Revised 10/95

NVCC COLLEGE-WIDE COURSE CONTENT SUMMARY

WEL 121 - ARC WELDING (2 CR.)

COURSE DESCRIPTION

Studies the operation of AC and DC power sources, weld heat, polarities, and electrodes for use in joining various alloys by the SMAW process. Covers welds in different types of joints and different welding positions. Emphasizes safety procedures. Lecture 1 hour. Laboratory 3 hours. Total 4 hours per week.

GENERAL COURSE PURPOSE

WEL 121 is designed to prepare students for industrial employment as apprentice welders, welders, quality control inspectors, welding equipment salesmen, and welding laboratory assistants.

COURSE OBJECTIVES

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

A. become proficient in the theory of AC and DC power sources
B. have proficient knowledge of the selection and application of electrodes
C. demonstrate his proficiency of welding techniques on assigned lab projects in the flat, horizontal, and vertical positions using fast freeze and fill freeze electrodes
D. demonstrate his knowledge of safety and set-up at all times

MAJOR TOPICS TO BE INCLUDED

A. Safety and health of welders
B. Power sources and respective applications
C. Selection of electrodes, heat, and polarities
D. Welding technique and positions
E. Metallurgy relative to welding
    1. alloys
    2. thermal effects
    3. atomic structure
F. Organizations and codes governing the SMAW, process, joints, and specifications

EXTRA TOPICS (optional)

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