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| Elgin Community College  |
| Course Outline  |
| **Welding 101** **Instructor: David Reich****Phone: 847-214-7235****Description:Basic concepts of oxy-acetylene welding and electric welding for beginners. Includes arc welding and gas welding, brazing and cutting in the flat position.** **2 Credit Hours****Books, Supplies, and Supplementary Materials**  ***Required*** **Hobart. Shielded Metal Arc Welding SMAW-B . ISBN: 9970050451** **Hobart. Oxyacetylene Welding & Cutting . ISBN: 9970050508** ***Supplementary materials*** **Welding Safety: The Way the Pro's Do It," Lincoln** **"Oxyacetylene Welding, Cutting, & Brazing," Hobart Brothers** **Oxyfuel Safety," Smith** **Oxyacetylene Welding Safety, LTee** **How to Weld with the Thunderbold AC/DC, Miller Electric** **Shielded Metal Arc Welding/Basic," Hobart Brothers** 1. **Course Outline**

**1.  Basics of Welding Safety2.  Basics of Shielded Metal Arc Welding3.  Basics of Oxyacetylene Welding4.  Establishing a Stable Arc5.  Determining Proper Amperage Setting & Electrode Selections6.  Importance of Slag Removal/Weld Cleaning7.  Oxyacetylene Welding Equipment Identification and Operation8.  Recognition of Flame Types9.  Developing Eye-Hand Coordination to Allow Production of Quality Welds**1. **Outcomes**
	1. ***Course Content Outcomes***
		1. **The student will be able, on completion of the course, to produce high quality common arc welds in the flat and horizontal positions as evaluated by the instructor.**
		2. **The student will be able to produce high quality oxyacetylene welds, brazing, cuts, and pierces on course completion as observed by the instructor.**
		3. **On successful completion of the final exam, the student will display transference of learning by producing a good weld which has not been demonstrated.**
2. **Measures of Student Performance**
	* 1. **Mid-term exam - weight of 1 weld 14 required welds - weight of 14 welds Final exam (1 weld - 2 weld grades) Written exam - 1 weld Student may miss up to 5% of classtime - work made up results in no loss of grade.**
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This course meets the agreed upon terminal objectives for the Welding Program.

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