



WLDG-1425-101C3
Oxy-Acetylene Welding and Cutting,
And Other Cutting Processes
Fall-2024
M-W- 8:30am-11:50am

Instructor Information: Dwight Miller, dmiller@com.edu 409-933-8454

Student hours and location: MTWTH-7:30am-8:30am-MW-12:00pm-1:30pm-T 12:00pm-12:30pm **Welding Technology Office**

Required Textbook/Materials: Welding Principles and Applications (Larry Jeffus)
(ISBN-13: 978-0-3573-7765-9)
(ISBN-13: 978-0-357-37769-9)
The Hard back and Lab book are required.

Course Description: An introduction to oxy-fuel welding and cutting, including history and future in welding, safety, setup and maintenance of oxy-fuel welding, and cutting equipment and supplies. The student will describe or explain oxy-fuel welding and cutting safety procedures and identify and classify fuels and filler metals. The student will perform entry level oxy-fuel welding and cutting operations and select proper equipment and materials.

Course requirements:

WLDG 1425 Lab Assignments
Plasma Arc Cutting
1. Perform safety inspections of equipment and accessories.
2. Operate manual plasma arc cutting equipment
3. Perform cutting on Tee Plates
4. Perform cutting on 3/8 "plates
5. Perform cutting on pipe

Air Carbon Arc Cutting
6. Perform safety inspections of equipment and accessories
7. Operate manual air carbon arc cutting equipment
8. Perform removing welds from tee plates
9. Perform removing welds from 3/8" plates
10. Perform removing welds from pipe
Machine Oxy-fuel Gas Cutting
11. Perform pipe cutting operations on pipe beveler. Use all three machines.
12. Perform bevel cutting operations on plain carbon steel
Manual Oxy-fuel Gas Cutting and Welding
13. Operate manual oxy-fuel gas cutting equipment
14. Perform straight cutting operations on 3/8" steel plate.
15. Perform beveled cutting operations on 3/8" steel plate
16. Remove welded metal from tee plate using washing techniques
17. Perform straight cutting operations on carbon steel pipe 5G fixed position
18.. Perform beveled cutting operations on carbon steel pipe 5G fixed position
19. Perform Manual oxy-fuel gas welding on 3/16" steel plate

1. **Determination of Course Grade/Detailed Grading Formula:** The student must meet AWS standards on all workmanship qualifications.
2. 25% of the grade is homework, all homework must be completed to take the exam or it is a 0 on exam, 25% written exams, and 50% is skills test
3. Student must have a 65-70 on Exams and complete Lab Objectives 1 thru 16=D
4. Student must 71 thru 80 on Exams and complete Lab Objectives 1 thru 17=C
5. Student must 81 thru 90 on Exams and complete Lab Objectives 1 thru 18=B
6. Student must 91 thru 100 on Exams and complete Lab Objectives 1 thru 19=A

Late Work, Make-Up, and Extra-Credit Policy: Make-up exams must be scheduled with your professor but must be scheduled within 7 days of the original test date or you will receive a zero for the test. Make-up exams may score no higher than 90% unless the make-up exam was scheduled prior to the original exam date. At the instructor's discretion, make up exams may be in a different format from the scheduled exam. Labs and homework not turned in on the due date will be scored at 80% of the maximum

Attendance Policy: Attendance and Tardiness will be taken each class period

Communicating with your instructor: ALL electronic communication with the instructor must be through your COM email. Due to FERPA restrictions, faculty cannot share any information about performance in the class through other electronic means. (Faculty may add additional statement requiring monitoring and communication expectations via D2L or other LMS)

Student Learner Outcome	Maps to Core Objective	Assessed via this Assignment
Demonstrate oxy-fuel welding and cutting safety procedures	Teamwork	Homework, Written Exams, Lab Manual Quiz Chapter 7. Students will do a safety inspection in the welding lab as a group of two or more students in front of the instructor
Identify and classify fuels and filler metals	Critical thinking	Homework, Written Exams, Lab Manual Assignment. Welding Quiz Chapter 31.
Perform entry-level oxy-fuel welding and cutting operations	Critical thinking	Homework, Written Exams, Quiz Chapter 32
Select proper equipment and materials.	Critical thinking	Homework, Written Exams Lab Manual Quiz Chapter 32

Academic Dishonesty: Any incident of academic policy will be dealt with in accordance with college policy and the Student Handbook. Academic dishonesty – such as cheating on exams is an extremely serious offense and will result in a **grade of zero** on that exam and the student will be referred to the Office of Student Conduct for appropriate discipline action.

