

Department of Electrical and Computer Engineering
520.214 Signals and Systems
Spring 2008

2007-09 Catalog An introduction to discrete-time and continuous-time signals and systems covers representation of signals and linear time-invariant systems and Fourier analysis. (4 credit hours/Required for EE, elective for CE)

Prerequisite(s): 520.213 Circuits
110.202 Calculus III

Textbook: None

Course Objectives: To develop facility with the theory and application of time-domain and Fourier and Laplace transform methods in the representation and analysis of signals, circuits, and linear systems.

Topics Covered: 1. Introduction to continuous-and discrete-time signals and systems
2. Linear time-invariant systems
3. Fourier series representation of continuous-time periodic signals
4. Introduction to Discrete-Time Fourier analysis
5. Continuous-time Fourier transform
6. Unilateral Laplace transform and circuit applications

Class Schedule: Three - one hour lectures/ week
One - one hour section/ week

Contribution of Course to Meeting the Professional Component (credit hours):

Engineering Science	Engineering Science and Design
4	

Relationship of Course to Program Educational Outcomes (√ those that apply):

x	Apply mathematics, probability and statistics, basic science, and computer science
	Design and conduct experiments, analyze and interpret data
x	Identify, formulate and solve electrical engineering problems
	Use technical skills and modern engineering tools to design to meet needs
	Communicate effectively and work on multidisciplinary teams
	Contemporary issues, ethical responsibilities, environmental, health, safety issues
	Engage in life-long learning

Prepared November 1, 2007 by: Wilson J. Rugh