ECEN 3723 Systems I  
Spring 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 202D  
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Office Hours: Tuesday/Thursday 10:30AM-2:00PM;  
3:30PM-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%  
1/25, 2/1, 2/8, 2/15, 3/8, 3/15, 3/29, 4/5, 4/24, 5/1  
Computer Simulation Project 10%  
Midterm Exam 1 (March 1, 2:00-3:15 PM) 20%  
Midterm Exam 2 (April 17, 2:00-3:15 PM) 20%  
Final Exam (May 8, 8:30-10:20 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.