REEDLEY COLLEGE

I.T. DIVISION

MFG. 32A BASIC WELDING - OXY-ACETY WELDING & CUTTING PROCESS, SMAW-ARC

T-TH 8:00 AM - 12:50 PM

INSTRUCTOR: Mr. Flores
Office: Industrial Technology Bldg.-Welding, Room 23
Phone: 638-3641, Ext. 3253

DESCRIPTION: Basic Welding 5 units, 10 hours weekly

1. Basic shop welding practices in oxy-acetylene fusion welding on plate, pipe and tubing of mild steel, stainless steel and cast iron, and brazing on M.S. and cast iron. Also soft and hard soldering on ferrous and nonferrous materials.
2. Basic shop oxy-acetylene cutting practices using: hand torch, straight line cutter and optic-cutter.
3. Basic shop welding practices in electric arc welding (SMAW) on M.S. plate and pipe. Welding will be done in flat, horizontal, vertical and overhead position with emphasis on working towards A.W.S. plate certification bends.
4. Construction of at least one welded project either student selected with instructor approval or instructor assigned project.
5. Student will learn the safety procedures as needed to work in both school and industrial shops.

EXPECTED OUTCOMES:

1. Students will be able to select and use the proper tools correctly as needed in the welding field.
2. Students will be able to perform fusion welds on plate, pipe and tubing with the oxy-acetylene torch, as well as braze both M.S. and C.I.
3. Students will be able to perform fusion welding on plate with the SMAW process in the flat, horizontal, vertical and overhead positions as time will allow.
4. Students will be able to use the oxy-acetylene cutting equipment with proficiency.
5. Students will know the correct safety procedures for working in both school and industrial shops.

REQUIRED BACKGROUND: Prerequisite - none

MINIMUM STUDENT MATERIALS: (Student Purchased)

		APPROXIMATE COST
1.	Textbook - Welding Skills - R.T. Miller	
2.	Student Workbook - Welding Skills - J.F. Gosse	
3.	Safety Booklet	N.C.
4.	Notebook - 3 ring and pencil	
5.	Highlight felt pen	
6.	Safety glasses	
7.	Ear plugs	N.C.
8.	Gloves	N.C.
9.	Helmet	N.C.
10.	Goggles	N.C.
11.	Shop coveralls	N.C.
12.	Tape measure - 16' or 20'	
	TOTAL	

HOW CLASS WILL BE CONDUCTED

1. Group lectures, tours, demos.
2. Individual instruction
3. Shop work
4. Workbook, quizzes, exams
5. Safety program

GRADING

1. Required welding assignments from progress chart	28%
2. Student Manual (workbooks)	29%
3. Quizzes and exams	7%
4. Participation, attendance & lab cleanup	36%
	100%

ATTENDANCE:

Roll will be taken through the use of a time clock. Each student is expected to punch in at the beginning of each class, and out at the end of each period.

Any student missing more than 3 days per each 9 weeks of the class, without prior permission, will be counseled by the instructor and if the student misses an additional day, he or she will be dropped from the class.

You are required to find out from the instructor any material missed during absence. Tests may be made up at the instructor's discretion.

Do not leave the classroom or shop area without the instructor's permission.

GENERAL POLICIES:

You are responsible to bring required materials to class. Textbooks and notebooks will be required.

Lockers will be provided for storage of projects and required materials. Students will provide locks.

Supplies will be provided by the school for required projects. Projects to be removed from shop will require all material bills to be paid.

School policy prohibits smoking, dipping snuff, eating, and drinking in the classroom and in the lab.

Any conduct that disrupts or distracts the class or is dangerous will not be tolerated.

Willful violations of any safety rule that endangers the health of yourself or others in the class or shop will result in immediate dismissal from the class.

* DROP DATE:

LAST DAY TO DROP THIS CLASS WITHOUT PENALTY WILL BE THE FRIDAY OF THE 9TH WEEK: FRIDAY, OCTOBER 15, 1999.

TEXT: Welding Skills
WORKBOOK: Welding Skills Workbook
SAFETY BOOKLET

Week	Topic	Text Chapter	Workbook Chapter	Workbook Page	Agenda
1-2	An Essential Skill	1	1	1-2	Lect. - Demo.
	Welding Safety	2	2	3-4	Safety Instructions
3-5	Oxy-Acetylene Equipment	5	5	12-13	Lect. - Demo.
	Oxy-Acetylene - Setting Up	6	6	14-15	Lect. - Demo.
6	Oxy-Acetylene - Flat Position	7	7	16-17	Lect. - Demo.
7-8	Oxy-Acetylene Cutting Operations	30	30	70-72	Lect. - Demo.
9-11	GTAW-TIG	24	24	51-53	Lect. - Demo.
12-13	SMAW-Machines & Access.	12	12	26-28	Lect. - Demo.
14-15	SMAW-Stricking Arcs	14	14	31-32	Lect. - Demo.
	Continuous Beads	15	15	33-34	Lect. - Demo.
	Flat Position	16	16	35-36	Lecture
	Weld-Selecting Electrodes	13	13	29-30	Lect. - Demo.
16	Reading Weld Symbols	35	35	85-87	Lecture
17	Review & Lab Cleanup	----	----	-----	Classroom and Lab
18	Final Exam Week	----	----	-----	----------

Student Workbook Assignments:	Date to be completed and turned in
1,2	August 26
5,6,7	September 9
30	September 23
24	October 7
12,14	October 21
15,16	November 4
13	November 18
35	December 2
Final day to turn in any book assignments	December 9

*Any assignment turned in up to <u>one</u> week late will receive only <u>50%</u> credit for the assignment. Any assignment more than <u>one</u> week late will receive <u>no</u> credit!

*Workbook questions point values:

T & F = 3 points each
Multiple choice = 4 points each
Matching = 3 points each

MFG. 32A SEMESTER REQUIREMENTS FOR LAB AND LECTURE

	Points
Workbook:	
Chapters 1,2	159
Chapters 5,6,7	285
Chapters 30	143
Chapters 24	189
Chapters 12,14	218
Chapters 15,16	186
Chapters 13,35	305
Safety Test	175
Quizzes - Oxy fuel process, SMAW process, electrodes symbols, soldering & brazing, mid-term exam	250
Final Exam	125
(TOTAL - 2,035)	
Welds from Progress Chart:	
SMAW - _____	600
Oxy-Acetylene _____ & Brazing _____	600
Oxy-Acetylene Cutting Exercise _____	400
Propane-Copper Exercise _____	100
Certification Plate - Face & Root Bend _____	200
(TOTAL - 1,900)	
Attendance	
Attendance Deduct 25 points for each absence Deduct 25 points for each tardy	300
Time clock usage - 40 pts @ 16 weeks	640
Weekly clean-up - 20 pts @ 16 weeks	320
End of semester clean-up and preventative maintenance	250
Classroom & Lab Participation	
Following instructions and working with other students	555
(TOTAL - 2,065)	
GRAND TOTAL	6,000

Listed above are the total number of all possible points that can be earned. The following percentages are needed to earn the respective grade.

5400 to 6000 - 90% = A
4800 to 5399 - 80% = B
4200 to 4799 - 70% = C
3600 to 4199 - 60% = D

*Extra points may be earned during the semester by attending field trips, doing a tech. report, or shop maintenance outside of scheduled class or lab time. Maximum of 10% of the Grand Total Points (600 points) can be earned.