ECEN 3723 Systems I  
Fall 2000  
Syllabus

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

Place:  
Cordell 128

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 3:15-5:00 PM

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:  
10/11 Weekly Homework Assignments  20%  
8/31, 9/7, 9/14, 9/21, 10/10, 10/17, 10/24, 11/9, 11/16, 11/23, 11/30  
Computer Simulation Project  10%  
Midterm Exam 1 (September 28)  20%  
Midterm Exam 2 (October 31)  20%  
Final Exam (December 11, 10:30 AM-12:20 PM)  30%

Note:  
A-85% above; B-76%-85%; C-66%-75%; D-56%-65%; F-55% below  
All exams are open books and class notes.