# Welding 2 Semester 1

## Instructors: Andrew Lamer

**Email:** **alamer@muhs.com**

**Classroom: Welding Shop Room 122**

**Classroom phone: 928-634-7531 ext 1122**

**Class Description:**

Fundamentals of basic shielded metal arc welding procedures, equipment, and safety.

**Course Content:**

1. SMAW safety and equipment

2. Machine adjustments and operation

3. SMAW techniques in various positions

4. Selection of electrodes for shielded metal arc welding

5. Terminology and symbols

**Learning Outcomes:**

1. Explain shielded metal arc welding safety. (1)

2. Explain shielded metal arc welding theory, based on an understanding of its method of operation, equipment and application. (2-5)

3. Operate shielded metal arc welding equipment to industry requirements. (1-5)

**Text Books**

NCCER Welding Level 1

**Supplies Needed**

* Safety Glasses
* Welding Gloves
* Pencil / Pen
* Note Book
* 3 Ring Binder
* Black Sharpies

**State Standards Introduced:**

**STANDARD 3.0 SET UP AND USE SHIELDED METAL ARC WELDING (SMAW) EQUIPMENT**

3.1 Perform safety inspections of SMAW equipment and accessories

3.2 Set up and perform SMAW operations

3.3 Identify the use, storage, and handling of various types of electrodes

3.4 Perform surfacing welds

3.5 Perform fillet and groove welds in all positions

**STANDARD 8.0 PERFORM WELDMENT TESTING**

8.1 Describe nondestructive testing methods

8.2 Perform destructive testing methods

8.3 Perform a visual inspection on a weld

**STANDARD 9.0 USE AUXILLIARY EQUIPMENT AND TOOLS**

9.1 Perform safety inspections of equipment and accessories

9.2 Use mechanical/abrasive cutting equipment

9.3 Use power equipment to wire brush metal

9.4 Use multi‐purpose shear and punch (iron worker)

9.5 Identify and describe the use of metal forming equipment (i.e., metal rollers, metal brakes)

9.6 Use drilling equipment

9.7 Use welding‐related hand tools

**Attendance**

Missing class can have direct impact on a student’s achievement. Although some absences are beyond our control, a serious attempt should be made to minimize the loss of valuable class time. After the 7th absence during a term, credit will be denied regardless of the current grade. Students entering class after half of the period has elapsed will be considered absent. Any student who is not inside the classroom when the bell rings is considered tardy. Students are expected to be **PUNCTUAL, PREPARED, AND POSITIVE**. When a student will be or has been absent it is his or her responsibility to arrange to make up any work missed. Make up work must be completed within 5 days upon return to class or it will NOT be accepted. Any work due or tests taken the day of an absence will be made-up the FIRST day of the student’s return.

**It is the students’ responsibility to find out what work was missed and schedule a time to make it up!**

**Grading**

Grades will be based on

* Assessments
* Performance Tasks
* Assignments
* Quizzes
* Bell Work

**Extra credit assignments are not given, but bonus points may be earned on tests, performance tasks, and exams.**

**Scores will be rounded to the nearest whole number percentage and letter grades assigned based on the following scale:**

**90 to 100% = A**

**80 to 89% = B**

**70 to 79% = C**

**60 to 69% = D**

**Below 60% = F**

**Assessments**

Pre-Test

SMAW- Pre/Post

Mid-Term

Final Exam/ Post Test

**Performance Tasks**

14 SMAW Tasks

**Students will be given a set number of materials for each performance task. If needed additional materials can be purchased through the bookstore.**

**Please sign this page and return as soon as possible**

**Welding 2**

**Semester 1**

**A. Lamer**

We have read and understand the information on the preceding pages related to the course outline, attendance and grading policies for this class.

Name of student **(please print)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Name of parent/guardian **(please print)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Parent/guardian signature**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Date**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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