MASTER OF EDUCATION (M.ED.) MAJOR IN AGRICULTURAL EDUCATION (NON-THESIS OPTION)

Major Program
The Master of Education (M.Ed.) degree with a major in Agricultural Education offered through the department prepares students to work as professionals in the agriculture industry and in positions of leadership and management in secondary schools and adult education.

Application Requirements
The items listed below are required for admission consideration for applicable semesters of entry during the current academic year. Submission instructions, additional details, and changes to admission requirements for semesters other than the current academic year can be found on The Graduate College's website (http://www.gradcollege.txstate.edu). International students should review the International Admission Documents webpage (http://mycatalog.txstate.edu/graduate/admission-documents/international) for additional requirements.

- completed online ApplyTexas application
- $40 nonrefundable application fee
- $50 nonrefundable international evaluation fee (if applicable)
- baccalaureate degree in agriculture or a closely related field from a regionally accredited university
- official transcripts required from each institution where course credit was granted
- minimum 2.75 GPA in your last 60 hours of undergraduate course work (plus any completed graduate courses)*
- official GRE scores not required*
- three letters of recommendation with at least two coming from academia

TOEFL or IELTS Scores
Non-native English speakers who do not qualify for an English proficiency waiver:

- official TOEFL iBT scores required with a 78 overall
- official IELTS (academic) scores required with a 6.5 overall and
  - minimum individual module scores of 6.0

This program does not offer admission if the scores above are not met.

*Additional Information
If your last-60-hours GPA falls between 2.5-2.75, please submit the following:

- official GRE scores with a preferred minimum of 293 (verbal and quantitative sections combined)

Degree Requirements
The Master of Education (M.Ed.) degree with a major in Agricultural Education requires 36 semester credit hours. The major and supportive courses are to be taken with the advice and consent of the student's advisory committee, which consists of three or more faculty selected with the help of the graduate advisor.

Course Requirements

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Minor in Integrated Agriculture
Choose 15 hours of advisor-approved courses

Total Hours 36

Comprehensive Examination Requirements
All candidates for graduate degrees must pass one or more comprehensive examinations.

Master's level courses in Agriculture: AG (p. 1), AGED (p. 4)

Courses Offered

Agriculture (AG)

AG 5100. Professional Development.
This course introduces key concepts and practices for teaching college courses. It provides regular in-service training and planned periodic evaluations of instructional responsibilities. It is required for first-year teaching and instructional assistants in the Master’s of Science in Integrated Agricultural Sciences. Graded on a credit (CR), no-credit (F) basis.
1 Credit Hour. 1 Lecture Contact Hour. 0 Lab Contact Hours.
Course Attribute(s): Exclude from 3-peat Processing
Grade Mode: Credit/No Credit

AG 5101. Research Experience.
This course provides students with an opportunity to explore a focused research topic. Ideally the topic would be an emergent topic within their research area that was unplanned and resulted from their initial investigation. May be repeated twice for credit.
1 Credit Hour. 1 Lecture Contact Hour. 0 Lab Contact Hours.
Course Attribute(s): Exclude from 3-peat Processing
Grade Mode: Standard Letter

AG 5120. Aquaponic Internship.
This course provides students with hands-on production experience in aquaculture. Students will complete 64 hours of internship with an aquaponic facility.
1 Credit Hour. 0 Lecture Contact Hours. 1 Lab Contact Hour.
Grade Mode: Standard Letter
AG 5199B. Thesis. 
This course represents a student's continuing thesis enrollment. The student continues to enroll in this course until the thesis is submitted for binding. Graded on a credit (CR), progress (PR), no-credit (F) basis.
1 Credit Hour. 1 Lecture Contact Hour. 0 Lab Contact Hours.
Course Attribute(s): Exclude from 3-peat Processing
Grade Mode: Credit/No Credit

AG 5299B. Thesis. 
This course represents a student's continuing thesis enrollment. The student continues to enroll in this course until the thesis is submitted for binding. Graded on a credit (CR), progress (PR), no-credit (F) basis.
2 Credit Hours. 2 Lecture Contact Hours. 0 Lab Contact Hours.
Course Attribute(s): Exclude from 3-peat Processing
Grade Mode: Credit/No Credit

