880 - Educational Procedures in the Education of the Gifted

3 credit hours

Prerequisite: SPED 6860. Reviews various theoretical models of learning and teaching that are most often used in developing curriculum for the gifted learner. Application of the models is stressed.

SPED 6900 - Characteristics of Preschool Children with Disabilities

3 credit hours

Includes an in-depth study of young children delayed in their development. Focus on developmental needs.

SPED 6910 - Developmental Assessment

3 credit hours

Evaluative and diagnostic instruments and procedures used with very young and/or multiple disabled individuals.

SPED 6920 - Laboratory Experience I

3 credit hours

Practicum experience in settings serving preschool children who have developmental delays. Students will spend 60 hours in each of two practicum settings.

SPED 6930 - Methods of Working with Children Who Are Developmentally Delayed

3 credit hours

Current theories, practices, and procedures used to develop programs for preschool children who are developmentally delayed (ages birth to 5 years).

SPED 6950 - Laboratory Experience II

3 credit hours

Practicum experience in settings serving preschool children who have developmental delays. Students will spend 60 hours in each of two practicum settings.

SPED 6999 - Comprehensive Examination and Preparation

1 credit hours

Open only to students who are not enrolled in any

other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.