

SOUTHEAST COMMUNITY COLLEGE
MANUFACTURING OCCUPATIONS
WELDING TECHNOLOGY
COURSE SYLLABUS
September 11, 2023

I. CATALOG DESCRIPTION

Course Number: WELD1230
Course Title: SMAW III
Prerequisite(s): WELD1101, WELD1109

Catalog Description: Advanced welding of carbon steel plate with the shielded metal arc welding process on joint configurations and with various electrodes.

Credit Hours: 2.5
Classroom Hours: 8
Lab Hours: 90
Total Contact Hours: 98

II. COURSE OBJECTIVES: *Course will:*

- A. Teach the proper use of personal protection equipment required.
- B. Demonstrate how to attach leads to the power source to produce correct polarity.
- C. Demonstrate how to set the power source to the correct amperage for any given electrode.
- D. Demonstrate how to weld on carbon steel in all positions.
- E. Demonstrate how to follow Welding Procedure Specifications as required on certain welds.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES

A. STUDENT LEARNING OUTCOMES: *The student will be able to:*

- 1. Prepare and weld a single V groove in the vertical position.
- 2. Weld a multiple pass lap joint in the overhead position.
- 3. Identify the fundamentals of welding qualification tests.
- 4. Prepare and weld an out of position angle iron to plate.

B. GENERAL LEARNING OUTCOME:

GELO #3: Critical Thinking & Problem Solving

Outcomes:

- 1. Collect, identify, interpret and analyze data.
- 2. Synthesize information to arrive at reasoned solutions to problems.
- 3. Evaluate ideas presented in writing, medial, speech, or artistic presentations.
- 4. Evaluate the validity of arguments, alternatives, data, outcomes and/or impacts of actions.
- 5. Acquire and integrate knowledge and construct relationships across disciplines.

IV. CONTENT/UNIT OF INSTRUCTION

- A. Vertical Up Single V Groove
- B. Overhead Multiple Pass Lap Joint
- C. Compound Angle. Angle Iron to Plate.

V. INSTRUCTIONAL MATERIALS

Required Text(s): Refer to Course Information Document and/or course instructor for required text(s)

Other Resources: Supplemental handouts supplied by instructor
Notebook
Tools/Supplies for the 1st and 2nd semester listed on the Welding Technology Program required tool list

VI. METHODS OF PRESENTATION/INSTRUCTION

A. Methods of presentation typically include a combination of the following:

1. Lecture
2. Video presentations
3. Laboratory demonstrations

VII. METHODS OF EVALUATION

A. Methods of Evaluation typically include a combination of the following:

1. Written assignments
2. Written tests and quizzes

VIII. SPECIFIC COURSE REQUIREMENTS

A. Successful completion of all assignments, exams, and weldments.

B. Grading

1. All weldments must meet a minimum grade of C (70 Percent).
2. It is the students' responsibility to make up work when absent.
3. If a student misses an exam or practical test, due to an unexcused absence, a grade of zero (0) will be given.
4. All assigned work must be turned in on the day due or a late grade will be given (10% deduction each late day).
5. The instructor reserves the right to revise assignments and/or grading scale in accordance to the progress of the class at any time of the quarter.
6. Minimum course grade of C (70 Percent) is required.