COURSE NUMBER AND TITLE: WELD 1700-80 GENERAL WELDING

SEMESTER/YEAR: Fall 2006

LECTURE HOURS: 1 LABORATORY HOURS: 1 CREDITS: 2.5

CLASS TIME 6:00 p.m. – 9:00 p.m.
10/19/06 – 12/14/06

INSTRUCTOR’S NAME: Mark Steinle Ph.D.

INSTRUCTOR’S CONTACT INFORMATION:
Office Location: WT 146
Office Phone: 268-2411
EMAIL: msteinle@caspercollege.edu

OFFICE HOURS: See current schedule posted on office door.

COURSE DESCRIPTION: This course includes the study of Oxyacetylene Welding, cutting and brazing, OAW, OAC and Shielded Metal Arc Welding (SMAW) processes.

STATEMENT OF PREREQUISITES: None

GOAL: The student will develop the necessary skills to produce quality welds on mild steel joints utilizing both processes.

OUTCOMES: To provide the student with a thorough understanding of the OAW, OAC, and SMAW processes. Areas of instruction include welding safety, acetylene welding and cutting mild steel plate and pipe, fillet and groove welds on mild steel plate using OAW, braze welding, and SMAW, the AWS electrode classification system as it applies to all processes mentioned.

METHODOLOGY: One (1) lecture hour per week and a one (1) hour lab for 16 weeks, or can be structured to fit industry needs for specific apprenticeship programs.

EVALUATION CRITERIA: Students will be evaluated on quizzes, tests, and lab projects. The quizzes and tests may be either written or practical. The final exam will be worth 30% of the final grade.

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 instructor 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: Basic SMAW, Griffith, Rodan & Briggs; Basic Oxyacetylene Welding, Griffith, Rodan & Briggs
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’S 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 and 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 the instructor at your earliest convenience.

CALENDAR OF COURSE CONTENT:

TOPICAL OUTLINE:

Text: Basic Oxyacetylene Welding (Week 1-8)

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TEST #1
**Text: Basic Arc Welding (SMAW) (Week 9 - 16)**

9 - 10
1. The Arc Welding Process
2. Sources of Electricity for Welding
3. The Welding Circuit
4. Fundamentals of Arc Welding

11 - 12
9. Padding a Plate
19. Outside Corner Weld
12. Single Pass Lap Joint

13 - 14
TEST #2
13. Single Pass Fillet Weld
14. Multiple Pass Lap Joint
15. Multiple Pass Fillet Weld

15 - 16
FINAL TEST

**REQUIRED WELDMENTS**

**OXYACETYLENE WELDING:**
1G. BUTT JOINT
1F. CORNER JOINT
2F. LAP JOINT
2F. TEE JOINT

**BRAZE WELDING:**
1G. BUTT JOINT
2F. LAP JOINT
2F. TEE JOINT

**SHIELDED METAL ARC WELDING:**
1F. CORNER JOINT
2F. LAP JOINT
2F. TEE JOINT
2F. LAP JOINT (Multiple pass)
2F. TEE JOINT (Multiple pass)