Student Concerns: If you have any questions or concerns about any aspect of this course, please contact me using the contact information previously provided. If, after discussing your concern with me, you continue to have questions, please contact Derrick Lewis, Department Chair, 409-933-8321/409-933-8380 at dlewis22@com.edu

Course outline:

Week#	Day/Date	Topic	Reading Assignments & Homework Due Dates
1	M 8-19-24	Intro + Syllabus + Expectations + Explain Grading % + Welding Safety Rules + Welding Equipment	Chapter 7 key terms 1 thru 9
	W 8-21-24	Welding Lecture 2 hours lab	Chapter 7 key terms 1 thru 9
2	M 8-26-24	Welding Lecture 2 hours lab	Chapter 7 key terms 10 thru 19
	W 8-28-24	Welding Lecture 2 hours lab	Chapter 7 key terms 20 thru 29
3	M 9-2-24	Closed Labor Day	
	W 9-4-24	Welding Lecture 2 hours lab	Chapter 7 key terms 30 thru 39
4	M 9-9-24	Welding Lecture 2-hour lab	Chapter 7 review questions 1 thru 20
	W 9-11-24	Welding Lecture 2-hour lab	Chapter 7 review questions 21 thru 30
5	M 9-16-24	Welding Lecture 2 hours lab	Chapter 7 review questions 31 thru 43
	W 9-18-24	Class review and Exam on Chapter 7 Students have 7 days to make-up test, or it will be a O on EXAM	Exam -Ch-7
6	M 9-23-24	Welding Lecture 2-hour lab	Chapter 8 key terms 1 thru 10
	W 9-25-24	Welding Lecture 2-hour lab	Chapter 8 key terms 11 thru 20
7	M 9-30-24	Welding Lecture 2-hour lab	Chapter 8 review questions 1 thru 10
	W 10-2-24	Welding Lecture 2-hour lab	Chapter 8 review questions 11 thru 20
8	M 10-7-24	Welding Lecture 2 hours lab	Chapter 8 review questions 21 thru 26
	W 10-9-24	Class review and Exam on Chapter 8 Students have 7 days to make-up test or it will be a O on EXAM	Exam -Ch-8

9	M 10-14-24	Welding Lecture 2 hours lab	Chapter 9 key terms 1 thru 10
	W 10-16-24	Welding Lecture 2 hours lab	Chapter 9 key terms 11 thru 20
10	M 10-21-23	Welding Lecture 2 hours lab	Chapter 9 review questions 1 thru 9
	W 10-23-24	Welding Lecture 2 hours lab	Chapter 9 review questions 10 thru 18
11	M 10-28-24	Class review and Exam on Chapter 9 Students have 7 days to make-up test or it will be a O on EXAM	Exam -9
	W 10-30-24	Welding Lecture 2-hour lab	Chapter 32 key terms 1 thru 17
12	M 11-4-24	Welding Lecture 2-hour lab	Chapter 32 key terms 18 thru 25
	W 11-6-24	Welding Lecture 2-hour lab	Chapter 32 review questions 1 thru 16
13	M 11-11-24	Welding Lecture 2-hour lab	Chapter 32 review questions 17 thru 29
	W 11-13-24	Class review and Exam on Chapter 32 Students have 7 days to make-up test or it will be a O on EXAM	Exam-32
14	M 11-18-24	Lab Work	Lab Work
	W 11-20-24	Lab Work	Lab Work
15	M 11-25-24	Lab Work	Lab Work
	W 11-27-24	Lab Work	Lab Work
16	M 12-2-24	Lab Work	Lab Work
	W 12-4-24	Lab Work	Lab Work

