

I. COURSE INFORMATION

- A. Agriculture 216 Agriculture Technology Management
- B. 3 credit hours
- C. Field, Harry and John Solie. *Introduction to Agricultural Engineering-A Problem Solving Approach*. 4th ed. New York: Springer, 2018
- D. Prerequisites: None

II. COURSE DESCRIPTION

This course focuses on the application of physical and engineering sciences to problems in agriculture. The course will cover simple machines, energy, electrical and mechanical systems, natural resource management, equipment calibration, animal waste systems, and land use and measurement.

III. LEARNING OUTCOMES

- A. Compare methods of problem solving and measures
- B. Explain how simple machines function
- C. Describe engine operation and biofuels
- D. Compare types of power trains and their function
- E. Interpret land descriptions and surveying
- F. Select proper structural members
- G. Describe principles of electricity and circuits
- H. Explain site specific crop management

IV. MAJOR CONTENT AREAS

- A. Problem solving methods
- B. Interpreting figures and standard forms
- C. Simple machines
- D. Work and power
- E. Combustion engine operations
- F. Biofuels
- G. Power trains
- H. Site specific crop management tools
- I. Land descriptions
- J. Differential and profile leveling
- K. Principles of electricity

V. ASSIGNMENTS (may include but are not limited to)

- A. Discussions
- B. Decision-making and problem-solving assignments
- C. Reading assignments
- D. Projects

VI. EVALUATION METHODS (may include but are not limited to)

- A. Attendance
- B. Quizzes
- C. Assignments and calculations
- D. Exams
- E. Final exam