

# ESE 210

## Syllabus

Spring 2008

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**TEXT:** There is no assigned text for this course, although there is a bulk pack obtainable from the SEAS Copy Center which is based on the book by Luenberger.

### **Basis of Grade:**

Homework	10%
Hourly exams	25% each
Final exam	40%

### **Educational Objectives:**

In this course, students will learn the principles of modeling discrete-time dynamic systems including the use of difference equations and linear algebra. The breadth of systems engineering is demonstrated through examples which are drawn from engineering, the biological sciences, sociology, and economics. Proficiency in the use of MATLAB will be developed.

### **Course Outcomes:**

1. Ability to use difference equations to model discrete-time systems
2. Ability to use linear algebra techniques to solve systems of equations
3. Ability to use MATLAB
4. Ability to apply z-transforms

### **House Rules:**

It is essential that **all** assignments for this course be completed in accordance with the precepts of the [Code of Academic Integrity](#). Failure to comply with the [Code of Academic Integrity](#) will **not** be tolerated.

Homeworks are due at the beginning of class on the day indicated. Late papers will be penalized. You are expected to do your own work and to show how all answers are developed.

Assignments must be submitted on time and in legible form. (Pages **stapled** together; 8 1/2 x 11 sheets.) If I cannot read it, it is considered wrong and you will receive zero credit.

In the lecture, it will be assumed that you have done the assigned reading before a new topic is introduced. For example, it will be understood that you have read much of Chapter 2 before class begins on January 21.

Please silence your cell phones before class begins or  
<http://video.google.com/videoplay?docid=-8666853249964284510&q=professor+cell+phone>

The final exam date is determined by the [University](#). It is tentatively scheduled for Thursday, May 8, from 12–2.

**Syllabus:**

DATE	TOPIC	READING
Jan 16	Systems Modeling	2
Jan 30	Linear Difference Equations	3
Feb 13	Exam 1	
Feb 18	Linear State Equations	4
Mar 17	Linear Systems	5
Apr 7	Exam 2	
Apr 9	Concepts of Control	8