

**NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY  
WEL 120 –INTRODUCTION TO WELDING (2 CR.)**

**Course Description:**

Introduces history of welding processes. Covers types of equipment, and assembly of units. Stresses welding procedures such as fusion, non-fusion, and cutting oxyacetylene. Introduces arc welding. Introduces MIG welding. Emphasizes procedures in the use of tools and equipment.  
Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week. 2 credits.

**General Course Purpose**

WEL 120 is a one semester course designed to provide the student with a basic knowledge of oxyacetylene welding, shielded metal arc welding, and MIG welding. The student will develop an understanding of safety, set-up and the practical application of the processes. The student will also have an understanding of equipment, procedure and technique as applied to industry and personal use. This course will introduce the beginning welder to the welding field and also be useful to future automotive and diesel technicians in relation to their desired occupations.

**Course Prerequisites/Co-requisites**

Students should have adequate, high school level reading and comprehension skills in English. Students also should have the ability to perform basic math skills including fractions and be able to use a tape measure.

**Course Objectives**

Upon completing the course, the student will be able to:

- Describe career choices for which welding is important
- set up equipment correctly and use it safely
- weld and braze sheet metal using an oxy-fuel torch(SLO)
- weld carbon steel plate using shielded metal arc welding(SLO)
- weld carbon steel plates and sheet metal using MIG equipment(SLO)
- cut carbon steel plate using an oxy-fuel cutting torch

**Major Topics to be Included**

- Careers in welding
- General safety as related to a welding shop
- Oxyacetylene welding/brazing, set-up and techniques
- Oxyacetylene cutting
- Shielded metal arc welding, set-up and techniques
- MIG welding, set-up and techniques
- Filler metals and gases pertaining to each welding process
- Welding vocabulary