

LABETTE COMMUNITY COLLEGE BRIEF SYLLABUS

SPECIAL NOTE:

This brief syllabus is not intended to be a legal contract. A full syllabus will be distributed to students at the first class session.

TEXT AND SUPPLEMENTARY MATERIALS USED IN THE COURSE (if any):

Please check with the LCC bookstore, <http://www.labette.edu/bookstore>, for the required texts for this class.

COURSE NUMBER: WELD 260

COURSE TITLE: Specialized Welding

SEMESTER CREDIT HOURS: 4

DEPARTMENT: Welding

DIVISION: Career Technical Education

PREREQUISITES: None

REVISION DATE: 8/25/17

COURSE DESCRIPTION:

Through classroom and/or lab/shop learning assessment activities, students in this 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 thickness; build pads of weld beads with selected electrodes in the vertical position; build pads of weld beads with selected electrodes in the overhead position; perform basic SMAW welds on selected weld joints; and perform visual inspection of welds.

COURSE OUTCOMES AND COMPETENCIES:

Students who successfully complete this course will be able to:

1. Demonstrate safe work practices and proper use of protective equipment.

- Identify hazards.
- Explain selection, care and use of Personal Protective Equipment.
- Identify potential hazardous situations before they occur.
- Define hazards and develop solutions for each hazard identified in lab.

2. Demonstrate lock out tag out procedures.

- Explain proper lockout rules and processes.
- Describe tag out requirements.

3. Demonstrate appropriate use of the operators' manual to verify that all guards and safety devices are properly installed and properly functioning

- Perform safety inspection.
- Communicate safety issues with appropriate personnel.
- Determine proper safety components using the owners' manual.

4. Demonstrate the proper care and maintenance of fabrication equipment.

- Use operators manual to determine maintenance procedures and schedules.
- Determine proper sequence of operation for safe use of equipment.

5. Identify from a blue print proper equipment needed to perform fabrication procedures to achieve industry standard results.

- Describe Shear use.
- Describe Press Brake use.
- Describe Drill Press use.
- Describe Plasma Cutter use.
- Describe Oxy-Acetylene burning machine.
- Describe Punch Press use.
- Describe Iron Worker use.
- Describe Horizontal Band Saw use.

6. Demonstrate safe and proper operation of fabrication equipment.

- Describe Shear use.
- Describe Press Brake use.
- Describe Drill Press use.
- Describe Plasma Cutter use.
- Describe Oxy-Acetylene burning machine.
- Describe Punch Press use.
- Describe Iron Worker use.
- Describe Horizontal Band Saw use.
- Demonstrate proper use of hand grinding equipment.

7. Determine proper welding procedures and process need to meet industry requirements and standards.

- Determine proper welding sequence.
- Determine proper weld filler metal.
- Determine proper welding gasses if needed.
- Match welding process requirements to blue print requirements.
- Identify fixture requirements as determined by welding position.

8. Determine proper machining procedures and processes needed to meet industry requirements and standards.

- Determine proper machining sequence.
- Determine proper machining process needed for metal composition.
- Match machining process requirements to blue print requirements.
- Identify fixture requirements as determined by machining requirements.

9. Demonstrate proficiencies of equipment operations and fabrication techniques using a blue print on individual basis.

- Fabricate a basic project to demonstrate individual competence of skills as per industry standards.
- Fabricate an intermediate to demonstrate individual competence of skills as per industry standards.
- Fabricate and advanced project to demonstrate individual competence of skills as per industry standards.

10. Demonstrate proficiencies of equipment operations and fabrication techniques using a blue print on team basis.

- Fabricate a project(s) to demonstrate team work and competence of skills as per industry standards.