RUTGERS UNIVERSITY
School of Engineering
Department of Electrical & Computer Engineering

332:345 – Linear Systems and Signals – Fall 2009

Course Description:

This course is an introduction to the basic principles and applications of linear systems. It covers the following topics:

Topic	Lectures
Introduction to signals and systems (ch.1 & 2)	2
Convolution (ch.6)	3
Laplace transforms and applications (ch.4)	5
Z-transforms (ch.5)	2
Fourier transforms (ch.3)	5
Time-domain response and stability (ch.7)	4
State-space realizations (ch.8)	2
Applications to communications and feedback (ch.10 & 12)	3

Text:

Z. Gajic, *Linear Dynamic Systems and Signals*, Prentice Hall, 2003.

Prerequisites:

Principles II, Math 244, and working knowledge of MATLAB.

Course Requirements and Makeups:

The course grade will be based on the final exam, two in-class exams, and possible quizzes. No make-up exams will be given. The nominal exam weights will be 30-30-40 percent—the actual percentages are determined after all three exams have been completed. The grades are not curved.

Exam dates:

Exam-1:	Thursday, October 15, 2009,	B-120 (A–F), Hill-114 (G–Z)
Exam-2:	Thursday, November 19, 2009,	B-120 (A–F), Hill-114 (G–Z)
Final Exam:	Thursday, December 17, 2009,	8:00–11:00 AM, (location TBD)

Instructor:

Sophocles J. Orfanidis
Room ELE-230, Tel. 445-5017, E-mail: `orfanidi@ece.rutgers.edu`
Office hours: Monday & Thursday 10:15–11:15 AM (otherwise by appointment.)

Course Web Page:

`www.ece.rutgers.edu/~orfanidi/ece345`

Linear Systems Lab 14:332:347:

The linear systems lab must be taken concurrently with the course. If the course is dropped, the lab must also be dropped. Additional lab information and schedule will be posted on the above course web page.

The first lab meeting will be on the week of 14-Sept-2009. The second lab will begin on the week of Sept. 21, 2009. Thereafter, please follow the posted schedule.