Instructor

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Office hours: Wednesday Friday 10:30am~12:00pm.

Textbook


Reading Lists


Course Description

The course is designed to develop understanding of the fundamentals of linear systems theory, with emphasis on analysis and design of linear systems represented by a state space model. Topics include: the mathematical description of systems, vector spaces and linear algebra, eigenvalues and eigenvectors, solution of the state equation, stability, controllability and observability, state feedback and state estimators, pole placement, and minimal state space realizations.

Prerequisites

EEL 3657 Linear Control Systems.

Lectures

Tuesday Thursday 1:30pm~2:45pm. ENGR 386A.
Attendance to class is not mandatory, but is necessary to pass the course. The textbook may not be followed exactly. Tests will be based on all material covered in class.

**Assessment**

Homework: 10%
Mid-Term Exam (March 3, Thursday class time): 40%
Final Exam (April 26, Tuesday 1:00pm-3:50pm): 50%

Homework will be assigned regularly and due time will be announced in class. No late homework will be accepted. No make-up tests.

**Grading**

A: 90-100; B: 80-89; C: 70-79; D: 60-69; F: Below 60. (I may choose to vary this slightly based on grade distribution and statistical analysis.)

Keep track of your grades. Record your homework and exam grades as you receive them. Grades will be available for review before the final exam. Check it and report any mistake immediately if occurred.

**Software**

MATLAB is used in control system simulation. The software is on the computers in Engr 274 and the Harris lab. The website [http://www.engin.umich.edu/group/ctm/index.html](http://www.engin.umich.edu/group/ctm/index.html) provides a tutorial for using MATLAB in the analysis and design of feedback control systems.

**Topics and Textbook Chapters**

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