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
http://www.okstate.edu/elec-engr/faculty/yen
405-744-7743, 405-744-9198 (fax), gyen@ceat.okstate.edu
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.