



**BAKER COLLEGE**  
**STUDENT LEARNING OUTCOMES**

**WELD 1110 Oxy-Fuel Welding and Cutting**  
**4 Semester Hours**

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**Student Learning Outcomes & Enabling Objectives**

1. Demonstrate appropriate safety precautions for shielded metal arc welding (SMAW), oxy-acetylene welding and cutting, and plasma arc cutting (PAC).
  - a. Apply general industrial safety precautions while working.
  - b. Apply necessary safety precautions related to welding and cutting.
  - c. Demonstrate appropriate use of personal protection equipment.
  - d. Properly set-up and tear down welding and cutting machinery.
2. Distinguish when and why various types of welding processes are used.
  - a. Identify the consumables and their uses for shielded metal arc welding (SMAW) and Oxy-Acetylene Welding.
  - b. Identify the uses for brazing and soldering.
3. Demonstrate the appropriate techniques for plasma arc cutting (PAC) and oxy-acetylene cutting.
  - a. Differentiate between the uses of plasma arc cutting (PAC) and oxy-acetylene cutting.
  - b. Determine the appropriate technique and angle needed for various cutting situations.
  - c. Determine the quality of a cut.
4. Demonstrate various techniques for shielded metal arc welding (SMAW) and oxy-acetylene welding.
  - a. Identify defects in a weld and what caused them.
  - b. Determine the quality of a weld.
  - c. Examine the positions needed for various welding situations.
  - d. Braze and solder using oxy-acetylene.
  - e. Identify various joint fit-ups used in welding.
  - f. Examine the 5 essentials of welding. (SMAW)

- g. Identify the parts of a weld.
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### **Big Ideas**

- Shielded Metal Arc Welding (SMAW)
- Oxy-Acetylene Welding and Cutting (OAW) and (OFC-A)
- Plasma Arc Cutting (PAC)

### **Essential Questions**

1. How do I ensure my safety and the safety of others during the welding process?
  2. How do I determine the appropriate type of welding process?
  3. Why do we use Plasma Arc Cutting over other cutting processes?
  4. How do welders determine the quality of the weld?
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These SLOs are approved for experiential credit.

**Effective: Fall 2017**