DEPT.: AGRI COURSE NO.: 2214
NUMBER OF CREDITS: 3
COURSE TITLE: Machinery Principles and Management
CATALOG DESCRIPTION: This course will cover the utilization of farm equipment from the purchasing of equipment and managing the costs to the operation and maintenance of agriculture equipment
AUDIENCE: Post secondary Agriculture students
FULFILLS MN TRANSFER CURRICULUM AREA(S) *(Leave blank if not applicable)*

PREREQUISITES OR NECESSARY ENTRY SKILLS/KNOWLEDGE: None

LENGTH OF COURSE: One 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:

1. To recognize and understand the basic principles of operation for the agricultural equipment utilized in the Midwest.
2. To understand the methods used to properly match equipment needs to business size.

3. To understand the necessary concepts used to determine equipment costs of ownership and operation on a per-acre basis.

4. To understand and perform proper maintenance and settings of agricultural equipment

5. To evaluate lease considerations as opposed to ownership costs

6. To understand the relationship of different tillage practices to environmental quality.

2) THINKING SKILLS:

1. To understand the functions performed by agricultural equipment

2. To understand and utilize the formulas used to calculate equipment costs

3. To learn the role of proper maintenance

4. To recognize the correlation of equipment used to erosion

3) COMMUNICATIONS SKILLS:

1. Written problems

2. Group work

3. Class discussion

4. Oral presentation

4) HUMAN DIVERSITY:

1. Equipment/tillage usage and the importance it has to soil and water quality as it relates to humanity.

TOPICS TO BE COVERED:

1. Machinery capacities
2. Horse power requirements
3. Tillage needs
4. Fixed costs
5. Variable costs
6. Fuel efficiencies
7. Equipment calibrations
8. Maintenance schedules
9. Lease plans
10. Ownership vs. lease

LIST OF EXPECTED COURSE OUTCOMES:

LEARNING/TEACHING TECHNIQUES used in the course are:

Collaborative Learning   Problem Solving
Student Presentations   Interactive Lectures
Creative Projects   Individual Coaching
Lecture   Films/Videos/Slides
Demonstrations   Other (describe below)
Lab   Field demonstrations on machine adjustment

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:

Reading   Tests   Individual Projects
Oral Presentations   Worksheets   Collaborative Projects
Textbook Problems   Papers   Portfolio
Group Problems   Term Paper
Other (describe below)
EXPECTED STUDENT LEARNING OUTCOMES:

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 or by using your preferred relay service.

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