



BAKER COLLEGE
STUDENT LEARNING OUTCOMES
CAD1410 Introduction to Industrial Materials
and Processes
3 Semester Credit Hours

Student Learning Outcomes and Enabling Objectives

1. Summarize manufacturing concepts and functions
 - a. Explain why manufacturing is important to our national and global economy
 - b. Discuss the impact of manufacturing on environment
 - c. Explain safe use of tools, machines and materials in the manufacturing environment

2. Examine material properties and selection
 - a. Compare the characteristics of metallic, plastic, wood, ceramic, composite, and other engineering materials
 - b. Explain how the operating environment affects material selection
 - c. Investigate the criteria used to select materials for a given application

3. Examine processing operations used in manufacturing
 - a. Explore shaping, property enhancing, and surface processing operations in manufacturing
 - b. Explain the processes used to manipulate engineering materials
 - c. Investigate the criteria used to select processes for a given application

Big Ideas and Essential Questions

Big Ideas

- Manufacturing Concepts
- Material Selection
- Process Selection

Essential Questions

1. How does manufacturing impact our society and environment?

2. Why is it important to select appropriate materials for an application?
3. Why is it important to select appropriate processes for an application?

These SLOs are/ are not approved for experiential credit.

Effective: Fall 2024