Introduction to Oxyfuel Welding and Cutting-(OFCW)-1425

Course Syllabus: Fall 2017

"Northeast Texas Community College exists to provide responsible, exemplary learning opportunities."

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Office Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Online
	12:00-2:30pm	12:00-2:30pm	12:00-2:30pm	12:00-2:30pm		

The information contained in this syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.

Course Description for WLDG-1425: Four hours credit. An introduction to oxy-fuel and brazing on regular (1/16") mild steel welding, cutting, including history and future in welding, safety, setup and maintenance of oxy-fuel welding, and cutting equipment and supplies. Additional lab course fee: $65.00. Three hours lecture and four hours lab each week.

Required Textbook(s):
Basic Principles and Applications, 8th edition, by Larry Jeffus

Publisher: Delmar, Cengage Learning
ISBN Number: 978-1-111-03917-2. ISBN-10: 1-111-03917-8

Recommended Reading(s): None

Student Learning Outcomes:
Describe or explain oxy-fuel welding and cutting safety procedures and identify and classify fuels and filler metals. Perform entry level oxy-fuel welding and cutting operations and select proper equipment and materials.

I. Safety in Welding
II. Oxy fuel welding and cutting equipment, setup, and operation
III. Oxy-fuel gases and Filler Metals
IV. Oxyacetylene welding (OFCW)

Exemplary Educational Objectives: N/A

SCANS Skills:
Course Objectives

Upon successful completion of this course, the student will be able to:
Objectives for this course are listed in the handout that covers Competencies/tasks.

Lectures & Discussions:

Task Code	Task Description
2502.00	**Safety in Welding (F1, F5, F11, C5, C10, C18)**
2502.01	Describe the type of protection that should be worn for welding
2502.02	Describe the proper method of handling, storing, and setting up cylinders
2502.03	Discuss the proper way to ventilate a welding area
2502.04	Explain how to avoid electric shock
2502.05	Describe how to avoid possible health hazards for welding
2502.06	Explain how to prevent fires in the welding shop
2503.00	**Oxyfuel Welding and Cutting Equipment, Setup, and Operation (F1, F5, F11, C5, C10, C18)**
2503.01	Describe how to maintain the major components of oxy-fuel welding equipment
2503.02	Explain the method of testing an oxy-fuel system for leaks
2503.03	Demonstrate how to set up, light, adjust, extinguish, and disassemble oxy-fuel welding equipment safely
2504.00	**Oxyfuel Gases and Filler Metals (F1, F5, F14, C9, C14, C18, C20)**
2504.01	Explain the chemical reaction that takes place in an oxy-fuel flame
2504.02	List the major advantages and disadvantages of the different fuel gases
2504.03	Demonstrate an ability to choose correct filler metals
2504.04	Explain what conditions affect the selection of filler metal
2505.00	**Oxyacetylene Welding (F1, F5, F14, C9, C14, C18, C20)**
2505.01	Explain how to set up and weld mild steel
2505.02	Make a variety of welded joints in any position on thin-gauge, mild steel sheet
2505.03	Make a satisfactory weld on small-diameter pipe and tubing any position
2505.04	Explain the effects of torch angle, flame height, filler metal size, and welding speed on gas welds

Competencies/Tasks.

STUDENT NAME	Square Butt With RG-45 1/8-3/32			Lap Joint With RG-45 1/8 – 3/32					Tee-Joint With RG-45 1/8-3/32				Out-Side Corner Without-Filler				Final Test All Positions				
	G1	G2	G3	G4	F1	F2	F3	F4	F1	F2	F3	F4	F1	F2	F3	F4					

STUDENT NAME	R-Brazing 3/32 Butt	Lap	Tee	Corner	Mild Steel ½" Straight Flame Cut				Mild-Steel ½" Hole Flame Cut				FINAL TEST			

Evaluation/Grading Policy:

The grades you will receive for this class will be based upon these areas:

A	**Test and Quizzes: Hands-on Lab Practices**	**50%**
B.	**Review Questions: At the end of each unit**	**10%**
C.	**General Work Habits: Safety, use of lab time, materials, and <u>Care of equipment</u>.**	**10%**
D.	**Mid-term Test: Art Project and Unit 22-23 Written test**	**10%**

E. Final Test: Hands-on Lab All Positions Final Test 20%
F. Total: 100%

Tests/Exams:
Same as the above Description

Assignments:
Review Questions: At the end of the assigned units by your instructor

Other Course Requirements:
Each student is required to have a welding toolkit that may be purchased from the bookstore on campus AND steel toe boots for this course. If the student does not purchase this from the bookstore they will be required to provide the necessary equipment.

