**REEDLEY COLLEGE – MAG 44 – AGRICULTURE WELDING FABRICATION**

**Fall 2021 MAG 44 M-F 8:15 AM-3:30 PM**

**3 Units, 18 weeks (1/11-6/11)**

**Instructor:** Manuel Torres

**Phone:** 559-485-8805 ext; 6093

**E-mail:** manuel.torres@wusd.ws

**Office:** L-2

**Classroom:** L-2

**Lab:** L-2

**Office hours:** M-F 7:15 am-8:05 am, 3:45-4:30

**Text Book:** John Deere Welding Fundamentals 10th Ed.

**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:**

* Used acquired knowledge and skills to design equipment and tools.
* Students will be able to create and design blueprints of project designing CAD/CAM OnShape.
* Use acquired skills to fabricate equipment and tools from a set of designs.
* Fabricate products to industry standards.
* Calculate the cost of a fabricated product.

**Course Outline:**

**The instructor will determine the order in which the following will be presented and developed.**

**Lecture Content:**

* Review: Shop, personal & welding safety
* OnShape Designing and Blueprinting
* Metal and material
* Review of SMAW
* Review of GMAW
* Review of GTAW
* Review: Cutting Metals
* Metal finishing
* Project plans: designs and sketches
* Project plans: working drawings
* Work Samples
* Bill of Materials
* Resume
* Letter of Application
* Portfolio

**Lab Content:**

* Safety Orientation
* GMAW Welding Proficiency
* Torch Cutting & Plasma Arc Proficiency
* Measurement Proficiency
* Metal; Preparation, layout, cutting and fitting
* Metal Clean-up and finishing
* **Project Fabrication**

**Prerequisites: None**

**Required Materials: \*Optional but recommended**

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| --- | --- |
| **Clear Safety Glasses (Z87.1+)** | **High Quality Resume Paper** |
| **Oxy-Fuel Goggles or Glasses (shade #5)** | **Report Folder / Binder** |
| **Welding Jacket / Leathers – or-**  **Coveralls / Shop Coat – or –**  **Long Sleeve Work Shirt & Jeans** | **Fine Point Sharpies** |
| **Approved footwear (leather work boots)** | **Tape Measure (length equivalent to project)** |
| **Welding Helmet (shade #10)** | **Calculator (basic)** |
| **Leather Welding Gloves** | **Scan-Tron for final exam** |

**How class will be conducted:**

1. **20%-Lab/Shop work/Work Points**
2. **20%- Classwork**
3. **20%- Tests/Quizzes**
4. **10%- Attendance/Shop Participation 20%**
5. **10%- Portfolio Due Thursday June 3rd, 2021 (beginning of class)**
6. **10%- SAE**
7. **10%- FFA (To earn, student must participate in 4 FFA activities per semester)**

**Point Distribution:** 100% - 90% = A

89% - 80% = B

79% - 70% = C

69% - 60% = D

59% and less = F

**Essential Information:**

* Any assignments turned in over a week late will receive 50% credit.
* Homework will not be accepted more than one week late.
* Attendance and participation is very important. You must attend class in order to participate and complete the required work.
* You are required to find out from the instructor any material missed during absence.
* Tests may be made up at the instructor’s discretion.
* Campus policy requires all students who miss 2 consecutive weeks must be dropped.
* In the event of class being cancelled you will be notified by a sign on the door.
* “Because cheating, plagiarism, and collusion are dishonest activities that erode the integrity of the college, each student is expected to exert an entirely honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences.” – SO DO NOT CHEAT!!
* If you carry a cellphone, please be respectful and set to vibrate before class starts.
* Foul Language will not be tolerated and students will be asked to leave class if not contained.
* Do not leave the classroom or shop area without instructor’s permission.
* Portfolio Due: Tuesday – June 3rd (beginning of class)
  + Each day late (past due date) will reduce portfolio grade 10%
  + Portfolio grade is 30% of total grade in class
  + Do Not Procrastinate on this assignment.

