NVCC COLLEGE-WIDE COURSE CONTENT SUMMARY

WEL 142 - WELDER QUALIFICATION TEST II (3 CR.)

COURSE DESCRIPTION

Studies techniques and practices of testing welded joints through destructive and non-destructive tests, gliding, discoloration heat tests, porous examinations, tensile, hammer, and free bend tests. Also studies visual, magnetic, fluorescent and ultrasonic tests. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

GENERAL COURSE PURPOSE

WEL 142 is designed to advance the student to an occupational proficiency in weld testing. The experienced welder and advanced welding student will find Welder Qualification Test II educational in understanding the tolerances and specifications required of professional welders. Experienced quality control and quality assurance personnel will find WEL 142 educational as a refresher course.

COURSE OBJECTIVES

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

A. demonstrate a proficient knowledge of welding techniques and purpose of operator qualification test  
B. become proficient in the techniques and practices of inspection  
C. demonstrate a proficient skill in the preparation and set-up of test specimens for welding in all positions  
D. obtain proficient knowledge in the welding and interpretation of welding tests performed on A.W.S. pre-qualified joints  
E. demonstrate his knowledge of safety in the welding lab at all times

MAJOR TOPICS TO BE INCLUDED

A. Strength of materials, formulas, charts, and equations  
B. Weld design, location, size, and classification  
C. Joint design, strength, and tolerances  
D. A.W.S. Structural Welding Code interpretation  
E. Major methods of destructive and non-destructive testing  
F. Welding symbols

EXTRA TOPICS (optional)

Qualification testing for certification in accordance with A.W.S. Structural Welding Code