

**NORTHEASTERN TECHNICAL COLLEGE
COURSE OUTLINE**

COURSE:	PREFIX NO.	EFFECTIVE DATE	NEXT REVIEW DATE		
Welding	WLD 134	Fall 2010	Fall 2012		
TITLE:	CREDITS	CONTACTS			
		CLASS	LAB	TOTAL	
Inert Gas Welding (Non-Ferrous)	3	1	6	3	

PREREQUISITES: None

DESCRIPTION: This course covers fundamental techniques for welding non-ferrous metals.

TEXTBOOK(S) OR ALTERNATIVE: Modern Welding, Chapters 1-4, 15, 16 (optional), Pat Programmed Audio-Visual Training: Hobart School of Welding Technology.

MATERIALS (specifying those to be purchased by student):

Welding shield	Welding gloves	Ear plugs
Cutting goggles	Safety glasses	

COLLATERAL READING: Practical Welding
General Welding - John Wiley and Sons
Welding Principles and Applications - Delmar

CLASS MANAGEMENT ACTIVITIES (attendance, tardies, testing, etc.):

Attendance: Students must attend a minimum of 80% of the meetings of each class. If students miss more than 20% of a class, the student will be dropped automatically by the instructor, and assigned a grade of "F". If the student wishes to withdraw from the class he/she must complete a withdrawal form found in Student Development Office. A grade of "W" will be assigned up to midterm. After midterm a grade of "WF" will be assigned if the student is not passing the course.

Tardy: Realizing that regular attendance in classes is a contributing factor toward academic success, it is also important that students arrive promptly for classes. Arriving late for a class not only disrupts a class in progress but interrupts the learning process. A tardy is defined as the arrival of the student to class after attendance has been taken. Three tardies will constitute one full absence. It is the student's responsibility to notify the instructor after class that he/she arrived late for class. If a student leaves early from class it is also counted.

Academic Dishonesty: NETC honors the state TEC Student Code with

regard to Academic Dishonesty. Students should read the Student Code and Grievance Procedure Book. Copies of the Student Code are available in Student Services. Academic Dishonesty will not be tolerated.

Classroom Etiquette: An integral part of an education is developing a sense of integrity and responsibility not only toward ourselves but also toward others. In the classroom, as on the job or in

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your home, exhibiting appropriate behavior reflects on your maturity. Arriving late to class, being unprepared, inappropriate talking while class is in session, etc., negatively reflect on you and your fellow students. Please be considerate.

Student ID: It is mandatory that students wear his or her student ID at all times. The instructor will dismiss students without ID from class. The student may get his/her ID and return to class before the midpoint of the class. If the student cannot get his/her ID and return to class by the midpoint, the instructor will record the absence.

DISABILITIES STATEMENT: Students with disabilities are encouraged to contact the Vice President for Student Services to discuss needs or concerns as they pursue an academic program and participate in campus life. The Vice President for Student Services will provide guidance regarding official documentation of disabilities and/or accommodation of needs. (See Catalog)

RESOURCES (A-V, persons, tools/equipment):

COURSE TOPICAL OUTLINE (List topics and sub-topics of course) and Calendar or approximate length of time devoted to topic.

1. Safety - 3 hours
 - a. Fumes and Gases
 - b. Harmful Rays
 - c. Electrical Components

2. Welding Machines - 3 hours
 - a. Equipment Setup
 - b. Proper Care of Equipment
 - c. Joint Preparation
 - d. Amperage Setting
 - e. Trouble Shooting

3. Testing Welds - 3 hours
 - a. How
 - b. Why
4. Pipe Welds on Mild Steel
 - a. Electrode Selection
 - b. Amperage Setting
 - c. Flat Stringer Beads
5. Vertical Welding on Stainless Steel Plate
 - a. Electrode Selection
 - b. Amperage Setting
 - c. Vertical Stringer Beads
6. Horizontal Welding on Stainless Steel Plate
 - a. Electrode Selection
 - b. Amperage Setting
 - c. Horizontal Stringer Beads

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7. Overhead Welding on Stainless Steel Plate
 - a. Electrode Selection
 - b. Amperage Setting
 - c. Overhead Stringer Beads
8. Pipe Welds on Stainless Steel
 - a. Electrode Selection
 - b. Amperage Setting
 - c. Position of Weld (Bellhole & Horizontal or Arkansas Bellhole).
9. Aluminum Welding on Plate
 - a. Electrode Selection
 - b. Amperage Setting
 - c. Stringer Beads in Flat, Vertical, Overhead, and Horizontal Position.
10. Aluminum Pipe Welds
 - a. Electrode Selection
 - b. Amperage Setting
 - c. Position of Weld (Bellhole & Horizontal or Arkansas Bellhole).

STUDENT LEARNING OUTCOMES/OBJECTIVES OF COURSE:

1. Safe work habits in welding lab.
2. Importance of safety in Oxy-Acetylene and electric ARC welding.

3. Use and care of Oxy-Acetylene and electric ARC welding equipment.
4. Operation and setup of Oxy-Acetylene and electric ARC welding.
5. Procedure for applying Oxy-Acetylene and electric ARC to different metals.
6. Ability to select proper tip and filler wire for job.
7. Ability to distinguish between good and bad weld beads and cuts.

INSTRUCTIONAL METHODS TO COMPLETE LEARNING OUTCOMES/OBJECTIVES:

1. Audio-Visual Instruction
2. Lab Projects
3. Demonstrations
4. Small Group Discussions

EVALUATIVE METHODS TO APPRAISE LEARNING OUTCOMES/OBJECTIVES:

1. Quality of projects
2. Care of machines and equipment

GRADING SCALE:

- 93 - 100 = A
86 - 92 = B
78 - 85 = C
70 - 77 = D
BELOW 70 = F

MIDTERM REPORT ON WELDING PERFORMANCE - WLD 134

Student Name: _____

Semester: _____

The following is a progress report on your performance in WLD 134 for the objectives of the course:

E=Excellent

S=Satisfactory

N=Needs Improvement

U=Unsatisfactory

	E	S	N	U	Comments:
1. Safety					
2. Wld Machine					
3. Testing Welds					
4. Pipe-Mild					
5. Stainless-Vert					
6. Stainless-Hor.					
7. Stainless-Ovrhd.					
8. Stainless-Pipe					
9. Aluminum-Plate					
10. Aluminum-Pipe					

GRADING RECORD FOR WELDING 134

Student Name: _____

Term: _____

INSTRUCTOR:

Project Name	1 st attempt (Grade/date)	2 nd attempt (Grade/date)	Comment
(See Course Outlines for Details)			
1. Safety			
2. Welding Machines (Amp, Joint)			
3. Testing Welds			
4. Pipe-Mild Steel			
5. Stainless-Vertical			
6. Stainless-Horizontal			
7. Stainless-Overhead			
8. Stainless-Pipe			
9. Aluminum-Plate			
10. Aluminum-Pipe			