



**BAKER COLLEGE
STUDENT LEARNING OUTCOMES**

**MATT 3990 Capstone Project
3 Semester Hours**

Student Learning Outcomes & Enabling Objectives

1. Assess situations and conditions that may present actual or potential damage to personnel, equipment and/or property.
 - a. Manage any unsafe conditions or circumstances before proceeding.
 - b. Report any unsafe conditions or circumstances.
 - c. Resolve any unsafe conditions or circumstances.

2. Design schematics that address specific applications.
 - a. Draw Electrical schematics
 - b. Draw Hydraulic schematics
 - c. Draw working blue prints

3. Fabricate the designated project using learned skills from the Mechatronics program
 - a. Demonstrate welding competency
 - b. Demonstrate machining competency
 - c. Demonstrate electrical competency
 - d. Demonstrate preventative/predictive maintenance competency
 - e. Demonstrate hydraulic and pneumatic competency
 - f. Demonstrate programmable logic control competency
 - g. Demonstrate Industrial controls competency

4. Design documentation to support the Capstone build project
 - a. Create Standard Operating Procedure (SOP) for the Capstone project
 - b. Create presentation in a professional manner to explain the project
 - c. Create weekly lab reports on status of build project
 - d. Create a preventative/predictive maintenance plan for project with visual controls

These SLOs are not approved for experiential credit.

Effective: Fall 2020