AG 5300. Applied Statistics and Econometrics for Agriculture. 
This course focuses on data analysis, modeling techniques and their applications with statistical inference for agriculture. This course will cover statistical tools applied in agriculture, including probability, sampling, principles of estimation, hypothesis testing, general linear models, multiple regression analysis, qualitative response modeling, and other related tools widely used in agriculture.
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AG 5301. Agricultural Development and Policy. 
This course focuses on current issues that integrate agricultural policy, resource development, application of welfare criteria and economic analysis, and food and rural development problems of the U.S. and the world. Course topics include integrated agricultural and rural development, food and nutrition security, commodity issues, and trade policy.
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AG 5302. Economics of Agricultural Production. 
This course focuses on analysis of agricultural production economic concepts and models. Topics will include traditional neo-classical theory of the firm, duality theory, resource allocation, production selection, scale of operation of agricultural firms, and risk and uncertainty associated with agricultural production.
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AG 5303. Agricultural Marketing and Price Analysis. 
This course emphasizes marketing theory and structure, characteristics of demand and supply of farm products, agricultural price research techniques for evaluating marketing behavior, market legislation, and market development. The course will provide an opportunity for students to develop marketable skills in quantitative price and market analysis.
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AG 5304. Economics of Sustainable Natural Resource Management. 
This course provides economic tools to analyze sustainable natural resources and environmental issues. It enables students to develop integrative expertise in economic analysis utilizing natural and behavioral sciences. The integrative expertise provides students with the ability to more effectively, efficiently, and sustainably manage natural resources for multiple objectives.
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

This course covers research techniques, literature analysis, the development and implementation of experimental designs, conceptual models and survey instruments.
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AG 5320. Integrated Agricultural Production in Aquaponic Systems. 
This course focuses on crop and fish production, pest management, water quality, nutrient management, and economics and marketing in aquaponic systems. Topics covered include contrasts and comparisons to soil based, hydroponic cropping and aquaculture (confined fish production without crop interactions).
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

The course provides experience and theoretical foundation for the basic design, production, management, utilization and marketing of composts, vermicomposts and related products, and non-renewable natural resource issues related to agriculture.
3 Credit Hours. 2 Lecture Contact Hours. 2 Lab Contact Hours.
Grade Mode: Standard Letter

AG 5324. Agroecology and Integrated Agriculture. 
This course will focus on integrative and ecological principles of agricultural production. Emphasis will be on sustainable agriculture, complex systems, production diversity, integrated animal-crop systems, resilience and small producers.
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AG 5350. Foundations of Ethics and Leadership in Agriculture. 
This course prepares students for professional leadership and service in agriculture, with emphasis on applications of ethics and leadership principles. The course will focus on industry ethics and leadership theory in various professional settings in agriculture.
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AG 5351. Grant Development and Management. 
This course explores competencies of locating external agency funding for agricultural research, teaching and extension. The principles of producing a competitive proposal that includes multi-, cross and interdisciplinary collaborations are also discussed. The development of the grant proposal, implementation, budget, and evaluation plan will be emphasized.
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter
AG 5352. Program Development and Evaluation. This course examines philosophies of program development, implementation and evaluation to meet stakeholders’ expectations. Emphasis is placed on methodologies that effectively evaluate agricultural programs.

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AG 5354. Instructional Design in Agricultural Education. This course examines instructional design models appropriate from a pedagogical and andragogical viewpoint. Emphasis is placed on theories and models to support the design of print-based, web-based, or multimedia-based instruction. Students will prepare evaluation strategies to assess comprehensive instruction in a high-tech environment.

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AG 5355. Methods of Technological Change. This course explores the dynamics and culture of technological change in agriculture. Topics covered will include ways to implement change, skills for being an innovator and a change agent, how to predict the effects of change, and the integration of other sciences into agricultural sciences.

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AG 5356. Advancements in Animal Science. Survey of the current knowledge and concepts in animal production including economic considerations and current production problems in breeding and feeding livestock.

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AG 5357. Animal Reproduction Science. This course will focus on animal agriculture reproduction and examine the molecular principles of reproduction. Topics will include molecular reproductive endocrinology, advanced physiology and current research in animal reproduction science.

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AG 5360. Advanced Animal Science: Minerals and Vitamins in Animal Nutrition. This course is an advanced study of the utilization and requirements of minerals and vitamins in farm and ranch animals. It emphasizes ruminant and non-ruminant mineral and vitamin metabolism and utilization. The utilization of specific minerals and vitamins by different species will be used to explain and predict subsequent performance.

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AG 5362. Advanced Animal Science: Minerals and Vitamins in Animal Nutrition. This course is an advanced study of the utilization and requirements of minerals and vitamins in farm and ranch animals. It emphasizes ruminant and non-ruminant mineral and vitamin metabolism and utilization. The utilization of specific minerals and vitamins by different species will be used to explain and predict subsequent performance.

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AG 5364. Biology of Reproduction in Farm Animals. This course will focus on animal agriculture reproduction and examine the molecular principles of reproduction. Topics will include molecular reproductive endocrinology, advanced physiology and current research in animal reproduction science.

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AG 5365. The Role of Animal Science in Society: An Integrated Approach. This course provides students with a broad understanding of the role animals have in society, the influences of animal production on economic development, changes in policy and social viewpoints of animal production, and the development of domesticated animals.

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AG 5370. Special Problems in Technical Agriculture. Special problems will be selected to meet the needs of the individual student. May be repeated (once) for additional credit when the problem differs.

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AG 5390. Foundation Studies in Agriculture. This course is required for non-thesis students to prepare a professional paper of publishable quality. Specific guidance of graduate faculty is required. Graded on a credit (CR), no-credit (F) basis.

