Reedley College
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AgNR Department
Plant Science 11

Course Information

PLS 11 – Machine Technology

Catalog Description

Principles of machinery management, operations, and maintenance for tractors, farm implements, forklifts, and harvesting equipment.

Units and Hours

3 semester units on course completion. Class meets for 2 hours of lecture per week and 3 hours of laboratory per week.

Textbook

Machinery Management, Fourth Edition Bowers.

Materials

- Approved Footwear - ScanTron 100 Question Test Cards - Calculator

Assignments and Grading

Three major tests will be given that correlate to the assigned readings and course lecture notes. Homework problem sets will be assigned and four laboratory practical exams are required. Weekly chapter quizzes will also be provided.

Lecture:	Quizzes	140
	Safety Test	100
	2 Midterms	200
	Homework	100
	Final Exam	100
Laboratory:	Participation	180
	Practical	180
		1000

90% = A 80% = B 70% = C 60% = D Less = F

Important Dates:

Last Day to Drop Class with Refund:	January 22, 2010
Last Day to Drop w/o Transcript Record:	January 29, 2010
Last Day to Change CR/NR:	February 16, 2010
Last Day to Drop w/o Letter Grade Assigned:	March 12, 2010

COURSE OUTCOME:

A. Integration of costs, operation and safety into machinery management.

COURSE OBJECTIVES:

In the process of completing this course, students will:

A. demonstrate the ability to safely operate farm equipment and identify safety hazards.

B. perform standard pre-operational procedures on farm equipment and explain its importance in preserving equipment life and preventing unnecessary repairs.

C. become knowledgeable and proficient with Global Positioning System guidance systems and identify applications in agriculture.

D. competently maneuver farm tractors and equipment in precision operation courses and during turning, backing and field cultivation.

E. perform routine maintenance procedures and inspections on farm equipment.

F. become effective in calculations pertaining to machine capacity, horsepower, depreciation, operation costs, and custom operator costs.

G. identify farm equipment and implements, and relate the costs and specific application in cultural operations.

Assignments: All assignments are due at the beginning of class on the date due. Late submission of assignments will be assessed a penalty of 50%. No exceptions are made.

Academic Dishonesty: Plagiarism and cheating are serious offenses and may be punished by failure on exam, paper or project; failure in course; and or expulsion from the University. For more information refer to the "Academic Dishonesty" policy in the College Catalog.

Need for Assistance: If you have any condition, such as a physical or learning disability, which will make it difficult for you to carry out the work as I have outlined it, or which will require academic accommodations, please notify me as soon as possible.

Posting of Grades: Final grades will not be posted. If you wish to have your final grade sent to you, please bring a self-addressed, stamped envelope to the final exam.

Office Hours - Ag 4
Monday 9:00 Wednesday 9:00 Friday 9:00

PLS 11 – Machine Technology

Lecture Schedule

Week	Topic	Reading Assignment
1	Introduction	Chapter 1
2	Equipment Safety	Prepared Materials
3	Safety Test	
	Dimensional Analysis	Prepared Materials
4	Measuring Machine Capacity	Chapter 2
5	Improving Field Efficiency	Chapter 3
6	Matching Machine Size & Capacity	Chapter 4
7	Estimating Power Requirements	Chapter 5
8	**Review & Midterm**	
9	Estimating Fixed Costs	Chapter 6
10	Estimating Fuel & Lubricant Costs	Chapter 7
11	Estimating Repair Costs	Chapter 8
12	Total Costs	Chapter 9
13	**Review & Midterm**	
14	Deciding When to Trade	Chapter 10
15	Considering Future Capacity Needs	Chapter 11
16	Calculating Custom Work Costs	Chapter 12
17	Comparing Ownership, Leasing, & Rental Costs	Chapter 13
18	**Final Exam**	