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 Physiology, Industry Management, or Equine Education.

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. In the Industry Management concentration, students structure their curriculum for a specific industry-related career. Students in the Equine Education concentration acquire a skill set needed to teach and provide instruction at a postsecondary equine program or leadership within the Cooperative Extension Service. Students in the Industry Management or Equine Education concentrations have the option to conduct and complete a traditional, research-based thesis project or to select a more contemporary nonthesis option.

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

Requirements for the Master of Science–Horse Science

The M.S. in Horse Science requires completion of a 15-credit-hour core and 21 credit hours in a concentration.

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

Candidate must
1. 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.
2. submit official scores on the Graduate Record Examination (GRE) or Miller Analogies Test (MAT). Successful applicants typically have GRE Verbal and Quantitative scores exceeding 400 each, with a total combined score that exceeds 800 or a score above 385 on the MAT.

3. submit official transcripts of previous college work reflecting a 3.0 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.

4. participate in an interview with the Horse Science Graduate Committee at the applicant’s expense before final acceptance into the program.

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.

The application deadline is February 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.

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.

Required Core Courses (15 hours)

- STAT 5140 Probabilistic and Statistical Reasoning
- ABAS 5420 Genetics of Domestic Livestock
- Advanced Equine Nutrition*
- Issues in Equine Industry*
- Research Methods in Agricultural Science*
- Graduate Seminar*

Equine Physiology

Required Courses (19 hours)

- BIOL 5170 Endocrinology
- CHEM 6500 Biochemistry I
- STAT 6020 Introduction to Biostatistics
- BIOL 6330 Principles of Physiology
- Equine Reproductive Physiology*
- Thesis Research*

Electives (2 hours)

In addition to the 19-hour concentration core, students must take a minimum of two (2) hours from 5000/6000-level courses in the following rubrics: ABAS, BIOL, CHEM, EXSC.

Equine Education

Required Courses (12 hours)

- Coaching and Teaching for Equine Competitions*
- Equine Experiential Learning* OR Thesis Research*
- LSM 6500 Legal Issues and Risk Management in Sport and Leisure Services
- Philosophy and Principles of Human Performance*

Electives (9 hours)

In consultation with their committees, students must select a minimum of 9 hours from graduate-level courses within the College of Basic and Applied Sciences, the College of Behavioral and Health Sciences, and 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.

Industry Management

Required Courses (12 hours)

- Advanced Equine Event and Facility Management*
- Equine Experiential Learning* OR Thesis Research*
- MKT 6000 Marketing Concepts
- MGMT 6000 Management and Operations Concepts
- LSM 6510 Financial Management Marketing of Leisure and Sport Services
- LSM 6520 Management Practices in Recreation and Leisure Services

*For current information about these courses, and other information about the Horse Science M.S. Degree, go to the program website at www.mtsu.edu/~horsesci.

NOTE: Students must choose two of the four courses as part of the Industry Management core.

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 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.

Courses in Agribusiness and Agriscience [ABAS]

5100 Microcomputer Applications in Agriculture. Three credits. Prerequisite: CSCI 1150 or INF5 2200. Includes use of agricultural software, agricultural communications network, computer daily feeding machines, and farm records.

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

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

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

5200 Fruit and Vegetable Marketing. Three credits. Prerequisites: PSCI 1030/1031 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.

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

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

5230 Adult Education in Vocational-Education and Program Development. Three credits. How to teach adults and administer
590 Problems in Agriculture. Three credits. 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.

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

6450 Problems in Agriscience Technologies. Three credits each. Prerequisites: Teaching experience or approval of instructor. Provides agricultural education teachers with intensive training in advanced technologies. A MAXIMUM OF SIX CREDIT HOURS IN EACH DIVISION.

6451 Animal Science
6452 Plant Science
6453 Agricultural Mechanics
6454 Agribusiness
6455 Forestry and Agricultural Products