Las Positas College
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Course Outline for WLDT 67B

ADVANCED WELDING SKILLS LAB

Effective: Fall 2008

I. CATALOG DESCRIPTION:
WLDT 67B — ADVANCED WELDING SKILLS LAB — 2.00 units

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

2.00 Units Lab

Prerequisite
WLDT 67A - Welding 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. WLDT67A

IV. MEASURABLE OBJECTIVES:
Upon completion of this course, the student should be able to:

A. Illustrate advanced skill and knowledge development in the welding process chosen by the 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 appropriate to 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. Correlation with real world industrial applications and careers

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 with work contracts 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