



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

**MATT3950 Advanced Mechatronics Work  
Experience  
1 Semester Credit Hour**

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**Student Learning Outcomes and Enabling Objectives**

1. Conduct a needs assessment for process improvement within a manufacturing organization
  - a. Determine manufacturing priorities for organizational improvements
  - b. Gain insight of needs or gaps in the work environment
2. Determine a project focus
  - a. Examine the needs assessment for project identification
  - b. Select a project focus area for development of need and resolution
  - c. Explore resource allocations for project focus area
  - d. Identify key project components
3. Evaluate the research surrounding project focus area
  - a. Gain insight into the focus area category for the project
  - b. Learn about what has been done or could be done to fill the needs
  - c. Gather support for the pursuit of project
4. Develop a project plan
  - a. Learn how to create a project plan
  - b. Build a plan using project research and components
  - c. Prepare project for presentation of goals, objectives and outcomes
  - d. Reflect on the process of creating, developing and presenting a project

**Big Ideas and Essential Questions**

**Big Ideas**

- Knowledge of the broad field of manufacturing
- Explore the work environment for proficiency and productivity
- Infuse course base knowledge with real life work experience
- Utilize the resources and tools available for appropriate application of skills
- Knowledge of project planning and management

## **Essential Questions**

1. Who are the stakeholders affected by project selection, development and outcomes?
2. What is the project planning and development process?
3. Where can research serve a purpose in the project development process?
4. When is a project ready to present?
5. How are project outcomes measured?

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These SLOs are not approved for experiential credit.

**Effective: Fall 2022**