



BAKER COLLEGE

STUDENT LEARNING OUTCOMES

MATT1210 Integrated Systems
3 Semester Hours

Student Learning Outcomes and Enabling Objectives

1. Summarize Integrated Systems and Computer Integrated Manufacturing (CIM) Concepts
 - a. Explain the role of CIM in engineering/manufacturing
 - b. Explore the role of Robotics in manufacturing
 - c. Assess contemporary CIM tools
2. Analyze manufacturing systems using CIM tools
 - a. Explore the Engineering Life Cycle
 - b. Explore CAD, CAM, and simulation tools
 - c. Explore Machine Control Systems
3. Develop a manufacturing plan for a given system
 - a. Analyze Material Handling, Quality, Manufacturing Processes, and Assembly of a system
 - b. Create an Ideal State and Future State for the system using CIM tools

Big Ideas and Essential Questions

Big Ideas

- Industrial Safety Foundations of Integrated Systems
- Basic Principles of Integrated Systems
- Understanding the Mathematics behind Integrated Systems
- Proficiency in the setup of Integrated Systems
- Fundamental understanding of the desired output of Integrated Systems

Essential Questions

- Why is safety the first priority?
- How do I determine what Integrated Systems should be utilized in different applications?
- What impact does an incorrect usage have on performance of the product?
- How are different Integrated Systems used?
- How does documentation impact industrial communication?
- What are the potential uses in the future?

These SLOs are not approved for experiential credit.
All MAT classes must be taken to ensure continuity of the program

Effective: Fall 2017