Institutional Policies and Guidelines

Grade Appeal Process: Concerns about the accuracy of grades should first be discussed with the instructor. A request for a change of grade is a formal request and must be made within six months of the grade assignment. Directions for filing an appeal can be found in the student handbook https://www.com.edu/student-services/docs/Student_Handbook_2024-2025_v2.pdf. *An appeal will not be considered because of general dissatisfaction with a grade, penalty, or outcome of a course.*

Disagreement with the instructor's professional judgment of the quality of the student's work and performance is also not an admissible basis for a grade appeal

Academic Success & Support Services: College of the Mainland is committed to providing students the necessary support and tools for success in their college careers. Support is offered through our Tutoring Services, Library, Counseling, and through Student Services. Please discuss any concerns with your faculty or an advisor.

ADA Statement: Any student with a documented disability needing academic accommodations is requested to contact Kimberly Lachney at 409-933-8919 or klachney@com.edu. The Office of Services for Students with Disabilities is located in the Student Success Center.

Textbook Purchasing Statement: A student attending College of the Mainland is not under any obligation to purchase a textbook from the college-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Withdrawal Policy: Students may withdraw from this course for any reason prior to the last eligible day for a "W" grade. Before withdrawing students should speak with the instructor and consult an advisor. Students are permitted to withdraw only six times during their college career by state law. The last date to withdraw from the 1st 8-week session is October 11. The last date to withdraw from the 16-week session is November 28. The last date to withdraw for the 2nd 8-week session is December 7.

FN Grading: The FN grade is issued in cases of *failure due to a lack of attendance*, as determined by the instructor. The FN grade may be issued for cases in which the student ceases or fails to attend class, submit assignments, or participate in required capacities, and for which the student has failed to withdraw. The issuing of the FN grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an FN grade.

Early Alert Program: The Student Success Center at College of the Mainland has implemented an Early Alert Program because student success and retention are very important to us. I have been asked to refer students to the program throughout the semester if they are having difficulty completing assignments or have poor attendance. If you are referred to the Early Alert Program you will be contacted by someone in the Student Success Center who will schedule a meeting with you to see what assistance they can offer in order for you to meet your academic goals.

Resources to Help with Stress:

If you are experiencing stress or anxiety about your daily living needs including food, housing or just feel you could benefit from free resources to help you through a difficult time, please click here <https://www.com.edu/community-resource-center/>. College of the Mainland has partnered with free community resources to help you stay on track with your schoolwork, by addressing life issues that get in the way of doing your best in school. All services are private and confidential. You may also contact the Dean of Students office at deanofstudents@com.edu or communityresources@com.edu.

SYLLABUS CHANGES:

The instructor reserves the right to make changes to this syllabus during the semester as needed to facilitate instruction and/or course.

Welding Safety Rules

- 1. No Horseplay of any kind**
- 2. No lighters or matches in the welding lab.**
- 3. Safety glasses(Z87) or prescription glasses with Z87 frame and lens MUST be always worn in labs and outside when students are working, sunglasses are NOT acceptable.**
- 4. Shaded cutting goggles or shaded cutting face shield must be worn when cutting with safety glasses.**
- 5. Never use machinery or equipment unless instructed by faculty instructor or lab assistant.**
- 6. Proper fitting clothing must be always worn in the lab (100% cotton, FRC)**
- 7. Report all accidents immediately.**
- 8. Grinding shields must be worn when grinding with safety glasses.**
- 9. No tobacco of any type in the welding building**
- 10.No spitting anywhere in the welding labs**
- 11.A welding hood with a shade of 9,10,11 or 12 must be worn while welding.**
- 12. Tool rest for tungsten grinder must be maintained at 1/16 distance from wheel.**
- 13.Gloves are required while welding, cutting, and handling metal in the welding lab.**

**14. FAILURE TO FOLLOW SAFETY RULES WILL RESULT BEING
REMOVED FROM CLASS**