

Reedley College  
George Moreno  
Email: George.moreno@reedleycollege.edu

AgNR Department  
Plant Science 11

## Course Information PLS 11 – Machine Technology 2011

### 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, (pending)

### Materials

- Approved Footwear – Safety glasses

### 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
	Midterm	200
	Homework	100
	Final Exam	100
	Laboratory: Participation	180
	Practical	180
		<b>1000</b>

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

### **Important Dates:**

August 16<sup>th</sup> class begins  
September 5<sup>th</sup> (Labor Day) No School  
September 16<sup>th</sup> last day to change to/from pass/no pass grading basis  
October 14<sup>th</sup> last day to drop  
November 24-26 (Thanksgiving Holiday) No School  
December 13<sup>th</sup> Final Exam  
December 16<sup>th</sup> End of Semester

**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.

**Office Hours**  
By appointment

## PLS 11 – Machine Technology

### Lecture Schedule

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

#### **Behavioral Standards:**

All students are expected to act in a mature, responsible manner that respects the rights of all other students, the instructor, and any guest presenters that may participate in the class. All cell phones and other electronic gadgets that may cause distractions are to be turned "off" during lecture and lab sessions.