COURSE NUMBER & TITLE: WELD 1710-01 Oxyacetylene Welding and Cutting
SEMESTER/YEAR: Fall 2006

LECTURE HOURS: 1 LABORATORY HOURS: 1 CREDITS: 1.5

CLASS TIME: 7:00 – 8:00 a.m. MW ROOM: WT 141

INSTRUCTOR’S NAME: Darin Miller

INSTRUCTOR’S CONTACT INFORMATION:
  Office Location: WT 145
  Office Phone: 268-2278
  EMAIL: dmiller@caspercollege.edu

OFFICE HOURS: As Posted

COURSE DESCRIPTION: Instruction in welding safety, oxyacetylene cutting (OAC), oxyacetylene welding (OAW) and torch brazing (TB) processes. Identification of the most common joint designs, including joining processes using bead, fillet, and groove welds. Applications used with art forms, pipe welding, and nonferrous metals are covered.

EXTENDED COURSE DESCRIPTION: For persons with little or no previous welding experience. This course offers entry level through advanced instruction on the use of oxyacetylene cutting and welding techniques. Applications used with art forms, pipe welding, and nonferrous metals joining are introduced using the OXYACETYLENE WELDING (OAW) and OXYACETYLENE CUTTING processes.

STATEMENT OF PREREQUISITES: None

GOAL: To develop a thorough understanding of different joint design, the flowing together of metals, capillary action, and safety in and around the workplace while using welding equipment.

OUTCOMES: To utilize these processes for preparing joints for welding and learning the different types of welds on a variety of joint configurations. Processes using bead, fillet, and groove welds will be examined. Proper testing and evaluation of each weld will be undertaken.

METHODOLOGY: One (1) lecture hour per week and a one (1) hour lab for sixteen (16) weeks. Students will be evaluated on the quality of assigned laboratory exercises and quizzes given throughout the length of the course. Additional grading will come in the form of a mid-term and final exam.

EVALUATION CRITERIA: The student will be evaluated on quizzes, tests, and lab projects. The quizzes may be either written or practical.

GRADING SCALE
  100 - 90 = A
  89 - 80 = B
  79 - 70 = C
  69 - 60 = D
  59 - Below = F

Attendance Policy: Attendance is of utmost importance. Unexcused absences in the excess of 4 will result in the loss of one letter grade. Due to the consideration of the instructors and students, you must be present at the designated starting class time or you will not be allowed to participate unless prior arrangements with the instructor have been made.
Tool Use: Misuse of shop tools will result in the loss of tool privileges.

REQUIRED TEXTS, READINGS, AND MATERIALS:
   Welding Principals and Applications III, Jeffus

CLASS POLICIES:
Last Date to Change to Audit Status: See current Casper College catalog.
Last Date to Withdraw With a W Grade: See current Casper College catalog.

SAFETY: Personal and equipment safety standards will be strictly enforced. It is the individual’s responsibility to develop and use a safe work attitude.

STUDENT RIGHTS AND RESPONSIBILITIES: Please refer to the Casper College Student Conduct and Judicial Code for information concerning your rights and responsibilities as a Casper College Student.

Chain of Command: If you have any problems with this class, you should first contact the instructor in order to solve the problem. If you are not satisfied with the solution offered by the instructor, you should then take your problem through the appropriate chain of command starting with the department head, then the division chair, and lastly the vice president for academic affairs.

Academic Dishonesty - Cheating & Plagiarism: Casper College demands intellectual honesty. Proven plagiarism or any form of dishonesty associated with the academic process can result in the offender failing the course in which the offense was committed or expulsion from school. See the Casper College Student Code of Conduct.

ADA Accommodations Policy: It is the policy of Casper College to provide appropriate accommodations to any student with a documented disability. If you have a need for accommodation in this course, please make an appointment to see me at your earliest convenience.

CALENDAR OF COURSE CONTENT:

COURSE OUTLINE

Safety in the Workplace:
1. Personal protection and safety rules 3-1
2. Fire and explosion hazard 3-5
3. Compressed gas hazard 3-6
4. Weld cleaning and other hazards 3-7

Oxyacetylene Cutting/Welding:
1. Glossary of terms
2. Equipment orientation Lab
3. Maintenance of equipment Lab
4. Oxygen Cutting 9-1
5. Practice/Hole piercing Lab
6. Cutting and removing bolts Lab
7. Brazing Lab
8. Soldering Lab
9. Oxyfuel Gas Welding 7-1
10. Ripple beads on flat, horizontal, vertical positions Lab
11. Open root beads on flat, horizontal, vertical positions Lab
12. Cast iron welding (As time allows) Lab
13. Aluminum welding (As time allows) Lab