



Fall 2017

MAG 40 57722

Introduction to Agricultural Mechanics Syllabus

Instructor: Ben Drake

Office Hours: Monday 2:00-3:00pm AGM 5 or by arrangement.

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Lecture Meeting: Monday 3 -4:50 LSH 1

Lab Meeting: Tuesday, 12 - 2:50, LSH 1 Shop

Units: 3

Course Description: Selection, care, and use of common tools, safety, projects of wood and metal; mechanical skills in the field of agriculture. Course is taught primarily to prepare agricultural education students, but skills are applicable to general agriculture. (2 lecture, 3 lab hours).

Course Goals:

- ☛ The student will develop an understanding of basic farm projects, materials and tools used.
- ☛ The student will be able to perform basic shop tasks commonly found in agricultural farming enterprises.

Primary Learning Outcomes:

The student will:

- ☛ Have an understanding of basic shop tasks commonly found in agriculture
- ☛ Be able to perform basic shop tasks common to agriculture
- ☛ Develop the ability to work safely in a shop environment
- ☛ Demonstrate their ability to layout projects from drawings
- ☛ Be able to create drawings of simple projects
- ☛ Be able to correctly identify common tools and materials
- ☛ Develop an understanding of projects and materials that will enable them to create a bill of materials for common farm or classroom projects
- ☛ Be able to solve project construction problems such as efficient use of materials, materials selection, etc.

Secondary Learning Outcomes:

The student will:

- ☛ Work with cold metal and perform simple tasks
- ☛ Work with plumbing materials and perform simple and assembly/repair tasks
- ☛ Work with wood and perform simple repair tasks

- 🔧 Work with electrical circuit components and perform simple assembly/repair tasks
- 🔧 Work with surveying instruments and perform simple tasks

Lab Dress: Work clothes, shop coats, or coveralls. No loose clothing. Long hair must be restrained. Closed toe shoes are required. Safety glasses will be worn at all times.

Required Lab Equipment:

- 🔧 OSHA approved Z87.1 or higher safety glasses
- 🔧 Steel tape measure

Lockers: Lockers are available in the restrooms in the Agricultural Mechanics building. Provide your own lock.

Safety: Safety is a primary concern while working in the shop. Students that are not working in a safe manner will be required to leave the shop. This includes failure to wear adequate eye protection. You will receive instruction on the safe operation of the equipment; any unsafe operation will be dealt with accordingly. **Proof of tetanus immunization is required.**

Required Text:

Ray Herren, Agricultural Mechanics Fundamentals & Applications, 6th edition Delmar Publishers. Students are expected to have read the assigned reading before lecture.

Students Responsibility:

- 🔧 Students are strongly advised not to miss labs since this time may be difficult or impossible to make them up.
- 🔧 No makeup's will be allowed unless by prior permission of the instructor.
- 🔧 Cleanup of the shop is part of the laboratory exercise. Students not participating in shop cleanup will have points deducted from their project grades.
- 🔧 No written assignments will be accepted after the last lecture meeting. Late assignments are subject to a 20% penalty. No lab projects will be accepted after the final exam.
- 🔧 Handouts will be given in almost every class or laboratory.

Tentative Schedule:

		LABS	BOOK UNITS
🔧	Week 1-	Safety/Measurement project	Units 4, 5 & 6
🔧	Week 2-	Wood Project (Nail Box)	Units 7 & 8
🔧	Week 3-	Wood Projects Continued	Units 9 & 10
🔧	Week 4-	Sheet Metal (Measuring Gauge)	Unit 12
🔧	Week 5-	Sheet Metal (Dust Pan)	15 & 16
🔧	Week 6-	Tool Fitting (Sharpening Drill Bits Screwdrivers & Chisels)	Units 21 & 22

🔥	Week 7-	Surveying	
🔥	Week 8-	Electrical Wiring	Unit 33
🔥	Week 9-	Electrical Wiring/Motors and Controls	Unit 34
🔥	Week 10-	Motors and Controls	Unit 36
🔥	Week 11-	Tap and Die	Unit 13
🔥	Week 12-	Concrete and Masonry (Step Stone)	Unit 40
🔥	Week 13-	Plumbing (Sprinkler)	Unit 37
🔥	Week 14-	Plumbing (Sprinkler)	
🔥	Week 15-	Lab Make-up	
🔥	Week 16-	Google Sketch-up	Units 18, 19 & 20
🔥	Week 18-	Open	

***You will be responsible for completing the multiple choice sections of all unit assignments on a scantron sheet (882) and turned in the following week.**

Subject to Change:

This syllabus and schedule are subject to change. If you are absent from class, it is your responsibility to check on any changes made while you were absent.

