

COURSE OUTLINE

Revision: R. Squirrell July 14, 2009

DEPARTMENT:	Manufacturing Technology
CURRICULUM:	Welding Fabrication Technology
COURSE TITLE:	Welding Processes and Applications
COURSE NUMBER:	WFT 100
TYPE OF COURSE:	Vocational Preparatory
COURSE LENGTH:	1 quarter
CREDIT HOURS:	2
LECTURE HOURS:	11
LAB HOURS:	22
CLASS SIZE:	25
PREREQUISITES:	None

COURSE DESCRIPTION:

Exploration of the applications and criteria for selecting the most widely used welding and weld-related metal joining processes, namely, gas metal arc welding, flux-cored arc welding, shielded metal arc welding, gas tungsten arc welding, submerged metal arc, oxyacetylene, brazing, soldering and cutting, plasma arc cutting and resistance welding. Covers types of welds and weld joints.

STUDENT LEARNING OUTCOMES ADDRESSED:

1. Technology - Use equipment and tools properly
2. Personal Responsibility - Take personal responsibility for skills, safety and production.

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STUDENT LEARNING OUTCOMES ADDRESSED: (cont.)

3. Critical Thinking and Problem Solving - Select best process to solve common welding defects
4. Human Relations - Share ideas and critique workmanship through teamwork
5. Communication - Use fabrication drawings and instruction to build samples

GENERAL COURSE OBJECTIVES:

At the end of the course the student will:

1. Recognize and select the best uses for each of the treated joining processes
2. Use criteria for choosing the best joining process
3. List the basic equipment needed and calculate costs for each of the treated joining processes
4. Follow procedures for manufacturing structural items per instructions
5. Produce workmanship samples using the listed welding processes

TOPICAL OUTLINE:

APPROX. HOURS

I. Welding and other major metals	5
II. Safety procedures and practices	2
III. Applications of major joining processes	20
IV. Joining process selection	2
V. Basic equipment requirements for joining processes	2
VI. Basic types of welds and weld joints	<u>2</u>
Total	33

REVISED BY: Rodger Squirrell / J. Todd
DATE: January 2003