ECEN 3723 Systems I
Fall 2001
Syllabus

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

Place: Classroom Building 207

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 404
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Office Hours: Tuesday/Thursday 8:00AM-10:00AM; 1:00PM-2:00 PM; 3:30-5:00PM 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%
8/30, 9/6, 9/13, 9/20, 10/9, 10/16, 10/23, 10/30, 11/15, 11/27
Computer Simulation Project 10%
Midterm Exam 1 (September 27, 2:00-3:30 PM) 20%
Midterm Exam 2 (November 6, 2:00-3:30 PM) 20%
Final Exam (December 11, 2:30-4:20 AM) 30%
A-85% above; B-76%-85%; C-66%-75%; D-56%-65%; F-55% below

Note: All exams are open notes, but close book.