Evaluation:

Students will be evaluated on the basis of their performance on quizzes (announced and unannounced), written assignments, unit tests, lab projects and final examination according to the following scale.

Unit Assignments	10%
Tests & Quizzes	25%
Lab projects	40%
Final Exam	25%

Your grade in this course will be based on the following scale:

A - 90 - 100%
B - 80 - 89%
C - 70 - 79%
D - 60 - 69%
F - 59% and below

Attendance

Lecture: Attendance is required and roll will be taken at each class meeting. There is no difference between an "excused" or "unexcused" absence. A "tardy" is considered an absence unless the student contacts the instructor at the end of class to change the status from absent to tardy. Two tardies will count as an absence. Any student who misses more than two weeks of

class meetings within the first 9 weeks of class may be dropped from the class by the instructor (i.e., class meets two times per week, 4 absences; class meets 1 time per week, 2 absences).

Lab: Attendance in all labs is mandatory. Students must make prior arrangements with the instructor to be excused from lab. At that time, the instructor will determine, if any, make-up work will be appropriate.

Quizzes: There will be no make-ups for quizzes.

Tests: Make-up tests are limited to students who have made arrangements with the instructor prior to the required testing period or those students who have been excused by the SCCCD Dean of Admissions, Dr. John Cummings.

Grading Policy/Scales/Evaluation Criteria

For maximum point consideration, all written assignments and term reports should be typed and double-spaced. Lecture assignments (homework) will be accepted late up to the test for that unit of the course; however, late assignments will be penalized 1/3 of the possible points. Late laboratory assignments turned in within one week of the required due date will be accepted with a penalty equal to 1/3 of the maximum points. Any lab assignment turned in after that time up to the last regular class meeting will be accepted with a 50% penalty.

College Policies:

Cheating & Plagiarism

In keeping with the philosophy that students are entitled to the best education available, and in compliance with Board Policy 5410, each student is expected to exert an entirely honest effort toward attaining an education. Violations of this policy will result in disqualification for the course.

Accommodations for Students with Disabilities

If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact the instructor as soon as possible.

Work Ethic - Most students are enrolled in college classes to obtain a quality job or to enhance their skills for advancement with their current employment situation. Employers look for a punctual, responsible individual who is prepared to go to work. Our goal is to replicate the workplace environment where a student can develop and demonstrate these desirable traits.

- **Punctual**: It is customary to arrive at least 5 minutes before work begins. Individuals will be terminated if they are not punctual.
- **Responsible**: It is expected that an employee work every scheduled work day. Individuals will be terminated if they are not responsible.
- **Prepared**: It is expected that an employee be prepared with he/she arrives for work. Students must have work shirts, safety glasses, and appropriate footwear to participate in the laboratory. If a student is not prepared, he/she cannot participate and will receive a zero (see "responsible").

Language - English is expected to be spoken in class for the following reasons:

- All course content and materials are presented in English and class discussions all take place in English.
- All lab activities are conducted in groups and must have effective communication between all group members.
- Shop activities can be hazardous and it is vital that instructors receive feedback in English to ensure safe practices.
- This policy is designed so that instructors and all students may communicate in a common language.
- All individuals must have freedom of expression and are allowed and encouraged to communicate in the language of their choice outside of class times, including breaks.

Behavioral Standards

- Each student is responsible for his/her own work. Written assignments are not group assignments and no credit will be awarded for students who turn in the same work. Students suspected of cheating on tests and quizzes will receive no credit for that particular assignment and may be removed from the class.
- It is considered polite to turn off cell phones when in the classroom or shop. Please do so.
- Reedley College is a **Tobacco Free Campus!** No tobacco products of **any** form are allowed while on campus. This includes "E-Cigarettes"
- This class is set for the semester. All doctor's appointments, interviews, meetings with counselor, and other types of appointments should be scheduled during your time outside of class.

Important Dates

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| • Last day to drop and qualify for a refund | <u>August 25</u> |
| • Labor Day | <u>September 4</u> |
| • Last Day to drop a class and not receive a letter grade | <u>September 1</u> |
| • Veterans Day | <u>November 10</u> |
| • Thanksgiving | <u>November 23 & 24</u> |
| • Finals Week | <u>December 11 – 15</u> |

FINAL EXAM: –

