SOUTHEAST COMMUNITY COLLEGE
MANUFACTURING OCCUPATIONS
WELDING TECHNOLGY
COURSE SYLLABUS
July 1, 2019

Syllabus Statements

I. CATALOG DESCRIPTION

Course Number: WELD1101
Course Title: SMAW I
Prerequisite(s): None

Catalog Description: Study of Shielded Metal Arc Welding theory, safety, applications, procedures, and welding practices. Beginning welding of carbon steel on various joints and with various electrodes. Explanation of safe operation and proper use of equipment, power tools and hand tools.

Credit Hours: 3.5
Classroom Hours: 30
Lab Hours: 68
Total Contact Hours: 98

II. COURSE OBJECTIVES: *Course will:*

A. Have the student understand and demonstrate the theory, safe operation and proper set up of the Shielded Metal Arc Welding and the Air Carbon Arc processes.
B. Have the student identify and demonstrate the safe and proficient use of basic hand, power, measuring and assembly tools.
C. Have the student be able 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:*

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/TOPICAL OUTLINE

A. Introduction
B. Identify and demonstrate ability to use basic hand tools, power tools and equipment used in welding

C. Identify and demonstrate ability to use hammers, punches, and chisels
D. History of SMAW
E. Hazards
F. Safety, and Protective Equipment
G. Basic Electricity for SMAW Power Sources
H. Power Sources for Welding
I. Parts of the Welding Circuit
J. Electrodes
K. Variables Affecting a Good Weld
L. Controlling Arc Blow
M. Types of Joints
N. Position of Welds
O. Types of Deposits of Beads
P. Welding Design and Bead Profiles
Q. Setup and Operation of SMA Welder/Equipment
R. Demonstrate setup and operation of Air Carbon Arc equipment
S. Demonstrate ability to shielded Metal Arc weld carbon steel on various joint types

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
Pen or Pencil
Tools/Supplies for the 1st and 2nd quarters 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. Lecturing
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
3. Class attendance and participation
4. SCC Standard Grading Scale Policy:

A+	–	95 to 100 Points	A	–	90 to 94 Points
B+	–	85 to 89 Points	B	–	80 to 84 Points
C+	–	75 to 79 Points	C	–	70 to 74 Points

F (Failing)–Less than 70 points

VIII. SPECIFIC COURSE REQUIREMENTS

A. The student must successfully complete all assignments and exams.

B. Grading:

1. It is the students' responsibility to make up work when absent.
2. If a student misses an exam or practical test, due to an unexcused absence, a 10% grade deduction will be given for each day late.
3. All assigned work must be turned in on the day due or a late grade will be given (10% deduction each late day).
4. 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.
5. Minimum course grade of C (70 Percent) is required

C. Attendance/Classroom Policy

1. The Attendance Policy, as specified in the Welding Technology Program will be followed.
2. The Classroom/Lab Policy, as specified in the Welding Technology Program will be followed.