REEDLEY COLLEGE
I.T. DIVISION
MFG. 33B ADVANCED WELDING, FABRICATION & CERTIFICATION
M-W 8:00 AM - 12:50 PM

INSTRUCTOR: Mr. Jefferys
Industrial Technical Building—Welding Department
Office: Room 23
Phone: 638-3641, ext. 3253

DESCRIPTION: Advanced Welding Fabrication & Certification. 5 units, 10 hours weekly

1. Advance welding applications in SMAW, Mig, Tig, Innershield and plasma. Materials will include carbon steel, stainless steels and aluminum.
2. Work towards A.W.S. welding certification in 1G, 3G and 6G positions.
3. Project fabrication, repair and problem solving.
4. An understanding of general welding shop cleanup, maintenance and repair.
5. Fill out Bill of Materials List and extend cost.
6. Learn how to use formulas as they apply to problems in mathematics for welders.
7. A general understanding of inspection of welds.
8. Students will learn how to fill out a job application and be given basic job interview skills.

EXPECTED OUTCOMES:

1. Students will be able to perform fusion welds for fabrication or repair by using either the SMAW, Mig, Tig or plasma systems.
2. Some students will be prepared to take the AWS certification welt test.
3. Students will have had the experience of designing, fabricating, repairing and problem solving on a major project.
4. Students will be able to price materials, estimate jobs and apply various formulas as needed in the welding industry.
5. Students will have been given the needed skills for successful job interviewing.
6. Students will have been given the opportunity to acquire both college welding and state AWS certifications.

REQUIRED BACKGROUND:

MFG. 32A, 32B - Basic Welding & Fabrication or instructor approval.

Final exam date

MINIMUM STUDENT MATERIALS:

		APPROXIMATE COST
1.	Textbook - GMAW-GTAW-FCAW - Minnick	
2.	Text Handbook - GMAW-GTAW-FCAW Handbook - Studebaker	NO COST
3.	Notebook - 3 ring and pencil	
4.	Highlight felt pen	
5.	Safety glasses	
6.	Ear plugs	NO COST
7.	Gloves	
8.	Tape measure - 16' or 20'	
9.	Calculator - four function	
	TOTAL	

HOW CLASS WILL BE CONDUCTED

1. Lectures, tours, demonstrations
2. Individual instruction
3. Lab work (skills, projects)
4. Workbook, quizzes, exams
5. Lab & classroom participation

GRADING	POINTS	PERCENT
1. Text Assignments	1342	14%
2. Quizzes	550	6%
3. Final Exam	200	2%
4. Lab work (skills from chart)	2400	27%
5. Fabrication Projects	2400	27%
6. Attendance	600	6.5%
7. Clean-up	570	6%
8. Time Clock Usage	640	6.5%
9. Lab & Class Participation	500	5%
TOTAL	9200	= 100.00%

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 class day.

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 may 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.

See additional "Policies & Procedures" handout sheet.

*** DROP DATE: LAST DAY TO DROP THIS CLASS WITHOUT PENALTY WILL BE THE FRIDAY OF THE 9TH WEEK: FRIDAY, MARCH 10, 2000.**

TEXTBOOK - GMAW-GTAW-FCAW - Minnick
TEXT HANDBOOK - GMAW-GTAW-FCAW - Studebaker

Week	Text	Topic	Chapter	Handbook	Agenda
1-2	GMAW	Processes, Safety, Welding C.S.	1, 8	All questions	Demo.
3-4	GMAW	Welding C.S., S.S.	9, 10	All questions	Lect.
5-6	Handouts	Materials I.D.	---	Handouts	Lect.
		Bill of Materials	---	Handouts	Lect.
7-8	GTAW	Process, Equipment	2, 3, 5	All questions	Lect./Demo.
9	GTAW	Welding C.S.	14	All questions	Lect.
10-11	GTAW	Welding Al, S.S.	11, 15	All questions	Lect.
12	GTAW	Q.C./Inspection	24	All questions	Lect.
13-14	Handouts	Math for Welders - Fractions, Percentages, Decimals, Formulas	---	Handouts	Lect.
15	FCAW	Process, Operation, Filler	1, 3, 5	All questions	Lect.
16	FCAW	Technique, Welding C.S.	7, 9	All questions	Lect.
17	Handouts	Job Interview Skills	---	Handouts	Lect.
18	Final Review & Lab Cleanup		---	---	Classroom & Lab

ASSIGNMENTS:	DATE TO BE COMPLETED AND TURNED IN
GMAW	
Chapters 1, 8	January 19
Chapters 9, 10	February 9
Bill of Materials Sheet	February 16
GTAW	
Chapters 2, 3, 5	March 1
Chapter 14	March 15
Chapters 11, 15	March 22
Chapter 24	April 5
Math for Welders Sheets	April 26
FCAW	
Chapters 1, 3, 5	May 10
Chapters 7, 9	May 10
Job Application Sheets	May 10

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

MFG. 33B SEMESTER REQUIREMENTS FOR LAB AND CLASSROOM

		Points
Text Assignments - GMAW:		
Chapters 1, 8		111
Chapters 9, 10		105
Text Assignments - GTAW:		
Chapters 2, 3, 5		411
Chapters 11, 14		181
Chapters 15, 24		239
Math Sheets		
Text Assignments - FCAW:		
Chapters 1, 3, 5		164
Chapters 7, 9		131
	(TOTAL - 1,342)	
Quizzes:		
Bill of Materials		150
Math Basics, Formulas		200
Mig, Tig, Innershield		150
Job Application		50
Final Exam - Written & Tool I.D.		200
	(TOTAL - 750)	
Lab-Welds from Progress Chart:		
MIG - chart # _____		800
TIG - chart # _____		800
Innershield - chart # _____		800
Fabrication Project & Repair Projects		2,400
	(TOTAL - 4,800)	
Attendance:		
Deduct 25 points for each absence		300
Deduct 25 points for each tardy		300
Clean-up:		
Weekly clean-up - 20 points per week @ 16 weeks		320
End of semester clean-up & preventative maintenance		250
Time Clock Usage:		
Forty points (40 points) per week @ 16 weeks		640
Lab & Classroom Participation:		
Follows lab instructions - Returns from break on time - Works with other students on assigned jobs		500
	(TOTAL - 2,310)	
	GRAND TOTAL - 9,200	

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

8280 to 9200 - 90% = A
7360 to 8279 - 80% = B
6440 to 7359 - 70% = C
5220 to 6439 - 60% = D
5219 below - 59% = F

*Extra points may be earned during the semester by attending field trips, doing a short industrial report, or shop maintenance. (All of the above are to be done outside of scheduled class or lab time.) A maximum of 10% (920 pts.) can be earned.