

**SOUTHEAST COMMUNITY COLLEGE
MANUFACTURING OCCUPATIONS
WELDING TECHNOLOGY
COURSE SYLLABUS
October 30, 2023**

I. CATALOG DESCRIPTION

Course Number: WELD1109
Course Title: SMAW II
Prerequisite(s): WELD1101

Catalog Description: Intermediate welding of carbon steel with the Shielded Metal Arc Welding process on various 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 student the safe operation of the Shielded Metal Arc Welding process.
- B.** Demonstrate the proper setup and operation of a Shielded Metal Arc welder with various electrodes.
- C.** Teach the student to Shielded Metal Arc weld carbon steel on various types of joints and with various electrodes.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES

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

- 1. Utilize and apply SMAW theory.
- 2. Demonstrate proper use of PPE for SMAW.
- 3. Understand setup and safe operation of SMAW equipment.
- 4. Understand and be able to demonstrate proper welding techniques of various joint types.

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.** Setup of equipment to SMAW weld
- B.** Welding of carbon steel in the vertical position
- C.** Welding of carbon steel in the overhead position

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 terms 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 tests and quizzes
2. Laboratory performance

Letter grades will be based on the SCC Standard Grade Scale Policy. **Note:** See course information document for specific details on how the course grades will be calculated.

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 semester.
6. Minimum course grade of C (70 Percent) is required.