

**MIDLAND COLLEGE**  
**SYLLABUS**  
**WLDG 2453**  
**ADVANCED PIPE WELDING**  
**2-4**

**Course Description:**

A comprehensive course on the welding of pipe using the shielded metal arc welding (SMAW) process. Position of welds will be 5G and 6G using various electrodes. Topics covered include electrode selection, equipment setup, and safe shop practices. The student will describe equipment and required pipe preparation. The student will perform 5G and 6G welds using various electrodes.  
Prerequisite: WLDG 2443

**Text, References, and Supplies:**

1. **MODERN WELDING**, Althouse, Turnquist & Bowditch.
2. Handouts from 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 Goal/Objectives:**

The following list of course goals will be addressed in the course. These goals are directly related to the performance objectives. Upon successful completion of the course the student will:

1. Define Welding Terms
2. Complete Chapter 23, Study Guide and Test
3. Complete ASME Code, Study Guide and Test
4. Complete API Code, Study Guide and Test
5. Complete All Positions SG and Test
6. SMAW, ASME, 6 In. Pipe 6010, 5G
7. SMAW, ASME, 6 In. Pipe 6010, 6G
8. SMAW, ASME, 6 In. 6010 & 7018 Cap, 5G
9. SMAW, ASME, 6 In. 6010, & 7018 Cap, 6G
10. SMAW, ASME, 4 In. 6010 & 7018 Cap, 5G

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11. SMAW, ASME, 4 In. 6010 & 7018 Cap, 6G
12. SMAW, ASME, 3 In. 6010 & 7018 Cap, 5G
13. SMAW, ASME, 3 In. 6010 & 7018 Cap, 6G
14. SMAW, ASME, 2 In. 6010 & 7018 Cap, 5G
15. SMAW, ASME, 2 In. 6010 & 7018 Cap, 6G
16. 6 In. Full Encirclement 5G
17. 6 In. Full Encirclement 6G

**Student Contributions, and  
Class Policies:**

Attendance, desire to learn with steady and consistent work.

1. The student will be enrolled in WELD 2453. 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
  - d. Student follows all departmental safety rules
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 as is consistent with AWS and the course text.
3. Student will use department resources to access AWS materials pertaining to welding codes.
4. Satisfactory performance will be measured by an objective and/or application exam and instructors observation.

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**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:**

The following SCANS skills are taught and reinforced in this course:

**RESOURCES:**

Selects material and equipment and procedure which will allow or produce enough time to complete all goals. Estimates cost to complete all content goals.

**THINKING:**

Specifies goals and procedures needed to meet the desired test results. Develops new learning technique in researching AWS codes. Learns that strict compliance to the rules and regulations of these codes are necessary.

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**Program Information:**

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Curt Pervier, Applied Technology Dean  
Lisa Hays, Applied Technology Secretary  
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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.

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.

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://wdcrobcolp01.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://wdcrobcolp01.ed.gov/CFAPPS/OCR/contactus.cfm> o llame al 1 (800) 421-3481.