**IMPORTANT DATES:**

* **January 19 (T) Class Starts**
* **February 8 (M) No Classes No Classes**
* **February 15(M) George W. Birthday No Classes**
* **March- April 3/29- 4/5 Spring Break No Classes**
* **June 1-6 (wk) Finals Week.**

**Work Ethic:** Most students are enrolled in college classes to obtain a quality job or to enhance their skills for enhancement 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 works every scheduled work day. Individuals will be terminated if they are not responsible.
* **Prepared**: It is expected that an employee be prepared when he/she arrives for work. Students must have the appropriate clothing, tools and safety gear to participate in the laboratory. If a student is not prepared, he/she cannot participate and will receive a zero (see “responsible”).
* **Phones**: **Phones will not be allowed in the shop,** only under instructor's discretion.

\*\* Withdrawal (W): A student will be assigned a grade of “W” for classes dropped on or after 20 percent of the duration of the class, up to and including 50 percent of the duration of the class. After the 50 percent point, the student must receive a letter grade other than a “W” (i.e., A, B, C, D, F, I, P, NP). Check with your instructor for the deadline applicable to your class.

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Printed Student Name Student Signature/Date

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Printed Parent Name Parent Signature/Date

*Return signed syllabus to the next class meeting to receive full credit for your first assignment. Please return the entire syllabus and DO NOT rip or cut signature portion off. A second copy of the syllabus will be supplied to student upon request.*

Agriculture Mechanics

Shop Safety Policy

It is the intent to provide the safest hop environment as possible for the students. To obtain this objective, it is necessary to instill the importance of practicing safety and cleanliness. A student who violates any aspect of the shop safety code endangers fellow classmates. Any shop safety or clean-up rules that are broken will result in a violation. After the fifth violation you will be removed from the class, and as a result receive an “F” in the class.

Student Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Violation | Consequence | Date | Student Signature | Teacher Signature |
| 1. | Verbal Warning |  |  |  |
| 2. | Student and teacher call home. One day class suspension |  |  |  |
| 3. | Written assignment (one page) on why safety is important & suspension |  |  |  |
| 4. | One week shop suspension, research assignment on safety. |  |  |  |
| 5. . | Complete removal from class and shop privileges |  |  |  |

Agriculture Mechanics Classes Agreement

Student Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ID#\_\_\_\_\_\_\_\_\_\_\_\_

1. Safety equipment; You **MUST WEAR** the following equipment at **ALL TIMES** while you are in the shop.
   1. Safety glasses any time you are in the shop area. These will be provided to you, how if you lose, forget, or damage them you must pay $5.00 to replace them.
   2. Closed toed shoes this means **NO** flip-flops or sandals
   3. Long pants are suggested
   4. Coverall or long sleeved shirts anytime you are welding. You can purchase used coveralls at several stores in Fresno.
   5. The correct welding helmet or goggles for the job.
   6. Gloves when welding to protect hands (you may purchase you own pair)
2. Safety in the Ag. Mechanics Shop is the number one priority. Not complying to wear the proper clothing will result in a violation. **A total of 5 violations will result in suspension of shop privileges.**
3. There are lockers provided for students to shore lab/shop items. You will share this locker with another student in the class. You will be issued a school lock; if you lose or damage the lock you and your partner must pay $2.50 each to replace the lock.
4. If you abuse or misuse any tools or equipment, you are responsible for the damage and will be charged to either replace it or repair the tool.
5. All materials for a required project will be supplied free of charge. However, if you choose to take the procession of the project, you will be charged for the cost of the materials.
6. All students are responsible for daily clean-up and will be graded accordingly.
7. A safety test be passed with a 100% prior to the student allowed to participate in any shop activities.

I have read and understand the above as well as the class syllabus and agree to adhere to them all:

Student Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_

Parent Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_