



# Adv. Gas Tungsten Arc Weld.

WLDG 2451

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

COURSE NUMBER: WLDG 2451

CREDIT HOURS: 4 (2/6)

PREREQUISITE OR COREQUISITE: WLDG 1434.

CATALOGUE DESCRIPTION:

Advanced topics in GTAW welding, including welding in various positions and directions. (Positions include 1G, 2G, 5G, and 6G.) The student will describe and demonstrate safety rules and equipment used; and the effects of welding parameters in GTAW. The student will weld various joint designs; diagnose welding problems; and perform visual inspections. Welds tested by AWS standards. This is a capstone course for the Lead Welding Machine Operator Level II Certificate. Lab fee required. (SCANS 8, 9)

TEXTBOOK: Gas Tungsten Arc Welding Handbook   ISBN 1-59070-581-5

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:

Demonstrate proficiency in various welding positions; describe safety rules and equipment used; and describe the effects of welding parameters in GTAW; weld various joint designs; diagnose welding problems; and perform visual inspection..

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%
HOMEWORK	10%

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TOTAL	100%
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# 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.

## ADVANCED GTAW 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 TIG welding process and watch a demonstration video	TBA
3	Lecture/ Lab	Gas Tungsten Arc Welding Process Lecture /Machine Setup Demonstration, Students Begin To TIG Weld In Lab	TBA
4	Lecture/ Lab	Lecture covering pipe welding positions / Weld in lab toward completion of assigned tasks as defined on Lab Sheet	TBA
5	Lecture/ Lab	Lecture and lab demonstration on 6" 1G TIG pipe weld/ 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 and lab demonstration on 6" 2G TIG pipe weld/ Weld	TBA

		in lab toward 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	Test Review/ Lab	Lecture and lab demonstration on 6" 5G TIG pipe weld/ 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 and lab demonstration on 6" 6G TIG pipe weld/ 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	Lecture/ Lab	Lecture and lab demonstration on 4" 1G TIG pipe weld/ Weld in lab toward completion of assigned tasks as defined on Lab Sheet	TBA
14	Lab	Weld in lab toward completion of assigned tasks as defined on Lab Sheet	TBA
15	Lecture/ Lab	Lecture and lab demonstration on 4" 2G TIG pipe weld/ 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 and lab demonstration on 4" 5G TIG pipe weld/ Weld	TBA

		in lab toward completion of assigned tasks as defined on Lab Sheet	
18	Lab	Weld in lab toward completion of assigned tasks as defined on Lab Sheet	TBA
19	Lecture/ Lab	Lecture and lab demonstration on 4" 6G TIG pipe weld/ 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	Lecture and lab demonstration on 2" 1G TIG pipe weld/ 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	Lecture/ Lab	Lecture and lab demonstration on 2" 2G TIG pipe weld/ Weld in lab toward completion of assigned tasks as defined on Lab Sheet	TBA
24	Lab	Weld in lab toward completion of assigned tasks as defined on Lab Sheet	TBA
25	Lecture/ Lab	Lecture and lab demonstration on 2" 5G TIG pipe weld/ Weld in lab toward completion of assigned tasks as defined on Lab Sheet	TBA
26	Lab	Weld in lab toward completion of assigned tasks as defined on Lab Sheet	TBA
27	Lecture/ Lab	Lecture and lab demonstration on 2" 6G TIG pipe weld/ Weld	TBA

		in lab toward completion of assigned tasks as defined on Lab Sheet	
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	TBA
30, 31	Final Exam	All Materials Covered In The Lab, Lecture	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](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](#).