



ECEN 5713 Linear System Spring 2000



- Time:** Tuesday/Thursday 9:00-10:15 AM
- Place:** Cordell 128
- Text:** *Linear Systems*, Panos Antsaklis and Anthony Michel
McGraw-Hill, 1997 (antsaklis.1@nd.edu)
- References:** *Modern Control Theory*, 3rd edition, William L. Brogan
Prentice-Hall, 1991 (eewlb@ee.unlv.edu)
Linear System Theory and Design, Chi-Tsong Chen
Oxford, 1984 (ctchen@sbee.sunysb.edu)
Linear Systems, Thomas Kailath
Prentice-Hall, 1980
Linear Systems, Ray DeCarlo
Prentice-Hall, 1989
- Instructor:** Professor Gary G. Yen,
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Engineering South 202D
Office Hours: Tuesday/Thursday 10:30 AM-12:00 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-output operator, geometric approach,
state space representation, transfer function algorithm
 - conversion of alternative representations
 - linear dynamical solution
 - controllability, observability, stability and control
 - linearization and minimal realization
 - state feedback and state estimation
- Grading:**
- | | |
|---|-----|
| 10 Weekly Homework Assignments | 20% |
| 1/20, 1/27, 2/3, 2/10, 2/17, 3/9, 3/23, 4/13, 4/20, 4/27 | |
| Midterm Exam 1 (March 2) | 25% |
| Midterm Exam 2 (April 6) | 25% |
| Final Exam (May 2, 8:30-10:20 AM) | 30% |
- A-85% above; B-76%-85%; C-66%-75%; D-65% below
- Note:** All exams are open notes, but close book.