UNIVERSITY OF MASSACHUSETTS
DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

ECE 604 STATE VARIABLE ANALYSIS FALL, 2015

Class Hours: M-W-F 1:25 PM – 2:15 PM
Professor: Doug Looze
Office: KEB 113F Phone: (413) 545-0973 email: looze@ecs.umass.edu
Office Hours: T 3:00 PM - 5:00PM
Course URL: https://moodle.umass.edu/ (login using OIT ID)

The moodle page contains all the course material to date, including this syllabus, the problem sets, and the lecture notes.


Exams: There will be an evening 2-hour midterm exam from 7-9 PM (on a date to be determined) and a final exam given during exam week. Each exam will count as 35% of the final grade. All exams will be open book and open notes.

Homework: There will be approximately 8 homework assignments. Late homework will not be accepted. Homework will count as 30% of the final grade.

Prerequisite: Linear Algebra (undergraduate level).

Course Outline

Objectives: Provide a basic understanding of linear systems and the methodologies that are used to analyze and model such systems; provide the necessary background for advanced material in systems, control and communications.

1. Linear Algebra 3 Lectures
2. State variable models 3 Lectures
3. Solution of state variable models 8 Lectures
4. Controllability and Observability 8 Lectures
5. Realization 5 Lectures
6. Internal Stability 5 Lectures
7. Feedback 5 Lectures