WELD 170B Course Outline as of Summer 2008

CATALOG INFORMATION

Dept and Nbr: WELD 170B Title: WELDING BASICS,INTERMED.
Full Title: Welding Basics, Intermediate
Last Reviewed: 12/10/2001

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	1.00	Lecture Scheduled	0.50	17.5	Lecture Scheduled	8.75
Minimum	1.00	Lab Scheduled	1.50	8	Lab Scheduled	26.25
		Contact DHR	0		Contact DHR	0
		Contact Total	2.00		Contact Total	35.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 17.50 Total Student Learning Hours: 52.50

Title 5 Category: AA Degree Applicable
Grading: Grade Only
Repeatability: 22 - 4 Times in any Comb of Levels
Also Listed As:
Formerly:

Catalog Description:
Intermediate basics of arc and oxy-acetylene welding and cutting. This course is a time shortened version of WELD 70B. It is intended to train individuals as maintenance technicians who need to know how to weld but who are not training to be welders.

Prerequisites/Corequisites:
Course Completion of WELD 170A

Recommended Preparation:

Limits on Enrollment:

Schedule of Classes Information:
Description: All-position arc welding, heli-arc, M.I.G. & fabrication techniques. This is a shortened version of WELD 70B, intended to train maintenance techs. who need to know how to weld but are not training to be welders. (Grade Only)
Prerequisites/Corequisites: Course Completion of WELD 170A
Recommended:
Limits on Enrollment:

Transfer Credit:
Repeatability: 4 Times in any Comb of Levels

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**	Effective:	Inactive:
CSU GE:	**Transfer Area**	Effective:	Inactive:
IGETC:	**Transfer Area**	Effective:	Inactive:

CSU Transfer:	Effective:	Inactive:
UC Transfer:	Effective:	Inactive:

CID:

Certificate/Major Applicable:
Not Certificate/Major Applicable

COURSE CONTENT

Outcomes and Objectives:
The student will:
1. Demonstrate the ability to carry out safe welding practices.
2. Identify the five basic types of welding joints.
3. Set up and place in operation arc, oxy-acetylene, gas tungsten and gas metal arc welding equipment.
4. Demonstrate welding in flat, horizontal and vertical positions.
5. Discuss the reasons for preheating in welding.
6. Assemble gas tungsten/gas metal arc welding equipment for welding.
7. Identify common shielding gases for welding mild steel, stainless steel and aluminum with the gas metal arc welding process.
8. Demonstrate ability to weld in all positions with shielded metal arc, gas metal arc.

Topics and Scope:

I. Shielded Metal Arc
   A. Arc welding safety
   B. Fillet welds, flat position
   C. Fillet welds, vertical position
   D. Single V-butt joints, flat, horizontal, and vertical positions
   E. Manipulative practice
II. Gas Metal Arc (MIG)
   A. Mig safety
   B. Power sources
   C. Shielding gases
   D. Wire feeders

E. Guns and barrels
F. Consumable wire
G. Manipulative practice

III. Gas Tungsten Arc Welding (TIG)
A. Tig safety
B. Power sources
C. Torches
D. Shielding gases
E. Tungsten electrodes
F. Metal preparation
G. Filler rod
H. Manipulative practice

IV. Flame Cutting
A. Flame cutting safety
B. Manual
C. Torches and tips
D. Gas pressure settings
E. Torch manipulation
F. Manipulative practice

V. Plasma Arc Cutting
A. Plasma arc cutting safety
B. Power source
C. Torches and nozzles
D. Cutting gases metals
E. Ferrous and nonferrous metals
F. Cutting techniques

Assignment:

Include weekly reading assignments, regular quizzes based on reading (including handouts developed by instructor and from manufacturers), practical skills assignments and tests. Course information will be supplemented by films and videos.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments and skill demonstrations are more appropriate for this course.	Writing 0 - 0%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems, Quizzes, Exams	Problem solving 10 - 35%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Class performances, Performance exams	Skill Demonstrations 30 - 50%

Exams: All forms of formal testing, other than skill performance exams.

Multiple choice, True/false, Matching items, Completion	Exams 15 - 35%

Other: Includes any assessment tools that do not logically fit into the above categories.

ATTENDANCE	Other Category 5 - 10%

Representative Textbooks and Materials:
SRJC Welding Department Handbook, updated annually.