

Course Syllabus

NOTE: This syllabus is subject to change during the semester. Please check this syllabus on a regular basis for any updates.

Department : Welding Technology
Course Title : Intermediate Welding Using Multiple Processes
Section Name : WLDG_2413_ 6245
Start Date : 01/18/2011
End Date : 05/13/2011
Modality : FACE-TO-FACE
Credits : 4 (2-6)

Instructor Information

Name : James Mosman
OC Email : jmosman@odessa.edu
OC Phone # : (432) 335-6474

Course Description

Instruction using layout tools and print reading with demonstration and guided practice using some of the following processes; oxy-fuel cutting (OFC), Plasma Arc cutting (PAC), Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Flux core Welding (FCAW), Gas Tungsten Arc Welding (GTAW), Submerged Arc Welding (SAW) or any other approved welding process. This is a capstone course for the General Welder Level I Certificate and the Lead Welding Machine Operator Level II Certificate.

Prerequisites/Corequisites

Prerequisite: WLDG 1417, WLDG 1421, WLDG 1430, WLDG 1434 and consent of Department Chair.

Scans

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Course Objectives

The student will identify proper safety equipment and tools. Student will identify and select the proper welding process for a given application. The student will demonstrate

skills training using more than one approved welding process; demonstrate ability to analyze situations and make proper decisions using skills as taught; and select the most economical and practical welding process for the given task.

ACADEMIC ETHICS:

Each student is expected to do their own work on the assignments, and take tests without outside assistance. If unethical behaviour is detected, by Odessa College Policy, all parties involved may either be denied credit for the project, or at the instructor's discretion, the student(s) may be dropped from the class. A report will be made to the department chairman for further action as deemed necessary by the department chair.

Required Readings/Materials

a) You must purchase the following **required** readings/materials:

All textbooks from prerequisite courses will be utilized.

1. Welding Hood with shade 10 or darker lens or auto-dark lens
2. Welding Cap
3. Welding Gloves
4. Safety Glasses or Goggles or Face Shield
5. Cutting Goggles or Face Shield
6. Spark striker
7. Chipping hammer
8. Hand Wire Brush
9. Stainless Steel Hand Wire Brush
10. MIG Pliers / Welpers
11. Combination Square

All students must have equipment prior to 3rd class period or arrangements made with instructor.

b) You are encouraged to buy the following *optional* books/materials

1. Welding Leather sleeves
2. 25 foot tape measure
3. 2nd pair of Welding Gloves

Course Requirements (Lectures, Assignments and Assessments)

1. Take all tests
2. Complete all homework assignments

3. Complete all welds projects as assigned

Summary of Assignments & Activities

* NOTE: The due dates are subject to change. Please check this syllabus on a regular basis for any updates.

Item(Name)	Type	Description
1. Class Introduction, Safety Orientation	Lecture/Video/Exam	Students will be introduced to welding program, lab safety, class requirements.
2. Oxy-fuel welding and cutting / Weld project Assignment	Lecture/Lab	Introduction to Oxy-fuel processes and safety. Introduction to weld projects assignment.
3. Plasma Arc cutting	Lecture/Lab	Introduction to PAC and safety.
4. Air Carbon Arc Cutting / Base Metal Prep	Lecture/Lab	Introduction to CAC-A process and safety, preparation of base metal for welding. Weld projects determined and assigned.
5. Project Assignment / SMAW	Lecture/Lab	Introduction to paper and presentation project assignment. Begin work on SMA welding project.
6. SMAW	Lab	Work on SMA welding project.
7. SMAW	Lab	Work on SMA welding project.
8. SMAW	Lab	Work on SMA welding project.
9. SMAW	Lab	Work on SMA welding project.
10. SMAW	Lab	Complete work on SMA welding project.
11. Presentation abstract / GMAW	Lecture/Lab/Exam	Presentation abstract due. Begin work on Gas Metal Arc Welding project. First project due.
12. GMAW	Lab	Work on Gas Metal Arc Welding project.
13. GMAW	Lab	Work on Gas Metal Arc Welding project.
14. GMAW	Lab	Complete Gas Metal Arc Welding project.
15. FCAW	Lecture/Lab	Second project due. Begin work on Flux core Arc welding project.
16. FCAW	Lab	Work on Flux core Arc welding project.
17. FCAW	Lab	Work on Flux core Arc welding project.
18. FCAW	Lab	Complete Flux Core Arc welding project.
19. GTAW	Lecture/Lab	Third project due. Begin work on Gas Tungsten

		Arc welding project.
20. GTAW	Lab	Work on Gas Tungsten Arc welding project.
21. GTAW	Lab	Work on Gas Tungsten Arc welding project.
22. Final Exam Assignment / GTAW	Lecture/Lab	Final Exam distributed. Work on Gas Tungsten Arc welding project.
23. GTAW	Lab	Complete Gas Tungsten Arc welding project.
24. SAW	Lecture/Lab	Fourth project due. Begin work on Submerged Arc welding project.
25. SAW	Lab	Work on Sub Arc welding project.
26. SAW	Lab	Work on Sub Arc welding project.
27. SAW	Lab	Complete Sub Arc welding project.
28. Presentations	Lecture	Final weld project due. Give class project presentation.
29. Presentations	Lecture	Give class project presentation.
30. Final Review & Clean-up	Lecture /Lab	Final Review. Clean-up Lab.
31. Final Exam	Exam	Final comprehensive written exam due.

Grading Policy

METHOD OF EVALUATION:

Project Abstract	10%
Written Paper	10%
Class Presentation	10%
Lab Work	50%
Final Exam	<u>20%</u>
Total Grade	100%

91 – 100 = A

81 – 90 = B

72 – 80 = C

65 – 71 = D

Below 65 = F

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 and 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](#).