

COURSE OUTLINE

Revision: D. Weber, August, 2011

DEPARTMENT:	Manufacturing Technology
CURRICULUM:	Welding Fabrication Technology
COURSE TITLE:	Gas Tungsten Arc Welding
COURSE NUMBER:	WFT 127
TYPE OF COURSE:	Vocational Preparatory
COURSE LENGTH:	1 Quarter
CREDIT HOURS:	6
LECTURE HOURS:	22
LAB HOURS:	88
CLASS SIZE:	25
PREREQUISITES:	WFT: 100, 120, 121, 105, 124, 125

COURSE DESCRIPTION:

A set of practical lab exercises that convey the usage of equipment along with theory of operation and applications of the Gas Tungsten Arc Welding (GTAW) process demonstrated throughout multiple joint configurations, as well as various alloys of metal, including carbon steel, stainless steel and aluminum. The high quality welds produced by this process are commonplace in pressure piping systems, aerospace products, and when using heat-sensitive metals. The GTAW process provides both high quality and excellent weld appearance and demands a high quality skill set.

STUDENT LEARNING OUTCOMES ADDRESSED:

1. Communication - Communicate and work in groups to complete minimum skills activities.

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STUDENT LEARNING OUTCOMES ADDRESSED: (cont.)

2. Personal Responsibility - Complete reading and written work as assigned. Properly tack and complete high quality welds as required for assigned lab competencies. Demonstrate consistent safe work habits including citizenship. Demonstrate consistent quality workmanship per industry standards.
3. Critical Thinking and Problem Solving - Formulate and communicate a plan of action for assigned fabrication and maintenance projects.

GENERAL COURSE OBJECTIVES:

At the end of the course the student will be able to:

1. Identify components of Gas Tungsten Arc Welding equipment.
2. Explain GTAW principles of operation.
3. Safely transport, assemble, adjust, and maintain a GTAW equipment.
4. Perform assigned laboratory exercises using GTAW

TOPICAL OUTLINE	APPROX. HOURS
I. Components of a GTAW system	2
II. Operating principles of GTAW	2
III. Setup & use of GTAW system	2
IV. Techniques for using GTAW	<u>104</u>
Total	110

Detailed Topical Outline is available separately

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