ECEN 3723 Systems I
Spring 1999

Syllabus

Time:  
Tuesday/Thursday 2:00-3:15 PM

Place:  
Engineering South 302

Prerequisite:  
ENGSC 2613- Introduction to Electrical Science
MATH 2613- Differential Equations

Text:  
System Dynamics
Katsuhiko Ogata, Prentice-Hall, 1998

References:  
Discrete-time and Continuous-time Linear Systems
Robert J. Mayhan, Addison-Wesley, 1984
Signals and Systems- an Introduction
Leslie Balmer, Prentice-Hall, 1991
Signals, Systems and Transforms
Charles L. Phillips and John M. Parr, Prentice-Hall, 1995

Instructor:  
Professor Gary G. Yen, Engineering South 202D
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Office Hours: Tuesday/Thursday 10:30 AM-5:00 PM
or by appointment only

Objectives:  
To introduce some basic tools needed for signal and system
analysis and design applicable to dynamic controls through
mathematical derivations and computer simulations.
The topics include
• signals and systems representation
• Laplace transform
• solving differential equations
• z transform
• solving difference equations
• modeling of electrical systems
• modeling of mechanical systems
• time-domain analysis
• frequency-domain analysis
• state space model and its solution

Grading:  
10 Weekly Homework Assignments 20%
1/21, 1/28, 2/4, 2/11, 2/18, 3/11, 3/25, 4/13, 4/20, 4/27
Computer Simulation Project 10%
Midterm Exam 1 (March 4) 20%
Midterm Exam 2 (April 6) 20%
Final Exam (May 7, 1:00-2:50 PM) 30%
A-85% above; B-76%-85%; C-66%-75%; D-56%-65%; F-55% below

Note:  
All exams are open books and class notes.