



WLDG-1425-101CL
Oxy-Acetylene Welding and Cutting,
And Other Cutting Processes
Spring-2022
M-W- 8:30am-11:50am

Instructor: 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:

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	Performance Rating	Date Completed	Instructor's Initials	Trainee's Initials
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 straight cutting operations on plain carbon steel				
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 3/8" steel 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				

Determination of Course Grade/Detailed Grading Formula

1. 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

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 the 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 1-17-22	Closed Martin L. King Observed	

	W 1-19-22	Intro + Syllabus + Expectations + Explain Grading % + Welding Safety Rules + Welding Equipment	Chapter 7 key terms 1 thru 9
2	M 1-24-22	Welding Lecture 2 hours lab	Chapter 7 key terms 10 thru 19
	W 1-26-22	Welding Lecture 2 hours lab	Chapter 7 key terms 20 thru 29
3	M 1-31-22	Welding Lecture 2 hours lab	Chapter 7 key terms 20 thru 29
	W 2-2-22	Welding Lecture 2 hours lab	Chapter 7 key terms 30 thru 39
4	M 2-7-22	Welding Lecture 2-hour lab	Chapter 7 review questions 1 thru 8
	W 2-9-22	Welding Lecture 2-hour lab	Chapter 7 review questions 9 thru 15
5	M 2-14-22	Welding Lecture 2 hours lab	Chapter 7 review questions 16 thru 30
	W 2-16-22	Welding Lecture 2 hours lab	Chapter 7 review questions 31 thru 43
6	M 2-21-22	Class Review and Exam on Chapter 7	Exam -Ch-7
	W 2-23-22	Welding Lecture 2-hour lab	Chapter 8 key terms 1 thru 9
7	M 2-28-22	Welding Lecture 2-hour lab	Chapter 8 key terms 10 thru 14
	W 3-2-22	Welding Lecture 2-hour lab	Chapter 8 key terms 15 thru 20
8	M 3-7-22	Welding Lecture 2 hours lab	Chapter 8 key terms 21 thru 26
	W 3-9-22	Welding Lecture 2 hours lab	Chapter 8 review questions 1 thru 10
	3-14-22	Spring Break	
	3-18-22	Spring Break	
9	M 3-21-22	Welding Lecture 2 hours lab	Chapter 8 review questions 11 thru 20
	W 3-23-22	Welding Lecture 2 hours lab	Chapter 8 review questions 21 thru 26
10	M 3-28-22	Class review and Exam on Chapter 8	Exam
	W 3-30-22	Welding Lecture 2-hour lab	Chapter 9 key terms 1 thru 14
11	M 4-4-22	Class Review and Exam on Chapter 31	Chapter 9 key terms 15 thru 20
	W 4-6-22	Welding Lecture 2-hour lab	Chapter 9 review questions 1 thru 9
12	M 4-11-22	Welding Lecture 2-hour lab	Chapter 9 review questions 10 thru 18
	W 4-13-22	Class review and Exam on Chapter 9	Exam
13	M 4-18-22	Welding Lecture 2-hour lab	Chapter 32 key terms 1 thru 17
	W 4-20-22	Welding Lecture 2-hour lab	Chapter 32 key terms 18 thru 25

14	M 4-25-22	Welding Lecture 2-hour lab	Chapter 32 review questions 1 thru 16
	W 4-27-22	Welding Lecture 2-hour lab	Chapter 32 review questions 17 thru 29
15	M 5-2-22	Class review and Exam on Chapter 32	Exam.
	W 5-4-22	Welding Lecture 2-hour lab	Lab Work
16	M 5-9-22	Welding Lecture 2-hour lab	Lab Work
	W 5-11-22	Last day of class	Lab Work

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://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.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.* https://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.pdf

Academic Success & Support Services: College of the Mainland is committed to providing students 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 that is needing counseling services is requested to please contact Holly Bankston in the student success center at 409-933-8520 or hbankston@com.edu. Counseling services are available on campus in the student center for free. Appointments are strongly encouraged; however, some concerns may be addressed on a walk-in basis

Counseling Statement: Any student that is needing counseling services is requested to please contact Holly Bankston in the student success center at 409-933-8520 or hbankston@com.edu. Counseling services are available on campus in the student center for free and students can also email counseling@com.edu to setup their appointment. Appointments are strongly encouraged; however, some concerns may be addressed on a walk-in basis

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 adviser. Students are permitted to withdraw only six times during their college career by state law. The last date to withdraw from the 16-week session is April 25, 2022.

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

Early Warning Program: The Counseling Center at College of the Mainland has implemented an Early Warning Program. 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 Warning Program you will be contacted by someone in the Counseling Department. As student success and retention is very important to us, someone from the Counseling Department will schedule a meeting with you to see what assistance they can offer for you to meet your academic goals.

COVID-19 Statement: All students, faculty, and staff are expected to familiarize themselves with materials and information contained on the College of the Mainland's Coronavirus Information site at www.com.edu/coronavirus. In compliance with Governor Abbott's May 18 Executive Order, face coverings/masks will no longer be required on COM campus. Protocols and college signage are being updated. We will no longer enforce any COM protocol that requires face coverings. We continue to encourage all members of the COM community to distance, when possible, use hygiene measures, and get vaccinated to protect against COVID-19. Please visit com.edu/coronavirus for future updates.

The lab assignments are a major part of the course outline each student will progress at their own pace. However, each student must pass at least number 17 lab assignment to pass the class at a minimum requirement to A.W.S. Standards. Any student not passed assignment 16 by (W-day) will meet with instructor about their academic progress. The student and instructor will discuss any issue and/or distractions causing the problem. Faculty may, at their discretion withdraw a student due to an inability to maintain the prescribe minimum rate of progress stated in the course syllabi, or behavior detrimental to the learning process of the student or class.

SYLLABUS CHANGES:

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

The Speaking, Reading and Writing Center provides free tutoring services to students, staff and faculty seeking assistance for writing, reading and oral presentations for academic and non-academic assignments/projects. Located in the Technical Vocational Building 1306, the center provides face to face and online tutoring sessions in a welcoming environment. Appointments can be made in person, or on the center scheduler at com.mywconline.com, or by clicking the SRWC icon on the COM website.

Run, Hide, Fight *

<https://www.youtube.com/watch?v=5VcSwejU2D0>

Last Resort ACTIVE SHOOTER SURVIVAL Measures by Alon Stivi

<https://www.youtube.com/watch?v=r2tIeRUbRHw>

Welding Safety Rules

- 1. No Horseplay of any kind**
- 2. No lighters or matches in the weld 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.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 weld lab**
- 14.FAILUE TO FOLLOW SAFETY RULES WILL RESULT BEING REMOVED FROM CLASS**