



Department of Applied Engineering and Technology
School of Applied Sciences and Technology
College of Business & Technology (2017-18)

Agriculture Operations and Management Concentration

M.S. Degree in Applied Engineering and Technology Management

The AETM Master's Program

The Master of Science degree in Applied Engineering and Technology Management is for individuals who are interested in careers in industrial, technical, construction, agriculture operations, or network security management. Courses in the program are designed to cause students to examine principles, concepts, attitudes, and methods for dealing with many of the challenges that confront these sectors. This concentration will be of value to those who are currently employed in agriculture sectors and have professional growth aspirations. It will also be of value to those who have recently completed undergraduate study and want more preparation before embarking upon their career.

Upon completion of a degree in Applied Engineering and Technology Management graduates will be able to:

- 1) Plan, implement, and analyze technical projects;
- 2) Demonstrate an ability to formulate and apply advanced technical problem solving and managerial concepts; and
- 3) Accurately synthesize their total program experience.

Admission Requirements

Applicants are expected to present proper prerequisite preparation or technical management experience. For the Agriculture Operations concentration, applicants should possess an undergraduate degree in an agriculturally related field, and have an understanding of and experience in agricultural production practices. An undergraduate grade point average of 2.5 and individual Verbal and Quantitative scores of 144 or higher on the Graduate Record Examination are expected. Applicants may also submit scores on the Graduate Management Admission Test (GMAT) as a substitute for the GRE. GMAT scores of 420 or higher are expected. Applicants with cumulative undergraduate GPA's of 3.0 or higher, or 3.25 or higher in their last 60 hours of undergraduate work are exempt from the GRE/GMAT requirement.

For More Information

Department of Applied Engineering and Technology
307 Whalin Technology Complex
Eastern Kentucky University
521 Lancaster Avenue
Richmond, KY 40475-3102
Phone: 859-622-3232
Web: <http://technology.eku.edu>



**MS Degree, Agriculture Operations and Management Concentration
 University Requirements**

Major Requirements 18 hrs

- **AEM 801** Economics for Lean Operations
- **AEM 804** Project Management
- **TEC 830** Creative Problem Solving
- **AGR 720** Global Food Systems
- **AGR 850** Agricultural Policy
- **And three hours from:** **AGR 701** - Special Problems in Agriculture, **AGR 709** - Agricultural Research Methods and Interpretation, **AGR 770** - Advanced Technical Agriculture, **OR AGR 807** - Advanced Technical Study in Agriculture Problems

Synthesis Experience 6 hrs

AEM 820 (3 hrs) and AEM 821 (3 hrs), OR AEM 839 (6 hrs)

- **AEM 820** Technology Proposal (3 hrs)
- **AEM 821** Technology Project (3 hrs)
- **AEM 839** Applied Learning in Tech Management (6 hrs)

Supporting Course Requirements 6 hrs

This is not a complete list; other electives may be selected by advisement. Please check pre-requisites before enrolling in these courses.

- **ACC 820** Survey of Accounting
- **AEM 706** Six Sigma Quality
- **AEM 802** Productivity Assessment and Analysis
- **AEM 805** Operations Research
- **GBU 850** Legal, Ethical and Social Environment of Business
- **PSY 804** Introduction to Industrial-Organizational Psychology
- **PSY 873** Organizational Psychology
- **PSY 874** Organization Change and Development
- **PSY 875** Training and Development
- **QMB 850** Business Forecasting
- **STA 700** Applied Statistical Inference
- **STA 770** Quality Control & Reliability
- **STA 775** Statistical Methods Using SAS
- **STA 785** Experimental Design

Applied Engineering and Technology Management Exit Requirement 0 hrs

- **GRD 868b** Applied Engineering and Technology Management Oral Comprehensive Exam

Total Program Requirements 30 hrs



Applied Engineering and Technology Management Major Course Descriptions

- AEM 801 Economics for Lean Operations** (3 hrs) Cost management, budgeting, accounting, capital planning, and other topics necessary for making effective economic decisions from a lean perspective. Quantitative methods and computer applications used to formulate decisions relating to operations.
- AEM 804 Project Management** (3 hrs) Elements of managing projects including the use of modern project management software.
- AEM 820 Technology Proposal** (3 hrs) Prerequisite: Departmental approval. An individually developed proposal related to a project typically encountered by a manager in a technical environment. The project proposal is to be approved by the student's graduate advisor.
- AEM 821 Technology Project** (3 hrs) Prerequisite: AEM820 or departmental approval. An individually developed project related to the solution of a typical problem encountered by a manager in a technical environment. The problem is to be approved by the student's graduate committee and the results presented in open forum.
- AEM 839 Applied Learning in Tech Management.** (3-6 hrs) Prerequisite: Departmental approval. Planned and supervised experience in industry. The experience must be for at least one semester and the plan of activities must be approved by the student's graduate committee. Minimum of eighty hours work required for each academic credit.
- AGR 701 Special Problems in Agriculture.** (3) A. Student must have the independent study proposal form approved by faculty supervisor and department chair prior to enrollment. A course for graduate students involving independent study and research related to problems of a theoretical and/or practical nature. May be retaken once to a maximum of six hours.
- AGR 709 Agricultural Research Methods and Interpretation.** (3). I. Explores the scientific underpinnings of modern agriculture and adaptive management, including: the scientific method, observation, experimentation, and data interpretation with an examination of fallacies that masquerade as science. May be retaken up to six hours provided topic is different.
- AGR 720 Global Food Systems.** (3) A. A wide-ranging examination of various domestic and international food systems. The supply chain will be analyzed from field to farm gate through marketing and transportation to the consumer. Emphasis on the economics of the food supply chain.
- AGR 770 Advanced Technical Agriculture.** (3) A. Advanced study of agriculture with emphasis on updating, understanding and developing competency in recent technology. May be retaken to a maximum of nine hours provided the topic varies.
- AGR 777 Workshop in the Conservation.** (3) A. For teachers returning for graduate work. Instruction is given in the areas of soil, water, fish and wildlife, forest conservation, and methods of teaching related units at the elementary and junior high level.
- AGR 807 Advanced Technical Study in Agriculture Problems.** (1-3) A. Prerequisite: Advisor/Department chair approval. Student must have the independent study proposal form approved by faculty supervisor and department chair prior to enrollment. Independent work, workshop, special topics, research problems, or seminars. May be retaken to a maximum of six hours.
- AGR 850 Agricultural Policy.** (3) A. An examination of agricultural policy in the U.S. and its effects on production, food and nutrition, conservation and rural communities. Special attention is paid to the current Farm Bill.
- TEC 830 Creative Problem Solving** (3 hrs) A review and analysis of basic and applied research in the development of creative behavior with emphasis on its application to industrial teaching and industrial problem solving. Students will be expected to complete a term project showing their creative abilities.