General Classroom and Lab Policies
The Mechanical Power Technology program, like most other vocational programs, has policies that must be followed. These policies will give you, the student, a better opportunity to learn the mechanical power trade. *The general classroom and lab policies are in the Mechanical Power Technology Shop Safety Manual.* The instructor may have additional policies for their class.

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General Safety Policies
Anyone with extremely long hair must have some way to keep it up (hair net, hat). There will be no open-toe shoes worn in the shop (sandals, flip flops). Each student will be required to have a pair of safety glasses to be at all times. *The general safety policies are in the Mechanical Power Technology Shop Safety Manual.* The instructor may have additional safety policies for their class.

Student Responsibilities/Expectations:
It is important to present a professional image in the work place. Therefore, students are required to wear 100% cotton long sleeve shirts. They may be purchased in the bookstore or you can purchase in town. If your employer furnishes uniform shirts, they may be worn in place of the school shirt. These shirts should be clean and neat at all times. You must have an approved uniform Welding Clothing by the second week of class. If you do not, you will not allowed to start any hands-on welding in the lab and10 points will be deducted from your professionalism grade each class period proper welding clothing is not worn. **Shorts and sandals are not allowed.** ***Professional appearance is part of your grade***

NTCC Academic Honesty Statement:
"Students are expected to complete course work in an honest manner, using their intellects and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. NTCC upholds the highest standards of academic integrity. This course will follow the NTCC Academic Honesty policy stated in the Student Handbook."

Conduct of Course

Attendance Policy

Regular and punctual attendance at all scheduled classes is expected. Attendance is necessary for successful completion of course work. If you are absent, you are responsible for initiating procedures for make-up work. All course work missed, regardless of cause, is to be completed to the satisfaction of the instructor. Every time the student comes late to class will be adding deduction points into his final grade. *More than three absences is considered excessive*! It is up to you to initiate a drop in the Office of Admissions and Records. (At the discretion of the instructor, a student with nor more than two absences and with an "A" average will be exempt from the final exam.)

Academic Ethics

The college expects all students to engage in academic pursuits in a manner that is beyond reproach. Students are expected to maintain complete honesty and integrity in their academic pursuit. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. Refer to the student handbook for more information on this subject.

ADA Statement:

It is the policy of NTCC to provide reasonable accommodations for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to arrange an appointment with a College counselor to obtain a Request for Accommodations form. For more information, please refer to the NTCC Catalog or Student Handbook.

Family Educational Rights And Privacy Act (Ferpa):

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered "eligible students." In essence, a parent has no legal right to obtain information concerning the child's college records without the written consent of the student. In compliance with FERPA, information classified as "directory information" may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student's name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous education institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.

Other Course Policies:

Class recognition certificates may be distributed at the end of the course. The awarding of such certificate is at the sole discretion of the instructor.

LOCKERS AND TOOLS BOXES AT THE END OF EACH SEMESTER

Each student has to clean up his/her own locker, take all personal items out the locker box and return ALL WELDING TOOLS. IF ANY WELDING TOOL IS MISSING, HE/SHE WILL NOT RECEIVE A FINAL GRADE UNTILL ALLTHEM ARE RETURNED BACK AS THEY WERE ISSUED AT THE BEGINNING OF THE SEMESTER.

I HAVE READ THE SYLLABUS FOR THIS COURSE AND UNDERSTAND WHAT IS REQUIRED TO PASS. I UNDERSTAND THE EVALUATION AND GRADING POLICIES IN THIS COURSE.

I WILL FOLLOW ALL SAFETY AND CLASSROOM POLICIES BOTH WRITTEN AND VERBAL.

ALL QUESTIONS I HAD WERE ANSWERED BY THE INSTRUCTOR TO MY SATISFACTION.

COURSE WLDG 1425.

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Student Signature Date