1. ME 5281, Feedback Control Systems

2. 4 credits, 4 contact hours.

3. Instructors: T. Kowalewski, R. Rajamani, K. Stelson, Z. Sun


5. Specific course information:
   b. Prerequisites: ME 3281
   c. Elective course for ME students.

6. Course outcomes (related ABET student outcomes indicated in square brackets):
   a. An understanding of the dynamic equations for common mechanical and electromechanical systems. [1]
   b. The ability to analyze stability and response of dynamic systems using frequency domain and state space techniques. [1]
   c. The ability to design practical controllers using a variety of classical control methods. [1,2]
   d. The ability to design control systems using state-space techniques. [1,2]
   e. The ability to create digital realizations of control systems. [1,2]
   f. The ability to utilize modern software tools to design and analyze the performance of control systems. [1,2,7]

7. Course topics:
   a. Review of feedback control
   c. The performance of feedback control systems
   d. The stability of linear feedback systems
   e. Frequency response techniques
   f. Nyquist methods
   g. Root locus techniques
   h. Design via frequency response
i. Design via state space
j. Digital control systems