

## WELD-205-PIPE WELDING 5-G/6-G 4 CREDITS

### SYLLABUS

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#### CATALOG DESCRIPTION

Stresses the theory and practical application of 5-G and 6-G pipe welding. This course will develop individual skills in the technique of downhill pipe welding, using E-6010 electrodes and the Shielded Metal Arc Welding process.

Prerequisites: WELD-133, WELD-134, WELD-135, WELD-136

Corequisites: WELD-WELD-204, WELD-206, WELD-207

Semester Offered: Fall, Spring

#### ***Common Student Learning Outcomes***

*Upon successful completion of San Juan College programs and degrees, the student will demonstrate competency in...*

##### **BROAD AND SPECIALIZED LEARNING**

Students will actively and independently acquire, apply, and adapt skills and knowledge with an awareness of global contexts.

##### **CRITICAL THINKING**

Students will think analytically and creatively to explore ideas, make connections, draw conclusions and solve problems.

##### **CULTURAL AND CIVIC ENGAGEMENT**

Students will act purposefully, reflectively, and ethically in diverse and complex environments.

##### **EFFECTIVE COMMUNICATION**

Students will exchange ideas and information with clarity in multiple contexts.

##### **INFORMATION LITERACY**

Students will be able to recognize when information is needed and have the ability to locate, evaluate, and use it effectively.

##### **INTEGRATING TECHNOLOGIES**

Students will demonstrate fluency in the application and use of technologies in multiple contexts.

*Student work from this class may be randomly selected and used anonymously for assessment of course, program, and/or institutional learning outcomes. For more information, please refer to the Dean of the appropriate School.*

#### **Course Learning Outcomes**

Upon successful completion of the course, the student will be able to...

1. To provide students with an understanding of 5-G and 6-G pipe welding in the downhill position using a variety of pipe sizes.

## Specific Learning Outcomes

Upon successful completion of the course, the student will be able to...

1. Perform the task of welding pipe joints in the 5-G and 6-G position using the SMAW process.
2. Weld pipe in the 5-G & 6-G position (downhill travel) using E-6010 electrodes on 2," 3" and 4" pipe.
3. Weld then prepare test coupons that will withstand a root and face bend. Inspection will consist of both visual and destructive methods.