ECE4551 Course Syllabus

ECE4551

System and Controls I (3-3-4)

Prerequisites
ECE 3085

Corequisites
None

Catalog Description
Introduction to feedback control. Root locus and bode design for SISO systems, continuous and discrete. Introduction to state space formulation, continuous and discrete.

Textbook(s)
Dorsey, *Continuous and Discrete Control Systems*, McGraw Hill, 2001. ISBN 9780072505009 (required) (comment: Course notes are currently used for this course. Text purchase not required.)

Topical Outline

ECE 4551 last taught Spring 2011.

Root Locus Analysis (1 week)
Nyquist Theory (1 week)
Root Locus Design Continuous (1 week)
Bode Design Continuous (2 weeks)
Sample Data System Forumation (1 week)
Lag/Lead Compensation for Discrete Systems (1 week)
Direct Design Methods for Discrete Systems (2 weeks)
Phase Plane Analysis (1 week)
State Models of Arbitrary Order (1 week)
Pole Placement Problem (1 week)
Observability - Controllability (1 week)
State Model Discretization (1 week)