

Department of Electrical and Computer Engineering  
520.353 Control Systems

- 2004-05 Catalog: Modeling, analysis, and an introduction to design for feedback control systems. Topics include state equation and transfer function representations, stability, performance measures, root locus methods, and frequency response methods (Nyquist, Bode). (3 credit hours/Elective)
- Prerequisite(s): 520.214 Signals and Systems  
110.201 Linear Algebra or 550.291 Linear Algebra and Differential Equations
- Textbook: Norman S. Nise, Control Systems Engineering, Fourth Edition, Wiley, 2003
- Course Objectives: To develop basic techniques for representation and analysis of linear feedback systems.
- Topics Covered:
  1. Dynamic models of physical systems
  2. Response properties of linear time-invariant systems
  3. Properties of feedback
  4. Root locus method
  5. Frequency response representation
  6. State variable representations
- Class Schedule: Three – one hour classes/week

Contribution of Course to Meeting the Professional Component (credit hours):

<b>Engineering Science</b>	<b>Engineering Science and Design</b>
3	

Relationship of Course to Program Educational Outcomes (✓ those that apply):

x	Apply mathematics, probability and statistics, basic science, and computer science
	Design and conduct experiments, analyze and interpret data
x	Identify, formulate and solve electrical engineering problems
x	Use technical skills and modern engineering tools to design to meet needs
	Communicate effectively and work on multidisciplinary teams
	Contemporary issues, ethical responsibilities, environmental, health, safety issues
	Engage in life-long learning

Prepared June 1, 2005 by:      Wilson J. Rugh