Barstow College Course Outline - Course - SLO, Objectives, Methods of Instruction

WELD 52

Dept & Nbr: WELD 52 **Abbrv Title:** POSITION WELD - ARC

Full Title:
Position Welding (Arc Welding)

Title 5 Category:
Associate Degree Applicable

Certificate:
Yes

Units
Max: 3.00
Min: 3.00

Course Hours Per Week
Lecture 2
Lab 3

Number of Weeks
18.0

Course Hours Total
Lecture 36.00
Lab 54.00

Methods of Delivery

Selected Topic
No

Grading
Graded Option (ABCDEF) and Pass/No Pass (P/NP)

Repeat Code

Non Repeatable/Non Activity Course (May be repeated two times with a grade of less than “P” or "C")

Basic Skills

Course is not a basic skills course.

Prerequisites

WELD 51

Corequisites

Recommended Preparation

Catalog Description

Advanced shielded metal arc welding. Electrodes and welding symbols.

Course Content

I. Shielded Metal Arc Welding (SMAW) Safety
II. Weld puddle
III. Weld heat affected zone
IV. Materials and cylinders
V. Inspection
VI. Testing
VII. Welding positions
VIII. SMAW equipment
IX. Electrodes
X. Out of position welding
XI. Arc Blow

Methods of Instruction

1. Lecture presentations and class discussion.
   (Satisfies objectives 2, 4, 5)
2. Video viewing and class discussion.
   (Satisfies objectives 2, 4)
3. Instructor demonstration followed by student demonstration and instructor critique.
   (Satisfies objectives 1, 2, 3, 5)
4. Homework, both reading and writing, assigned by instructor.
   (Satisfies objectives 2, 4, 5)

Course Objectives

A. Define Course Objectives

1. Produce a sound out of position Shielded Metal Arc Weld as measured by standard industry destructive tests.
2. Build upon basic theory of Shield Metal Arc Welding as provided by Welding 51.
3. Apply sound fabrication principles to construction of a useful product using the Shielded Metal Arc Welding processes.
4. Recognize and draw most of the common welding symbols pertaining to the Shielded Metal Arc Welding processes.

5. Apply Safety principles as they pertain to the art of position Shielded Metal Arc Welding processes

B. Critical Thinking Tasks/Assignments

Critical thinking assignments include(but are not limited to) the following:

Substantial Writing Assignments Including:

Computational or Non-Computational Problem Solving Demonstrations Including:
Exam(s)
Quizzes

Skill Demonstration Including

Objective Examinations Including

C. Methods of Evaluation

Substantial Writing Assignments	None
Computational or Non-Computational Problem Solving Demonstrations	Exam(s) Quizzes
Skill Demonstration	Class Performance(s) Performance Exam(s)
Objective Examinations	Multiple Choice True/False Matching Completion
Other	None
Additional assessment information (optional).	SPECIAL ASSIGNMENTS = 5% CLASS PARTICIPATION AND ATTENDANCE = 15%

Basis for Grades

Writing Assignments	30.0%
Skill Demonstrations	30.0%
Objective Examinations	20.0%
Other Category	20.0%

Required Reading, Writing and Other Outside of Class Assignments

Required Reading:

Required Writing:

Other Out of Class Assignments:

Texts/Materials

Textbooks

1. Bonhart. *Welding*, 4th ed. MCG, 2011, ISBN: 9780073373713.
2. Sacks. *Welding (Workbook)*, 4th ed. MCG, 2011, ISBN: 9780077475079.

Manuals

You have no manuals defined.

Periodicals

You have no periodicals defined.

Software

You have no software defined.

Other

1. Sample Textbook: Koellhoffer, Manz, Hornberger. WELDING PROCESSES AND PRACTICES.

2. Sample Lab Manual: Hornberger and Manz. WELDING PROCESSES AND PRACTICES WORKBOOK.

Student Learning Outcomes

1. Student will exercise the safety precautions necessary to avoid injury to self or property when performing out of position shielded metal arc welding.
    - Core Competency: Communication and Critical Thinking and Personal/Professional Development
    - Assessment Methods: Multiple Choice, Demonstration, Observations by Instructors.
    - Rubric:
2. Student will be capable of properly setting up, adjusting, operating and shutting down shielded metal arc welding equipment
    - Core Competency: Communication and Critical Thinking and Personal/Professional Development
    - Assessment Methods: Project or Presentation, Multiple Choice, Demonstration, Observation by instructors
    - Rubric:
3. Student will produce sound shielded metal arc welds in the horizontal, vertical and overhead positions.
    - Core Competency: Communication and Critical Thinking and Personal/Professional Development
    - Assessment Methods: Project or Presentation, Multiple Choice, Demonstration, Instructor performed visual, non-detuctive, and/or detructive tests.
    - Rubric:

Curriculum Committee Approval Date: 01/10/1990 **Last Outline Revision Date:** 01/01/2013