

## WELDING SAFETY SYLLABUS

1. Title and Number of Course : Welding Safety 1050
2. Instructor :
3. Class Room : \_\_\_\_\_ Building \_\_\_\_\_
4. Required Text : Safety For Welders
5. Prerequisites : None
6. COURSE DESCRIPTION : An introductory course covering the basic safety in Oxy-Acetylene welding and cutting. Safety in Shielded Metallic Arc Welding, Tungsten Inert Gas Welding and Metallic Inert Gas Welding. Safety in material handling and handling of tools. It deals with the safe handling of the Oxy-Acetylene gases and Cylinders. The Electric Arc's ultraviolet and infrared rays. It also deals with fire prevention.
7. COURSE GOALS :
  1. Provide a basic knowledge in safety of the Oxy-Acetylene welding and cutting techniques .
  2. The safety in Electric Arc Welding, machines and equipment and their applications in modern industry.
  3. Safe shop practices and good work habits.
  4. Basic knowledge of the production of oxygen and acetylene gases.
  5. Safe knowledge of the electric welding circuit.
  6. Basic knowledge of material handling and handling of tools.
8. COURSE OBJECTIVES.

As a result of this course, student should be able to :

  1. Identify and distinguish the various gases used in the welding industry.
  2. Recognize, identify and adjust the three types of the Oxy-Acetylene flame
  3. Properly assemble the Oxy-Acetylene torches and their attachments to cylinders.
  4. Understand the production of oxygen and acetylene.
  5. Explain what type of clothing is worn in the welding shop
  6. Explain how to safely use power equipment and hand tools.
  7. Explain ventilation needed for welding shop and how to prevent ultraviolet light from injuring the welder and others in shop.
  8. Safely handle and store Oxy-fuel cylinders.
  9. Explain the techniques for lifting and moving bulky objects by hand.
  10. Locate fire extinguishers in shop and choose the correct type of fire extinguisher for the type of fire.

9. COURSE OUTLINELEARNING ACTIVITIES

<u>Days</u>	<u>Topic</u>	<u>Learning Activities</u>
1.	Orientation	
2.	Production of Oxygen and Acetylene. Gases. ( Handouts )	Lecture
3.	Unit- 1. Handling and Storage of Cylinders. ( Text )	Read Pgs. 1-6 Lecture
4.	Setting up Equipment for Welding. ( Handouts ) " Victor " manuel	Read Pgs. 23-33 Lecture
5.	Unit- 7 Welding, Brazing and Cutting. ( Text ) Adjusting Flames.	Read Pgs. 33-40 Lecture Shop participation
6.	Test ( Written )	
7.	Unit- 2. The Welding Environment. (Text) Safe work habits in welding ( Handouts )	Read Pgs. 7-11 Lecture Read Handouts
8.	Safety in Arc Welding Machines and Controls ( Handouts )	Read Handouts
9.	Unit- 6. Protection and Equipment (Text)	Read Pgs. 27-32 Lecture
10.	Welding Safety Films	Shown in shop
11.	Test ( Written )	
12.	Unit-3. Fire Protection ( Text )	Read Pgs. 12-15 Lecture
13.	Chap. 7. The Oxy-Acetylene Handbook ( Handouts )	Read Pgs. 92-101 Lecture
14.	Test ( Written )	
15.	Unit-4. Equipment and Material Handling. ( Text )	Read Pgs. 16-20 Lecture
16.	Unit-5. Tools and Equipment. ( Text )	Read Pgs. 21-26 Lecture
17.	Test ( Written )	
18.	Unit-8 Manifold Systems ( Text )	Read Pgs. 41-45 Lecture Shop participation
19.	Unit-9. Welding and Cutting ( Text ) ( Also Handouts )	Read Pgs. 46-51 Lecture Read handouts
20.	Unit-10. Equipment ( Text ) Review all Units.	Read Pgs. 52-55 Lecture
21.	Final Examination ( Written )	

10. INSTRUCTIONAL MATERIAL

- |   |                          |
|---|--------------------------|
| 1. Safety for Welders ( Text )                | Larry F. Jeffus          |
| 2. Welding, Cutting & Heating Guide (Handout) | Victor Co.               |
| 3. The Cxy-Acetylene Handbook ( Handout )     | Linde Co. N.Y.           |
| 4. New Lessons in Arc Welding ( Handout )     | Lincoln Electric Co.     |
| 5. Shop Handouts                              |                          |
| 6. Welding Principles & Practices ( Text )    | Raymond Sacks ( Revised) |

11. TYPES OF ASSESMENTS

Class attendance : Class attendance is mandatory.

Student Participation : Each student is expected to read the assignment before each class and be prepared for classroom discussions.

12. Methods of Grading

Five Examinations of Equal weight will be given. Several non grading quizzes will be given. Two points will be taken off for every day missed. The grading proceedure will be as follows.

- A. 90 - 100
- B. 80 - 89
- C. 70 - 79
- D. 60 - 69
- F. 59 & Below