

Las Positas College
3000 Campus Hill Drive
Livermore, CA 94551-7650
(925) 424-1000
(925) 443-0742 (Fax)

Course Outline for WLDT 67A
WELDING SKILLS LABORATORY
Effective: Fall 2008

I. CATALOG DESCRIPTION:

WLDT 67A — WELDING SKILLS LABORATORY — 2.00 units

Development and improvement of skills in Arc (SMAW), Flux-core (FCAW), MIG (GMAW), and TIG (GTAW) welding.

2.00 Units Lab

Prerequisite

WLDT 61AL - Beginning SMAW and FCAW Skills Lab
with a minimum grade of C

Grading Methods:

Letter or P/NP

Discipline:

	MIN
Lab Hours:	108.00
Total Hours:	108.00

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: 4

III. PREREQUISITE AND/OR ADVISORY SKILLS:

Before entering the course a student should be able to:

A. WLDT61AL

IV. MEASURABLE OBJECTIVES:

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

- A. Illustrate increased skill and knowledge development in the welding process chosen by student to study:
 - 1. Shielded Metal Arc (SMAW)
 - 2. Gas Tungsten Arc (GTAW)
 - 3. Gas Metal Arc (GMAW)
 - 4. Flux Core Arc (FCAW)
- B. Demonstrate safe and proper use of equipment;
- C. Practice skills in preparation for entry-level employment in the metal trades

V. CONTENT:

- A. Student selected and led projects or procedures
- B. Hands-on, process specific, advanced experience in laboratory;
- C. Current career trends in the welding industry
- D. American Welding Society nomenclature and symbols

VI. METHODS OF INSTRUCTION:

- A. **Demonstration** -
- B. Correlation with real world industrial applications and careers
- C. One-on-one, hands-on instruction
- D. Visual aids

VII. TYPICAL ASSIGNMENTS:

A. Welding samples using different welding processes 1. Gas Tungsten Arc Welding (GTAW) 2. Gas Metal Arc Welding (GMAW) 3. Shielded Metal Arc Welding (SMAW) 4. Flux-Core Arc Welding (FCAW) B. Welding samples using different welding joints 1. Butt joint 2. Tee joint 3. Lap joint 4. Corner joint 5. Edge joint C. Welding samples using different positions 1. Flat 2. Horizontal 3. Vertical 4. Overhead D. Welding Samples using different materials 1. Carbon Steel 2. Stainless Steel 3. Aluminum 4. Magnesium 5. Copper 6. Titanium

VIII. EVALUATION:

A. **Methods**

- 1. Class Participation

2. Lab Activities

3. Other:

a. Methods:

1. Participation

2. Workmanship samples

3. Safe operation in the laboratory environment and the proper use of shop equipment

B. Frequency

1. Frequency:

a. Participation will be evaluated daily

b. Workmanship samples will be submitted for grading as completed over the duration of the semester

c. Safety and proper use of tools will be evaluated on a daily basis

IX. TYPICAL TEXTS:

X. OTHER MATERIALS REQUIRED OF STUDENTS:

A. Personal Protective Equipment

B. Safety Glasses (ANSI Z81)

C. Leather welding gloves

D. Long sleeve shirt or jacket

E. Leather shoes or boots