



# BAKER COLLEGE STUDENT LEARNING OUTCOMES

**EGR2710 Computing for Engineers**  
**2 Semester Credit Hours**

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## **Student Learning Outcomes and Enabling Objectives**

1. Summarize data analysis and programming techniques
    - a. Explain data analysis options in engineering and manufacturing
    - b. Explain difference between algorithmic and analytical calculations
  2. Develop problem solving techniques using MATLAB and Excel
    - a. Construct charts and plots based on a set of data or user inputs with Excel and MATLAB
    - b. Create curves using curve fitting from a set of data including interpolation and extrapolation with Excel and MATLAB
    - c. Demonstrate basic MATLAB principles including mathematical functions
    - d. Predict maximums, minimums, means, standard deviations, and variance for data sets and vectors using Excel
    - e. Evaluate matrices, including special matrices such as 'zeros' and 'ones'
    - f. Solve problems with two matrix variables of different size and simultaneous equations
    - g. Create simple MATLAB programs using flow controls and functions
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These SLOs are approved for experiential credit.

**Effective: Fall 2020**