Faculty is required to have the outline submitted to the Academic Affairs Office. The course outline is the form used for approval of new courses by the Academic Affairs and Standards Council.

DEPT. AGRICULTURE               COURSE NUMBER: 2205

NUMBER OF CREDITS: 3

COURSE TITLE: Introduction to Precision Management Software

CATALOG DESCRIPTION: This course is intended to serve as an introduction to several precision management software packages that are used to manage farming decisions and implement site specific crop management.

AUDIENCE: Students, farm business operators, farm managers or others with consent of instructor.

FULFILLS MN TRANSFER CURRICULUM AREA(S) *(Leave blank if not applicable)*
Area: by meeting the following competencies:
Area: by meeting the following competencies:
Area: by meeting the following competencies:

PREREQUISITES OR NECESSARY ENTRY SKILLS/KNOWLEDGE:

LENGTH OF COURSE: 1 semester

THIS COURSE IS USUALLY OFFERED:
Every other year ☐ fall ☐ spring ☑ summer ☐ undetermined ☐

Four goals are emphasized in course at Minnesota West Community & Technical College:

1) ACADEMIC CONTENT: The academic objectives of this course are:
   a. Create and manage soil sampling points
   b. Analyze data from yield maps, planting population, soil characteristics, and fertility applications.
   c. Plan and document crop plans based on site specific data
   d. Create variable rate application maps and prescriptions
   e. Acquire basic understanding of software programs such as Farm Works, SMS, APEX, and Ag Studio.
2) THINKING SKILLS: This course will help students improve the effectiveness of their thinking skills through:
   a. Understand the role of precision management software in a farming operation.
   b. Navigate and perform multiple functions as it relates to implementing a software package.
   c. Determine solutions to crop management through data analysis.
   d. Select software packages that will be cost effective for the farming business.

3) COMMUNICATIONS SKILLS: This course will help students improve their oral and written communication skills through:
   a. Oral presentation of software capabilities.
   b. Group work
   c. Written tests
   d. Class discussion

4) HUMAN DIVERSITY: This course will help students recognize, understand, and appreciate human diversity through:
   a. Functionality of GIS software throughout the world.
   b.

TOPICS TO BE COVERED:
1. Role of spatial management software in agriculture
2. Basics of Geographic Information Systems
3. Management trees
4. Reading field display files
5. Importing/Exporting shape files
6. Reading legends
7. Soil Sampling
8. Crop Scouting
9. Layering
10. Prescriptions

LIST OF EXPECTED COURSE OUTCOMES:
1. Operate multiple farm and spacial management software programs.
2. Develop management decisions from field data.
3. Collect infield information such as soil types, soil grids, crop scouting, and yield data.
4. Create VRA prescriptions.
5. Operate a mobile computer.

LEARNING/TEACHING TECHNIQUES used in the course are:
- Collaborative Learning
- Student Presentations
- Creative Projects
- Lecture
- Demonstrations
- Lab
- Problem Solving
- Interactive Lectures
- Individual Coaching
- Films/Videos/Slides
- Other (describe below)

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:
EXPECTED STUDENT LEARNING OUTCOMES:

Students will be able to:
1. Select an appropriate spacial management system.
2. Define and operate a management tree.
   a. Enter and sort growers, farms, and field names.
3. Import field data from field displays.
4. Import data from mobile devices.
5. Define a field, create a boundary, and develop a soil grid.
6. Read and create legends.
7. Layer mapping features.
8. Create a variable rate prescription

Veteran Services: Minnesota West is dedicated to assisting veterans and eligible family members in achieving their educational goals efficiently. Active duty and reserve/guard military members should advise their instructor of all regularly scheduled military appointments and duties that conflict with scheduled course requirements. Instructors will make every effort to work with the student to identify adjusted timelines. If you are a veteran, please contact the Minnesota West Veterans Service Office.

The information in this course outline is subject to revision.

To receive reasonable accommodations for a documented disability, please contact the campus Student Services Advisor or campus Disability Coordinator as arrangements must be made in advance. In addition, students are encouraged to notify their instructor.

This document is available in alternative formats to individuals with disabilities by contacting the Student Services Advisor or by calling 800-658-2330 or Minnesota Relay Service at 800-627-3529

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