MIDLAND COLLEGE
SYLLABUS
WLDG 1457
INTERMEDIATE SHIELDED METAL ARC WELDING
2-5

Course Description: A study of the production of various fillets and groove welds, including preparation of specimens for testing in all test positions. The student will identify principles of arc welding; describe SMAW operations of fillet and groove joints; explain heat treatments of low alloy steels; and explain weld size and profiles. The student will prepare test plates perform fillet welds in the overhead position; perform Air Carbon Arc Cutting (CAC-A), weld removal; perform bevel groove welds with backing plates in various positions; and demonstrate use of tools and equipment. Students will demonstrate safe work practices.
Corequisite: WLDG 1421

Text, References, and Supplies:
1. MODERN WELDING, by Althouse, Turnquist & Bowditch.

The student will need to provide his/her own:
Welding hood with correct lens
Welding gloves
Face Shield - Tinted
Tape measure
Appropriate clothing for welding
Safety Glasses

Course Goal/Objectives: The following list of course goals will be addressed in the course. The goals are directly related to the performance objectives. (*designates a CRUCIAL Goal)
1. Complete Chapter 11 Study Guide & Test
2. Complete Chapter 12 Study Guide & Test
3. Complete Chapter 20 Study Guide & Test
4. Complete Chapter 32 Study Guide & Test
5. SMAW Bead Plates 1/8 E6010--all positions
6. SMAW LAP 1/8 E6010 2F
7. SMAW Lap 1/8 E6010 3F-D
8. SMAW Lap 1/8 E6010 3F-U
9. SMAW Lap 1/8 E6010 4F
10. SMAW T-Fillet 1/8 E6010 2F
11. SMAW T-Fillet 1/8 E6010 3F-D
12. SMAW T-Fillet 1/8 E6010 3F-U
13. SMAW T-Fillet 1/8 E6010 4F
14. SMAW Bead Plates 3/32 & 1/8 E6010 LH
15. SMAW Lap, 1/8 E7018LH, 2F
16. SMAW Lap, 1/8 E7018LH, 3F-U
17. SMAW Lap, 1/8 E7018LH, 4F
18. SMAW T-Fillet, 1/8 E7018LH, 2F
19. SMAW T-Fillet, 1/8 E7018LH, 3F-U
20. SMAW T-Fillet, 1/8 E7018LH, 4F
21. SMAW Bead Plate, 1/8 E7024 Jet, 1G
22. SMAW Lap, 1/8 E7024 Jet, 2F
23. SMAW Lap, 1/8 E7024 Jet, 2F + 15*
24. SMAW Lap, 1/8 E7024 Jet, 2F - 15*
25. SMAW T-Fillet, 1/8 E7024 Jet, 2F
26. SMAW Open V-Butt, E6010, 2F
27. SMAW Open V-Butt, E6010, 3F-U
28. SMAW Open V-Butt, E6010, 3F-D
29. SMAW Open V-Butt, E6010, 4F
30. Define Welding Terms

Student Contributions, and Class Policies:

Attendance, desire to learn with steady and Consistent work.

1. The student will be enrolled in WELD 1457. The student will exhibit professional behavior. Performance will be satisfactory if;

   A. College attendance is adhered to
   B. Student participates in class
   C. Student maintains a positive attitude
2. Unless otherwise stated, the student will be allowed references, including research material located in the Midland College Welding Technology Library. The student will be provided demonstrations for each of the content goals as seen necessary by the instructor. These goals will be complete and satisfactory is consistent with AWS and the course text.

3. Satisfactory performance will be measured by an objective and/or application exam and instructors observation.

**Evaluation of Students:**

<table>
<thead>
<tr>
<th>Evaluation Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weld Grades</td>
<td>50%</td>
</tr>
<tr>
<td>Chapter Tests</td>
<td>10%</td>
</tr>
<tr>
<td>Attendance, Class Participation, And Attitude</td>
<td>10%</td>
</tr>
<tr>
<td>Notebook</td>
<td>10%</td>
</tr>
<tr>
<td>Final Examination</td>
<td>20%</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 and above</td>
<td>A</td>
</tr>
<tr>
<td>80 to 89</td>
<td>B</td>
</tr>
<tr>
<td>70 to 79</td>
<td>C</td>
</tr>
<tr>
<td>60 to 69</td>
<td>D</td>
</tr>
<tr>
<td>50 to 59</td>
<td>F</td>
</tr>
</tbody>
</table>

(1 point per absence)

**Course Schedule:**

This course meets for 2 lecture hours and 5 lab hours per week.
SCANS Information: The following SCANS skills are taught and reinforced in this course:

INTERPERSONAL:
Works as a team member to solve shop (group) problems dealing with instructor specified content goal. Aids in the teaching of technique to WELD 1421 & 1425 students. Exercises leadership with encouragement of class participation in shop duties.

LISTENING/SPEAKING:
Interprets and responds to lectures in a manner which aid in the transfer of knowledge and ideas and supports the speaker. Organizes ideas and communicates group oral conversations on welding problems and codes.
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Instructor Information: Scott Cranford, Instructor ATC
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Office Hours: TBA by Individual Instructors

Curt Pervier, Applied Technology Dean
Lisa Hays, Applied Technology Secretary
Room 143A TC
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Fax: (432) 685-6472

Students are encouraged to contact the instructor at any time; however, making an appointment will guarantee the instructor’s availability at a specific time.
Midland College provides services for students with disabilities through Student Services. In order to receive accommodations, students must place documentation on file with the Counselor/Disability Specialist. Students with disabilities should notify Midland College prior to the beginning of each semester. Student Services will provide each student with a letter outlining any reasonable accommodations. The student must present the letter to the instructor at the beginning of the semester.

Students MUST actively participate by completing an academic assignment required by the instructor by the official census date. Students who do not actively participate in an academically-related activity will be reported as never attended and dropped from the course.

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Spanish
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