South Central College

WELD 1160 Fabrication I

Common Course Outline

Course Information

Description In this course students will be introduced to the concepts of fabrication. They will also learn proper names of the equipment and hand tools associated with fabrication. (Prerequisite: WELD 1011 - Safety OSHA 10 or instructor approval)

Total Credits 2

Total Hours 48

Types of Instruction

Instruction Type	Credits/Hours
Lecture	1/16
Lab	1/32

Pre/Corequisites

WELD 1011 - Safety OSHA 10 or instructor approval.

Institutional Core Competencies

Communication - Students will be able to demonstrate appropriate and effective interactions with others to achieve their personal, academic, and professional objectives.

Critical and Creative Thinking - Students will be able to demonstrate purposeful thinking with the goal of using a creative process for developing and building upon ideas and/or the goal of using a critical process for the analyzing and evaluating of ideas.

Course Competencies

1. **Demonstrate safety practices when using the fabrication equipment.**

   Learning Objectives
   Demonstrate the proper uses of all personal protective equipment (PPE) needed when operating the bender and/or roller.
   Identify all pinch points and hazards that may be present when operating tubing bender or sheet roller.

2. **Explain how to enter and access the programs that have been entered into the tubing bender and/or sheet roller.**

   Learning Objectives
   Demonstrate how to enter a specific degree to obtain the correct bend radius.
   Demonstrate how to retrieve programs that have been saved on the particular machine.

3. **Demonstrate how to use the tubing bender and/or sheet roller.**

Learning Objectives

Explain how to adjust the bender depending on the material thickness that is being bent.
Explain how to install the material and operate the bending equipment.

4. Demonstrate how to figure out correct angles while bending the material.

Learning Objectives

Demonstrate how to bend various thicknesses of metal to a specific degree or radius.
Demonstrate how to use a protractor and other measuring tools to obtain the correct measurements.

5. Demonstrate how to fix material that has been formed to the wrong specifications.

Learning Objectives

Explain if the object being formed is repairable or will have to be scrapped because the specific radius was not achieved.
Demonstrate how a repair would be made to obtain the specific bend radius.

6. Build a final project(s) that will be formed and welded by following a blueprint that has been drawn.

Learning Objectives

Assemble a final project from reading a blueprint that may be drawn in class or obtained from a company.
Demonstrate how to measure the project to ensure it matches what the measurements are on the blueprint.
Build the project using the proper welding process and visual standards acceptance used in accordance to the D1.1 visual acceptance criteria.

SCC Accessibility Statement

South Central College strives to make all learning experiences as accessible as possible. If you have a disability and need accommodations for access to this class, contact the Academic Support Center to request and discuss accommodations. North Mankato: Room C-112, (507) 389-7222; Faribault: Room A-116, (507) 332-5847.

Additional information and forms can be found at: www.southcentral.edu/disability

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