ECEN 5713 System Theory
Fall 1997

Time: Monday/Wednesday 1:30-3:00 PM

Place: Engineering South 111

Text: *Modern Control Theory*, 3rd edition, William L. Brogan
Prentice-Hall, 1991 (eewlb@ee.unlv.edu)

References:
Linear Systems, Thomas Kailath
Prentice-Hall, 1980
Linear System Theory and Design, Chi-Tsong Chen
Sanders, 1984
Linear Systems, Ray DeCarlo
Prentice-Hall, 1989
Linear Systems, Panos Antsaklis and Anthony Michel
McGraw-Hill, 1997

Instructor:
Professor Gary G. Yen,
http://www.okstate.edu/elec-engr/faculty/yen/yen.html
744-7743, gyen@master.ceat.okstate.edu
Engineering South 202
Office Hours: Monday/Wednesday 3:00-5:00 PM
or by appointment only

Objectives:
To study the fundamental theory of finite-dimensional linear system with emphasis on the state-space representation and its solution. The topics include

- mathematical basis-
  matrix theory, linear algebra, vector space
- system representation-
  input-out operator, geometric approach,
  state space representation, transfer function algorithm
- conversion of alternative representations
- linear dynamical solution
- controllablity, observability, stability and control
- linearization and minimal realization
- state feedback and state estimation

Grading:

10 Weekly Homework Assignments 9/3, 9/10, 9/17, 9/24, 10/8, 10/15, 10/27, 11/3, 11/19, 11/26	20%
Midterm Exam 1 (October 1)	20%
Midterm Exam 2 (November 12)	20%
Final Exam (December 19)	40%

Note:
All exams are open book and class notes.
You may use any references that may desire during exams.