COURSE NUMBER & TITLE: WELD 2500-80 Structural Welding

SEMESTER/YEAR: Spring 2016

LECTURE HOURS: 2  LABORATORY HOURS: 2  CREDITS: 3

CLASS TIME: 1:00p.m. - 4:50p.m. TTH X 8 weeks = 64 contact hours
ROOM: WT 141 / 121
03/22/16 – 05/10/16

INSTRUCTOR’S NAME: Darin Miller

INSTRUCTOR’S CONTACT INFORMATION:
Office Location: WT 129A
Office Phone: 268-2278
Email: dmiller@caspercollege.edu

OFFICE HOURS: See current schedule posted on office door.

COURSE DESCRIPTION: A continuation of ARC welding techniques utilizing Shielded Metal Arc Welding, (SMAW), Gas Metal Arc Welding, (GMAW), and Flux Cored Arc Welding, (FCAW), processes on a variety of structural applications. Emphasis will be placed on multiple positions and Joint Geometry common to industry. Testing and course material will be based on the American Welding Society’s Structural Welding Code D1.1

STATEMENT OF PREREQUISITES: WELD 1710, 1760, and 1770
OR Instructor’s Permission

GOAL: Students will learn the proper terms associated with structural welding, safety, identification of the different structural steels, proper joint designs, welding techniques, and acceptability standards as specified by the American Welding Society.

OUTCOMES: Students will also be able to produce sound welds on properly designed joints, and to recognize all the necessary factors involved in heavy industry steel erection. Students will understand what requirements are to be met by the welding operator as outlined in the AWS D1.1 code. Demonstrate effective oral and written communication, solve problems using critical thinking and creativity, use appropriate technology and information to conduct research

METHODOLOGY: Four to six contact hours weekly.

EVALUATION CRITERIA: The student will be evaluated on quizzes, tests and lab projects. The quizzes and tests may be written or practical. The final exam will be comprehensive and count 30% of the final grade. Successful completion of 3/8 3G and 4G plate test IAW D1.1 Bu2a, and Bu2a GF required to pass the class.

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 TEXT, READINGS, MATERIALS: Handouts and information sheets.

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.

**No cell phones or other electronic devices are allowed in the classroom or laboratories.**

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.

*Official Means of Communication:* Casper College faculty and staff will employ the student’s assigned Casper College email account as a primary method of communication. Students are responsible to check their account regularly.

*ADA Accommodations Policy:* If you need academic accommodations because of a disability, please inform me as soon as possible. See me privately after class, or during my office hours. To request academic accommodations, students must first consult with the college’s Disability Services Counselor located in the Gateway Building, Room 344, (307) 268-2557, bheuer@caspercollege.edu. The Disability Services Counselor is responsible for reviewing documentation provided by students requesting accommodations, determining eligibility for accommodations, and helping students request and use appropriate accommodations.

**CALENDAR OR SCHEDULE:**

**TOPICAL OUTLINE:**

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1.</td>
<td>Terminology Relating to Structural Applications</td>
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<td>2.</td>
<td>Load and Stress Analysis</td>
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<td>3.</td>
<td>Column Related Design</td>
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<td>4.</td>
<td>Girder Related Design</td>
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<td>5.</td>
<td>Welded Connection Design</td>
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<tr>
<td>6.</td>
<td>Rigging and Safety</td>
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<td>7.</td>
<td>Statically and Dynamically Loaded Structures</td>
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<tr>
<td>8.</td>
<td>Miscellaneous Structure Design</td>
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