



Department of Applied Engineering and Technology
School of Applied Sciences and Technology
College of Business & Technology (2019-20)

Agriculture Operations concentration

M.S. Degree in Technology Management (CIP 15.1501)

M.S. in Technology Management

The Master of Science degree in Technology Management is for individuals who are interested in careers in industrial, technical, construction, agriculture operations, or cyber systems 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 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. A minimum undergraduate grade point average of 2.5 is expected.

For More Information

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MS Degree in Technology Management Agriculture Operations concentration

University Requirements

Major Requirements.....9 hrs

- **AEM 801** Economics for Lean Operations
- **AEM 804** Project Management
- **TEC 830** Creative Problem Solving

Agriculture Operations concentration.....9 hrs

- **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

Supporting Course Requirements6 hrs

This is not a complete list; other electives may be selected by advisement, including a number of MBA courses. Please check the pre-requisite requirements for these courses before enrolling.

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| • CTE 800 Occupational Training Materials | • SSE 832 Construction Safety |
| • CTE 801 Occupational Training Methods | • SSE 845 Personal/Environmental Hazards |
| • CTE 888 Occupational Information | • SSE 850 Ergonomics & Human Factors |
| • HLS 830 Natural Hazards & Threats to the Nation | • SSE 851 Human Factors in Simple and Complex Systems |
| • PSY 804 Intro to Industrial-Organizational Psychology | • SSE 852 Ergonomics Process & Practice |
| • PSY 873 Organizational Psychology | • STA 700 Applied Statistical Inference |
| • PSY 874 Organization Change and Development | • STA 770 QC & Reliability |
| • PSY 875 Training and Development | • STA 775 Statistical Methods Using SAS |
| • SSE 827 Issues in Security Management | • STA 785 Experimental Design |
| • SSE 828 Industrial Safety Management | • TEC 867 Independent Study in Technology |
| | • UNP 700 Study Abroad |

Synthesis Experience6 hrs

- **TEC 860** (3 hrs) and **AEM 821** (3 hrs), **OR AEM 839** (6 hrs)
- **TEC 860** Research in Technology (3 hrs)
- **AEM 821** Technology Project (3 hrs)
- **AEM 839** Applied Learning in Tech Management (6 hrs)

Technology Management Exit Requirement0 hrs

- **GRD 868b** Technology Management Oral Comprehensive Exam

Total Program Requirements 30 hrs



Agriculture Operations 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 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.
- TEC 860** **Research in Technology** (3 hrs) A study of research and research methods as they apply in technological fields. Involves the development of a review of literature, a research proposal, and the use of descriptive and inferential statistics.