

**Virginia Western Community College**  
**WEL 120**  
**Fundamentals of Welding**

**Prerequisites**

None.

**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. Emphasizes procedures in the use of tools and equipment. Gain skills in working safely and practice safe working habits List and identify the components of a Welding station. Demonstrate the ability to select the correct equipment and settings for oxy fuel gas welding. Gain a basic overview of welding and the welding industry.

**Semester Credits: 3      Lecture Hours: 1.5 Lab/Clinical/Internship Hours: 1.5**

**Required Materials****Textbook:**

*Modern Welding.* Althouse

Edition: 12

ISBN: 9781635636864

**Other Materials****Student supplies the following PPE for student use in the welding labs:**

- Safety Glasses MUST BE WORN AT ALL TIMES IN LAB
- Helmet
- Proper Shade Lens
- Welding Hood / Jacket
- Gloves

**Students are responsible for replacing any lost or removed equipment.**

**Course Outcomes****At the completion of this course, the student should be able to:**

- Practice skills in working safely and practice safe working habits
- List and identify the components of a Welding station
- Demonstrate the ability to select the correct equipment and settings for oxy fuel gas welding
- Know the basics of various welding processes and the welding industry
- Perform basic welding projects with oxy fuel gas welding
- Perform basic weld beads with oxy fuel gas welding

**Topical Description**

→	Week	1	Orientation; Intro to Course; <b><u>Read chapt. 1 &amp; 4, Complete paperwork for 1 &amp; 4</u></b>
	Week	2	Review Chapter 1 & 4 in class, Chapter 1 & 4 paperwork due; <b><u>Read Chapter 12</u></b>
→	Week	3	Test on Chapter 1 & 4; Review Chapter 12; <b><u>Complete paperwork for 12; Read Chapt. 13</u></b>
→	Week	4	Review Chapter 12 and 13; Paperwork for 12 due; <b><u>Complete paperwork for 13</u></b>
	Week	5	Test on Chapter 12 and 13; Paperwork for 13 due ; <b><u>Read Chapter 14 &amp; 15; Complete paperwork for 14 &amp; 15</u></b>
	Week	6	Review Chapter 14 & 15
→	Week	7	Test on Chapter 14 & 15; Paperwork for 14 & 15 due; <b><u>Read Chapter 2 &amp; 3; Complete paperwork for 2 &amp; 3</u></b> ; History of Welding
	Week	8	Review Chapter 2 & 3
→	Week	9	Test on Chapter 2 & 3; Paperwork for 2 & 3 due; <b><u>Read chapter 17</u></b>
	Week	10	Review Chapter 17; <b><u>Read Chapter 5 &amp; 6</u></b>
	Week	11	Review Chapter 5 & 6; <b><u>Read Chapter 7 &amp; 9</u></b>
	Week	12	Review Chapter 7 & 9; <b><u>Read Chapter 8</u></b>
	Week	13	Review Chapter 8
→	Week	14	Test on Chapters 5, 6, 7, 8, 9
	Week	15	Final Exam Review
→	Week	16	Final Examination All projects/ workbooks due

**Notes to Instructors**

- None