

NVCC COLLEGE-WIDE COURSE CONTENT SUMMARY

WEL 160 - SEMI-AUTOMATIC WELDING PROCESSES (3 CR.)

COURSE DESCRIPTION

Introduces semi-automatic welding processes with emphasis on practical application. Includes the study of filler wires, fluxes, and gases. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

GENERAL COURSE PURPOSE

WEL 160 is a course in the certificate Welding Program updating the student in the trends of the welding industry. The student will be instructed in the set-up and use of GMAW, FCAW, and SAW equipment. Experienced welders will find WEL 160 educational.

COURSE OBJECTIVES

Upon completion of this course, the student will be able to:

- A. demonstrate a proficient knowledge of welding with the semi-automatic welding processes
- B. demonstrate proficient skill in the types of equipment and the set-up of equipment
- C. demonstrate a proficient knowledge of various filler wires, gases, fluxes, and combinations thereof
- D. observe and practice safety at all times in the welding lab

MAJOR TOPICS TO BE INCLUDED

- A. Introduction to semi-automatic welding processes, careers, general shop safety, and safety in welding
- B. The submerged arc process, filler wires, and flux
- C. The self-shielded flux-cored process and filler wire
- D. The gas metal arc welding process, filler wires, and gases

EXTRA TOPICS (optional)

- A. Semi-automatic welding in the vertical and overhead positions
- B. Qualification testing for certification in accordance with A.W.S. Structural Welding Code