

# Master of Science in Engineering Technology

## - Precision Agriculture Emphasis (30 semester hours)



### Why the ET Degree Program?

Graduates of the ET degree program are beneficiaries of the following:

- Nearly 100% placement
- Small student-to-faculty ratio
- Small class sizes
- Collaborative learning environment
- Industry certification opportunities
- High salaries
- Ability to work in a team environment
- Internship opportunities

The School of Engineering and Technology offers a Master of Science in Engineering Technology degree with an emphasis in Precision Agriculture. This STEM designated program (CIP 15.0613) prepares professionals who are knowledgeable about theories and leadership practices for technological applications in engineering-related fields. The program provides advanced coursework in planning strategies, continuous improvement, quality, and leadership. In addition, the program addresses the principles required for leading production and process-related enterprises, which include, but are not limited to, mission, vision, strategic planning, leadership for production and process planning, lean thinking, decision-making, operations management, research and development, and intellectual property protection.

### Distinctive Features

- Coursework includes problem-based, technology-centered leadership learning experiences.
- Experiences include designing experiments, preparing presentations and poster sessions, conducting studies that apply continuous improvement strategies and tools, preparing documentation of intellectual property, and working in a team building environment. These learning opportunities help students connect theories and principles with real-world professional practice.
- Opportunities are provided to participate in industrial work experiences (graduate internship), pursue independent studies, and perform independent research. Coupled with graduate coursework, the degree provides a balanced program of studies that may be designed to meet the individual needs of the student.
- Required in all coursework is technical writing that meets industry standards.

### Career Opportunities

The ET degree with a Precision Agriculture emphasis leads to career opportunities in

- Agricultural Business
- Agricultural Education
- Agricultural Technology Management
- Farm Operations
- Precision Agriculture
- As well as general Business and Industry

The program is designed to allow professionals to keep abreast of changes in technology and allows those with a technical background to gain leadership experience at the graduate level prior to, or while, being employed full-time.

### Internship Opportunities

Graduate students are afforded the opportunity to participate in an internship at the graduate level. The majority of students select a company that provides them with the opportunity to work in an area of expertise plus as an integral part of a leadership team. The internships can be completed during any term of the academic year.

**Program Location:**  
Macomb

### Contact Information

#### *Questions about the program:*

Dr. Dave Hunter,  
Graduate Advisor, Professor of  
Engineering Technology  
[gd-hunter@wiu.edu](mailto:gd-hunter@wiu.edu)  
(309) 298-1091  
[wiu.edu/set/](http://wiu.edu/set/)

-or-

Dr. Daniel Atherton  
Associate Professor of  
Precision Agriculture  
[dl-atherton@wiu.edu](mailto:dl-atherton@wiu.edu)  
(309) 298-2395

#### *General admission questions:*

School of Graduate Studies  
(309) 298-1806 or (877) WIU GRAD  
[Grad-Office@wiu.edu](mailto:Grad-Office@wiu.edu)  
[wiu.edu/grad](http://wiu.edu/grad)



**Western Illinois  
University**

**SCHOOL OF ENGINEERING  
& TECHNOLOGY**

## Admission Requirements

Applicants to the Engineering Technology degree with Precision Agriculture Emphasis must meet the admissions standards of the School of Graduate Studies. A bachelor's degree in an Engineering-related or Agriculture program with at least 15 hours of technical courses in the applicant's major field of study is required. Students who have been awarded a bachelor's degree from an accredited institution and have had less than 15 semester hours (sh) of coursework in technical areas may enroll in a two-phase program. Phase One consists of obtaining a total of 15 sh of Engineering Technology courses as proposed by the student and advisor and approved by the Department Graduate Committee. Phase Two is the completion of the program as outlined in the degree requirements below.

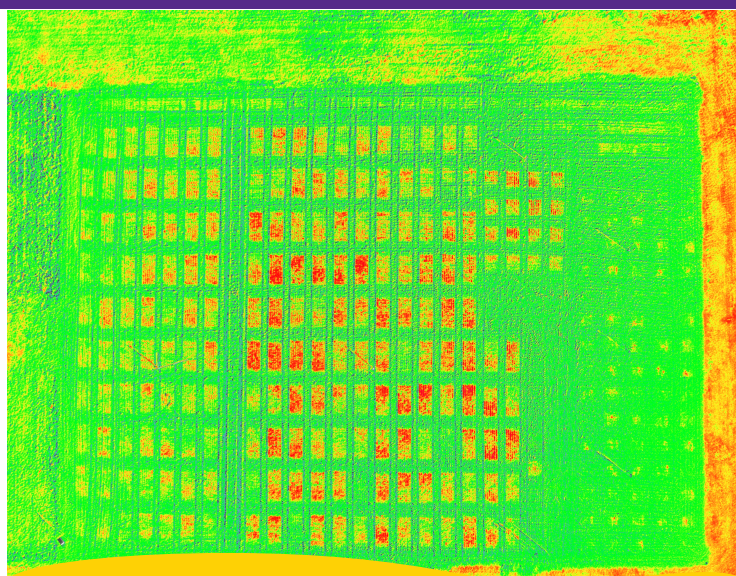
Students who wish to be admitted to the Master of Science in Engineering Technology degree program must meet the following entrance requirements:

- Submit a completed application packet. All documents listed below should be sent directly to the School of Graduate Studies. Files will not be forwarded to the department until all materials are received:
  - Online application to the School of Graduate Studies
  - Two- to three-page essay addressing the topic "Why I want to be a leader in a technological world"
  - Three letters of reference
- Graduated with a baccalaureate degree from an accredited university.
- Completed at least 15 sh of technology-related coursework.

**The GRE is not required for admission.**

## Degree Requirements

The degree requires completion of a minimum of 30 sh. All students must complete 21 sh of required core and 6 sh of directed elective courses plus the additional requirement of one of the following three exit options: (1) thesis plan, (2) professional internship plan, or (3) independent research plan.



NDVI scan of Pennycress breeding plots 2024

## Program Curriculum

### Core Courses (21 SH)

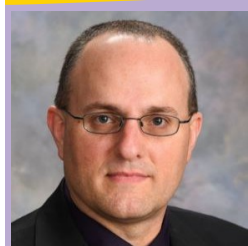
- ET 515 Eng Tech Design, Vis, and Diss (3 sh)
- ET 525 Management of Eng Tech (3 sh)
- ET 535 Eng Tech Leadership (3 sh)
- ET 545 Information Measurement Theory (3 sh)
- DS 503 Bus Stat for Mgt Dec Making (3 sh)
- ET 548 Planning Techniques for Leaders (3 sh)
- ET 590 Research Techniques (3 sh)

### Directed Electives (6 SH)

- AGTM 471G Ag Remote Sensing (3 sh)
- AGTM 472G Ag Analysis & Dec Making (3 sh)

### Exit Options (3 sh)

- ET 603 Comprehensive Exam (0 sh) and,
- ET 592 Independent Research (3 sh) or,
- ET 593 Professional Internship (3 sh) or;
- ET 601 Thesis (3 sh)



*"Precision Agriculture impacts all areas of modern agriculture. Analysis of agricultural inputs and data-driven decision-making activities are critical segments within precision agriculture. Today, agricultural employers desire employees that can solve problems and improve profit margins using all available resources in a data-driven approach. Graduates learn desirable skills that benefit them when competing for employment."*

*Daniel Atherton, Ph.D.  
Associate Professor of Precision Agriculture*