Instructors: Dr. Bruce Eisenstein  Bossone 512  Ext. 2359  eisenstein@drexel.edu
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Software: Matlab 7 and Simulink; Control Solutions powered by Just Ask®
References: (ECE-201) Basic Engineering Circuit Analysis, Irwin & Wu
           (ECE-S302) Signals, Systems and Transforms, Phillips & Parr

Lectures: Monday and Wednesday 9:00 AM to 11:00 AM, CAT 76
Recitations: Informal recitations will be scheduled as needed

Course Description:
This course continues the study of dynamic systems particularly in the context of control systems and communication systems. Emphasis will be on the computational and practical applications of systems to a broad range of topics including those from electrical, mechanical, aerospace, and chemical engineering.

Topics:
Introduction and History
Frequency Domain
   Laplace Transform, Transfer Functions, Linearization
Time Domain
   State-Space Representation (Review of Matrix Theory), Conversions from state-space
Time Response of Systems
   Pole-Zero plots, First and Second Order Systems, Solutions of Differential Equations
Block Diagrams
   Signal Flow Graphs, Mason’s Rule, Feedback Systems
Stability
   Tests for stability, computer simulations

Course Policy:
• Homework will be assigned, collected, and graded. At the end of the quarter, the homework grades will make a letter-grade difference in your final grade for borderline cases. Late homework will not be accepted.
• Special projects may be assigned.
• There will be a mid-term exam and a final exam.

Student Strategy:
It is very important that you stay ahead of the material presented in class. You can do this by reading ahead in your textbook or in any of the references cited above, or any of a variety of books available in the Hagerty Library. Students who fall behind will find it difficult to catch up since the material builds on the prior topics and, based on comments from students in previous years, this course is perceived to be very difficult.