3 Credit Hours. 0 Lecture Contact Hours. 3 Lab Contact Hours.
Grade Mode: Credit/No Credit

AG 5399A. Thesis. This course represents a student’s initial thesis enrollment. No thesis credit is awarded until the student has completed the thesis in Integrated Agricultural Sciences. Graded on a credit (CR), progress (PR), no-credit (F) basis.

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Credit/No Credit

AG 5399B. Thesis. This course represents a student’s continuing thesis enrollment. The student continues to enroll in this course until the thesis is submitted for binding. Graded on a credit (CR), progress (PR), no-credit (F) basis.

3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Course Attribute(s): Exclude from 3-peat Processing
Grade Mode: Credit/No Credit

AG 5426. Soil Health and Development. This course focuses on the fundamental topics of soil health and development. These fundamentals include pedogenesis, mineral composition, tillage practices, soil ecosystem and sustainability, soil biology and soil physics.

4 Credit Hours. 3 Lecture Contact Hours. 2 Lab Contact Hours.
Grade Mode: Standard Letter
This course examines the theory and practice of molecular genetics of livestock. Topics covered include genetic concepts and theory, as well as applications of these concepts in animal agriculture; e.g., Mendelian genetics, genomic revolution, cloning, epigenetics and transgenics. The course emphasizes techniques and underlying biological principles in genetics.
4 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.

AG 5599B. Thesis.
This course represents a student’s continuing thesis enrollment. The student continues to enroll in this course until the thesis is submitted for binding. Graded on a credit (CR), progress (PR), no-credit (F) basis.
5 Credit Hours. 5 Lecture Contact Hours. 0 Lab Contact Hours.

AG 5999B. Thesis.
This course represents a student’s continuing thesis enrollment. The student continues to enroll in this course until the thesis is submitted for binding. Graded on a credit (CR), progress (PR), no-credit (F) basis.
9 Credit Hours. 9 Lecture Contact Hours. 0 Lab Contact Hours.

AGED 5101. Instructional Skill Development.
Graduate assistants are required to enroll in this course to be prepared to instruct/assist with classes in Agricultural Education. Topics covered are essential teaching strategies, techniques, evaluation design, ethical classroom behavior, and effective instructional motivational techniques. This course does not earn graduate degree credit. Repeatable with different emphasis.
1 Credit Hour. 1 Lecture Contact Hour. 0 Lab Contact Hours.
Course Attribute(s): Graduate Assistantship
Grade Mode: Leveling/Assistantships

AGED 5102. History and Philosophy of Agricultural Education.
This course covers the history, basic principles, and philosophy of different programs of agricultural education existing today.
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.

AGED 5118. Administration and Supervision of Vocational Education.
The administration of comprehensive vocational education programs with emphasis on the operation and implementation of programs governed by state and national laws.
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AGED 5119. Principles and Methods of Adult Education.
The rationale, planning, implementing, conducting, and evaluation of adult education programs in formal and non-formal settings will be discussed.
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AGED 5120. History and Philosophy of Agricultural Education.
This course covers the history, basic principles, and philosophy of different programs of agricultural education existing today.
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AGED 5121. Methods of Technological Change.
The dynamics of cultural change as theoretical framework for planned technological change, methods of implementing change, the effects of change, and the prediction of change will be discussed.
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AGED 5130. Research Methods in Agricultural Education.
The principles and procedures of using and communicating both quantitative and qualitative research in agricultural education will be addressed. Special emphasis will be given to using appropriate methods to address research problems.
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AGED 5131. Guidance.
Analysis of occupational and vocational opportunities for vocational students; includes work in interpersonal communications as well as in the techniques of individual and group counseling in guidance. Practice in personality and occupational interest testing.
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AGED 5135. Curriculum Development of Vocational Programs.
Principles and practices in developing curricula for different areas of vocational education will be emphasized. The dynamics of cultural and technological changes on methods of planning and implementing vocational curricula as it relates to the educational needs of vocational youth will be stressed.
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter

AGED 5314. Special Problems in Agricultural Education.
The student is given the opportunity to work on problems of special interest and need in the discipline of agricultural education. May be repeated (once) for additional credit when the problem differs.
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Standard Letter
AGED 5399B. Thesis.
This course represents a student's continuing thesis enrollments. The student continues to enroll in this course until the thesis is submitted for binding.
3 Credit Hours. 3 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Credit/No Credit

AGED 5599B. Thesis.
This course represents a student's continuing thesis enrollments. The student continues to enroll in this course until the thesis is submitted for binding.
5 Credit Hours. 5 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Credit/No Credit

AGED 5999B. Thesis.
This course represents a student's continuing thesis enrollments. The student continues to enroll in this course until the thesis is submitted for binding.
9 Credit Hours. 9 Lecture Contact Hours. 0 Lab Contact Hours.
Grade Mode: Credit/No Credit