CLOUD COUNTY COMMUNITY COLLEGE

Our Mission: Cloud County Community College prepares students to lead successful lives and enhances the vitality of our communities.

**GENERAL INFORMATION**

**Course Number and Title:** IE 126 Shielded Metal Arc Welding  
**Term and Year:**Academic Year 2021-2022  
**Credit Hours and Course Description and Prerequisites:** 3 cr – Through classroom and/or lab/shop learning and assessment activities, students in the course will: describe the Shielded Metal Arc Welding process (SMAW); demonstrate the safe and correct set up of the SMAW workstation; associate SMAW electrode classifications with base metals and joint criteria; demonstrate proper electrode selection and use based on metal types and thicknesses; build a pad of weld beads with selected electrodes in the flat position; build pads of weld beads with selected electrodes in the horizontal position; perform basic SMAW welds on selected weld joints; and perform visual inspections of welds.

**Prerequisites**: None  
**Division:** Mathematics, Science, and Technical Programs    
**Department:** Agriculture

**Student Learning OUTCOMES and Assessment**

**Course Learning Outcomes**

For this course, students are expected to demonstrate the skills associated with the course learning goals as described by the student learning outcomes below:

1. Explain the shielded metal arc welding process
2. Demonstrate safe and correct set up of SMAW workstation
3. Relate SMAW electrode classifications with base metal and joint criteria
4. Demonstrate proper electrode selection and use based on metal types and thicknesses
5. Build a pad of beads with selected electrodes
6. Perform SMAW welds on selected joints
7. Perform visual inspection of welds

In class, students are assessed on the mastery of these outcomes using the learning management system. Student names will not be used when reporting results. Outcomes-based assessment is used to improve the instructional planning, design, and quality of student learning throughout the college

**Program Learning Outcomes**

For this course, students are expected to demonstrate the skills associated with the program learning outcomes as described below.

IE\_PLO 1: Develop the cognitive and physical skills necessary to pass American Welding Society certifications

IE\_PLO 2: Identify safe welding practices and procedures conforming to American Welding Society standards.

In class students are assessed on these outcomes. Student names will not be used when reporting results. Program accomplishment is partially measured through performance on program outcomes. Outcomes-based assessment of program learning outcomes is used to improve and enhance the programs throughout the college.

**Institutional Learning Outcomes**

For this course, students are expected to demonstrate the skills associated with the college wide learning outcomes as described below.

**Employment:**

ILO\_Em1. Demonstrate knowledge of norms and expectations of professional environments.

ILO\_Em2. Demonstrate skills in working with others in a professional and constructive manner.

In class, students are assessed on the mastery of these outcomes. Student names will not be used when reporting results. Outcomes-based assessment of the institutional learning outcomes is used to ensure we are meeting the mission of the college, following the guiding values and enhance instructional planning, design, and quality of student learning throughout the college.