

MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE

COURSE OUTLINE

DEPT. AGRI

COURSE NUMBER: 2204

NUMBER OF CREDITS: 3

Lecture: 3 Lab: 0 OJT: 0

Course Title:
Introduction to Precision Agriculture

Catalog Description:
Introduction to Precision Agriculture is intended to serve as an introduction to GPS (Global Positioning Systems) and GIS (Geographical Information Systems) with an emphasis on agricultural use. Topics include precision farming, positioning systems, yield monitoring, and variable rate technology.

Prerequisites or Necessary Entry Skills/Knowledge:
None

FULFILLS MN TRANSFER CURRICULUM AREA(S)

- ☐ Goal 1: Communication: By meeting the following competencies:
- ☐ Goal 2: Critical Thinking: By meeting the following competencies:
- ☐ Goal 3: Natural Sciences: By meeting the following competencies:
- ☐ Goal 4: Mathematics/Logical Reasoning: By meeting the following competencies:
- ☐ Goal 5: History and the Social and Behavioral Sciences: By meeting the following competencies:
- ☐ Goal 6: The Humanities and Fine Arts: By meeting the following competencies:
- ☐ Goal 7: Human Diversity: By meeting the following competencies:
- ☐ Goal 8: Global Perspective: By meeting the following competencies:
- ☐ Goal 9: Ethical and Civic Responsibility: By meeting the following competencies:
- ☐ Goal 10: People and the Environment: By meeting the following competencies:

Topics to be Covered
Global Positioning System
Yield Monitoring and Mapping
Variable Rate Application
Soil Sampling
Remote Sensing
Sprayer Components
Planter Components
Auto Steer Components
Geographic Information System

Student Learning Outcomes
Identify the segments and components of the Global Positioning System
Explain how the Global Positioning System operates
Describe differential technology

Identify the components of a yield monitoring system
Create a boundary and grid a field
Collect soil samples on a grid
Explain Normalized Difference Vegetation Index (NDVI)
Compare NDVI maps
Identify variable rate sprayer components
Identify variable rate planter components
Install and calibrate an auto-steer system
Operate precision displays

Is this course part of a transfer pathway: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Revised Date: 6/2021