1. ME 2011, Introduction to Engineering

2. 4 credits, 4 contact hours

3. Instructors: W. Durfee, T. Kowalewski

4. Text books: License to PTC University eLearning Library (for Creo Parametric training materials).

5. Specific course information:
   b. Prerequisites: CSE student.
   c. Required course.

6. Course outcomes (related ABET student outcomes indicated in square brackets):
   a. An ability to think visually through hand sketching. [3]
   b. An ability to document their designs. [3]
   c. An understanding of basic engineering graphics. [3]
   d. An ability to use a computer aided design program. [2,3]
   e. An ability to create a professional engineering portfolio. [7]
   f. Skills in practical electronics, computer interfacing and microcontroller programming. [2,6]
   g. Experience in designing, constructing and displaying a computer-controlled robot. [1,2,6]
   h. An ability to deliver an oral presentation. [3]
   i. An ability to work on solo projects and in teams. [5]
   j. An understanding of the basics of project management. [2,4]
   k. An ability to complete unstructured design projects with hard deadlines. [2]
   l. An ability to apply basic physics and engineering analysis [1]
   m. Basic engineering writing skills [3]
   n. An ability to document their work in an engineering notebook. [3]
   o. An ability to conduct and report engineering laboratory measurements. [6]
   p. A basic understanding of their ethical and professional responsibilities. [4]

7. Course topics:
   a. Engineering sketching.
   b. Engineering graphics.
   c. Engineering experiments and data presentation.
   d. Electronics and microcontroller programming.
   e. Mechanisms, sensors and actuators.
   f. Design process and project management.
   g. Engineering writing.