*COURSE SYLLABUS FOR*

# Introduction To Pipe Welding

*WLDG 2406*

INSTRUCTOR: Randall Switzer Office Phone: 335-6306 Office Hours: As Posted

COURSE NUMBER: WLDG 2406

CREDIT HOURS: 4 (2/6)

PREREQUISITE OR COREQUISITE: WLDG 1421 and WLDG 1435.

CATALOGUE DESCRIPTION:
A comprehensive course on the welding of pipe using the shielded metal arc welding (SMAW) process. Position of welds will be 1G, 2G, 5G, and 6G using various electrodes. Topics covered include electrode selection, equipment setup, safe shop practices. Topics also include ferrous and nonferrous materials. The student will describe equipment and required pipe preparation. Emphasizes technology of welding carbon steel pipe with LH 7018 Welds tested by AWS standards. This is a capstone course for the Pipe Welder Level I Certificate, Certified Welder Level I Certificate, and the Lead Welding Machine Operator Level II Certificate. Lab fee required. (SCANS 1, 3, 4, 5, 8)

TEXTBOOK: Pipe Welding Procedures ISBN 0-8311-3141-1

SUPPLIES:
1. Welding Hood with Shade 10 (or higher) Filter Lens
2. Cutting Goggles or Shield
3. Welding Gloves
4. TIG Gloves
5. Striker
6. Chipping Hammer
7. Wire Brush
8. Welding Cap
9. Tape Measure
10. Leather Sleeves (optional)

LEARNING OUTCOMES:
Describe equipment and required pipe preparation; perform welds using various positions.

COURSE REQUIREMENTS:
- Complete all homework
- Complete all labs
- Complete written\lab tests
- Complete a final test

METHODS OF EVALUATION:

GRADING SCALE

| POINTS | GRADE |
|---|---|
| 90-100 | A |
| 80-89 | B |
| 70-79 | C |
| 65-69 | D |

WEIGHT OF COURSE REQUIREMENTS

| AREA | GRADE WEIGHT |
|---|---|
| LAB ASSIGNMENTS | 40% |
| TESTS | 20% |
| FINAL TEST | 20% |
| PROFESSIONALISM | 10% |

| | |
|---|---|
| | |
| 0-64 | F |

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|---|---|
| HOMEWORK | 10% |
| TOTAL | 100% |

ATTENDANCE POLICY\PROFESSIONALISM POLICY

Attendance is the greatest predictor of your success. Your attendance at EVERY ONE of the classes and labs is important and expected. A substantial grade penalty will be assessed to late work; including homework, lab assignments, and test. The "Professionalism Grade" will be determined by such factors as attendance, tardiness, class participation, and other classroom factors.

# INTERMEDIATE PIPE WELDING SYLLABUS CHART

| Item(Name) | Type | Description | Due |
|---|---|---|---|
| 1 | Introduction/ syllabus review/ equipment discussion | Go over safety rules and practices/ watch safety videos/ take safety test/ discuss proper equipment and where to obtain it/ discuss syllabus, due dates, grading etc. | TBA |
| 2 | Lecture/ Video | Discuss overview of pipe welding processes and watch a demonstration video | TBA |
| 3 | Lecture/ Lab | Discuss an overview of the pipe welding industry/Machine Setup Demonstration, Students Begin To Weld In Lab | TBA |
| 4 | Lab | Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |
| 5 | Lecture/ Lab | Lecture over pipe welding positions, standards, and codes / Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |
| 6 | Lab | Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |
| 7 | Lecture/ Lab | Lecture over preparation of the pipe joint/ Weld in lab toward | TBA |

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|---|---|---|---|
| | | completion of assigned tasks as defined on Lab Sheet | |
| 8 | Lab | Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |
| 9 | Lecture/ Lab | Lecture over uphill welding the root bead- heavy wall pipe / Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |
| 10 | Lab | Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |
| 11 | Lecture/ Lab | Lecture over the welding of thin wall pipe / Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |
| 12 | Lab | Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |
| 13 | Test Review/ Lab | Review over previously covered chapters /Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |
| 14 | Test | Ch. 1,4,5,8 | TBA |
| 15 | Lecture/ Lab | Lecture over the intermediate and cover passes / Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |
| 16 | Lab | Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |
| 17 | Lecture/ Lab | Lecture over difficulties that may be encountered in welding the cover pass/ Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |
| 18 | Lab | Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |

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|---|---|---|---|
| 19 | Lecture/ Lab | Lecture over horizontal pipe welding/ Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |
| 20 | Lab | Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |
| 21 | Lecture/ Lab | Continued lecture over horizontal pipe welding/ Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |
| 22 | Lab | Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |
| 23 | Test Review/ Lab | Review over chapters 7 and 9/ Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |
| 24 | Test | Ch. 7,9 | TBA |
| 25 | Lab | Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |
| 26 | Lecture/ Lab | Lecture over Pipeline welding and Downhill Welding of Pipe handouts (test 3)/ Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |
| 27 | Chapter Review/ Lab | Review of Test 3/ Weld in lab toward completion of assigned tasks as defined on Lab Sheet | TBA |
| 28 | Clean up | Clean laboratory areas, empty metal bins, make minor repairs to equipment, hand out weld test certificates | TBA |
| 29 | Final Exam Review | All Materials Covered In The Lab, Lecture, and Tests | TBA |
| 30, 31 | Final Exam | All Materials Covered In The Lab, Lecture, and Tests | TBA |

Syllabus Subject To Change as Needed Without Notice

## Special Needs

Odessa College complies with Section 504 of the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. If you have any special needs or issues pertaining to your access to and participation in this or any other class at Odessa College, please feel free to contact me to discuss your concerns. You may also call the Office of Disability services at 432-335-6861 to request assistance and accommodations.

## Learning Resource Center (Library)

The Library, known as the Learning Resources Center, provides research assistance via the LRC's catalog (print books, videos, e-books) and databases (journal and magazine articles). Research guides covering specific subject areas, tutorials, and the "Ask a Librarian " service provide additional help.

## Student E-mail

Please access your Odessa College Student E-mail, by following the link to either set up or update your account: http://www.odessa.edu/gmail/. **All assignments or correspondence will be submitted using your Odessa College email.**

## Student Portal

Please access your Odessa College Student E-mail, by following the link to either set up or update your account: http://www.odessa.edu/gmail/. **All assignments or correspondence will be submitted using your Odessa College email.**

## Technical Support

For Blackboard username and password help and for help accessing your online course availability abd student email account contact the Student Success Center at 432-335-6878 or online at https://www.odessa.edu/dept/ssc/helpdesk_form.htm.

## Important School Policies

For information regarding student support services, academic dishonesty, disciplinary actions, special accommodations, or student's and instructors' right to academic freedom can be found in the Odessa College Student Handbook.