

SYLLABUSWEL 126

DIVISION: Business and Engineering Technology

REVISED: MAY / 2013

CURRICULA IN WHICH COURSE IS TAUGHT: DCC Program of Study

COURSE NUMBER AND TITLE: WEL 126 Pipe Welding

CREDIT HOURS: 3 HOURS/WK **LEC:** 1 HOURS/WK **LAB:** 3 **LEC/LAB COMB:** 4

CATALOG DESCRIPTION: Teaches metal arc welding processes including the welding of pressure piping in the horizontal, vertical, and horizontal-fixed positions in accordance with section IX of the ASME code.

I.

II. RELATIONSHIP OF THE COURSE TO CURRICULA OBJECTIVES:

Covers safety inspections, and operation of Shielded Metal Arc Welding equipment in a variety of positions on plain carbon steel pipe joints. Also covers evaluating and solving welding and fabrication problems, with visual inspection.

III. REQUIRED BACKGROUND/PREREQUISITIES:

WEL 120 WEL121 WEL122

IV. COURSE CONTENT:

- Welding orientation (first class only)
- Safety in the welding lab
- Assemble a Smaw outfit
- Equipment and Supplies
- Electrode selection
- Weld joint design
- Welding safety and efficient work habits
- Joint design and fit up
- AC, DCEN and DCEP Fundamentals
- Selecting the proper electrode
- Arc Welding Joint Designs
- Pipe fit-up
- Running a bead on pipe by roll and fixed position
- Restarting and finishing an arc welding bead
- Identify weld defects with visual inspection

V. THE FOLLOWING GENERAL EDUCATION OBJECTIVES WILL BE ADDRESSED IN THIS COURSE

X Communication

X Information Literacy

X Critical Thinking

X Personal Development

X Cultural and Social Understanding

X Quantitative Reasoning

VI. LEARNER OUTCOMES

VII. EVALUATION

| Learner outcome | Evaluation method |
|---|---|
| <ul style="list-style-type: none">• Demonstrate the ability to select the proper electrode, current and polarity to use in a given weld position.• Demonstrate the ability to correctly restart and arc and blend Demonstrates the ability to perform acceptable welds on rolled and fixed pipe• Describes different types of weld defects with the ability to differentiate between acceptable and unacceptable welds• Be able to complete a safety inspection in the welding lab | <p>Lab exercises</p> <p>Written test</p> <p>Hands on lab exam</p> |

