

**MIDLAND COLLEGE**  
**SYLLABUS**  
**WLDG 1421**  
**INTRODUCTION TO WELDING FUNDAMENTALS**  
**2-4**

- Course Description:** An introduction to the fundamentals of equipment used in oxy-acetylene welding (OFW-A) and shielded metal arc welding (SMAW), including welding and cutting safety, basic oxy-acetylene welding and cutting, basic arc welding processes and basic metallurgy. The student will demonstrate safety procedures associated with equipment; and identify ferrous and nonferrous metals.
- Text, References, and Supplies:**
1. **MODERN WELDING**, Althouse, Turnquist & Bowditch.
  2. Handouts form American Welding Society, Victor & Lincoln.
- 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 Goals/Objectives:**
- The following list of course goals will be addressed in the course. The goals are directly related to the performance objectives. Upon successful completion of the course the student will;
1. Define Welding Terms
  2. Complete Chapter 1 Study Guide & Test
  3. Complete Chapter 6 Study Guide & Test
  4. Complete Chapter 8 Study Guide & Test
  5. Complete Chapter 10 Study Guide & Test
  6. Assemble & Disassemble OAW Outfit
  7. OFW-A Fusion Bead 1G
  8. OFW-A Outside Corner Joint
  9. OFW-A Fillet
  10. OFW-A Butt Joint 1G

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11. OFW-A Butt Joint 3GU
12. OFW-A Butt Joint 3GD
13. OFW-A Butt Joint 2G
14. OFW-A Butt Joint 4G
15. OFC-A Hand Torch Plates
16. OFW-A Lap Joint 2F
17. OFW-A Lap Joint 3FD
18. OFW-A Lap Joint 4F
19. OFW-A T Fillet Joint 2F
20. TB Butt Joint 1G
21. OFW-A Tail Pipe 1G
22. OFW-A Tail Pipe 2 G
23. OFW-A Tail Pipe 5G
24. OFC-A Track Torch Bead Plates
25. OFC-A Pattern Torch
26. SMAW 4 Position Weldment E6010
27. SMAW Lap Joint 2F/E6010
28. SMAW Lap Joint 3FD/E6010
29. SMAW Lap Joint 4F/E6010
30. SMAW Lap Joint 3FU/E6010

**Student Contributions, and  
Class Policies:**

Attendance, desire to learn with steady and consistent work.

1. The student will be enrolled in WELD 1421. 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.

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

**Evaluation of Students:**

Weld Grades.....50%  
Chapter Tests.....10%  
Attendance, Class Participation,  
And Attitude.....10%  
Notebook.....10%  
Final Examination.....20%

90 and above           A  
80 to 89                B  
70 to 79                C  
60 to 69                D  
50 to 59                F  
(1 point per absence)

**Course Schedule:**

This class meets for 2 lecture hours and 5 lab hours per week.

**SCANS Information:**

**INTERPERSONAL:**

Works as a team member to solve shop (group) problems dealing with instructor specified content goal. 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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**Program Information:**

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Students are encouraged to contact the instructor at any time; however, making an appointment will guarantee the instructor's availability at a specific time.

## **Americans with Disabilities Act (ADA) Statement:**

Midland College provides services for students with disabilities through Student Services. In order to receive accommodations, students must visit [www.midland.edu/accommodation](http://www.midland.edu/accommodation) and complete the Application for Accommodation Services located under the Apply for Accommodations tab. Services or accommodations are not automatic, each student must apply and be approved to receive them. All documentation submitted will be reviewed and a "Notice of Accommodations" letter will be sent to instructors outlining any reasonable accommodations.

Midland College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following individuals have been designated to handle inquiries regarding the non-discrimination policies: **Tana Baker, Title IX Coordinator/Compliance Officer, 3600 N. Garfield, SSC 242, Midland, TX 79705, (432) 685-4781, [tbaker@midland.edu](mailto:tbaker@midland.edu)**; **Natasha Morgan, Director Human Resources/Payroll, 3600 N. Garfield, PAD 104, Midland, TX 79705, (432) 685-4534, [nmorgan@midland.edu](mailto:nmorgan@midland.edu)**. For further information on notice of non-discrimination, visit <http://wderobcolp01.ed.gov/CFAPPS/OCR/contactus.cfm> or call 1 (800) 421-3481.

### **Spanish**

Midland College no discrimina por motivos de raza, color, nacionalidad, sexo, discapacidad, o edad en sus programas o actividades. Las siguientes personas han sido designadas para responder a cualquier pregunta o duda sobre estas políticas no discriminatorias: **Tana Baker, Title IX Coordinator/Compliance Officer, 3600 N. Garfield, SSC 242, Midland, TX 79705, (432) 685-4781, [tbaker@midland.edu](mailto:tbaker@midland.edu)**; **Natasha Morgan, Director Human Resources/Payroll, 3600 N. Garfield, PAD 104, Midland, TX 79705, (432) 685-4534, [nmorgan@midland.edu](mailto:nmorgan@midland.edu)**. Para más información sobre estas políticas no discriminatorias, visite <http://wderobcolp01.ed.gov/CFAPPS/OCR/contactus.cfm> o llame al 1 (800) 421-3481.