### http://kingsriverlife.com/wp-content/uploads/2014/10/reedleycollege.jpg

###  *Spring 2018*

### MAG 44 57730

### Agriculture Welding Fabrication

### Syllabus

**Instructor:** Greg Ravy

**Office Hours:** By arrangement.

E-mail: gregory.ravy@fresnocitycollege.edu

**Lecture Meeting:** Tuesday & Thursday 4:00 -4:50 IND 17

**Lab Meeting:** Tuesday & Thursday 5:00 – 6:15 IND 19 (shop)

**Units:** 3

**Course Description:** This course will provide entry-level instruction on welding fabrication. Instruction will be provided in the areas of welding techniques, welding plans and blueprints, cutting, fitting, proper tacking procedures, squaring, and finishing.

**Student Learning Outcomes:**

*Upon completion of this course, students will be able to:*

* Use acquired knowledge and skills to design equipment and tools.
* Use acquired knowledge and skills to fabricate equipment and tools from a set of designs.

**Objectives:**

*In the process of completing this course, students will:*

* Demonstrate proper safety procedures relating to welding and fabrication.
* Prepare metal and materials for welding.
* Demonstrate proper cutting techniques used to cut metal.
* Demonstrate proper welding techniques using Shielded Metal Arc Welding (SMAW), and Gas Metal Arc Welding (GMAW).
* Select proper materials and supplies to construct a project.
* Develop basic drawings and materials lists.
* Select and order appropriate materials.
* Understand the terminology associated with welding fabrication.

**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

**Suggested Lab Equipment:**

* Welding Hood – Shade 10 Lens
* Cutting Glasses – Shade 5 Lens
* Slip Joint Pliers

**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.

**Recommended Text:**

John Deere Publishing. *Welding,* 9th ed. Moline: John Deere Publishing, 2008. 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.

**Lecture Content:**

 Shop Safety and Orientation

 Welding Safety

 Introduction into joining and cutting metal

 Review of SMAW

 Review of GMAW

 Cutting metal

 Project Design

 Properties of Metal

 Designs of welded units

 Project Plan Design

 Bill of Materials

 Finishing a fabrication project

**Lab Content:**

Safety Orientation

 SMAW Welding and Assessment

 GMAW Welding and Assessment

 Cutting/Fitting and Assessment

 Project Plans and Bill of Materials

 Project Construction

**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. Announcements will be made using CANVAS

**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.

 Quizzes and Assignments 25%

 Lab projects 25%

 Class Participation 25%

Final Exam and Midterm 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.

**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 than 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.
* 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**

* Last day to drop for a full refund January 19
* Last day to drop and receive a W March 9
* Spring Break March 26 - 30
* Finals Week May 14 – 18

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| **FINAL EXAM: – Tuesday, May 15th @ 4pm** |