CSCE 3010 & EENG 2620: Signals and Systems
Spring 2012

Course Description: Elementary concepts of continuous-time and discrete-time signals and systems. Linear time-invariant (LTI) systems, impulse response, convolution, Fourier series, Fourier transforms and frequency-domain analysis of LTI systems. Laplace transforms, Z-transforms and rational function descriptions of LTI systems.

Prerequisite(s): EENG 2610; and MATH 3310 or MATH 2730.

Instructor: Dr. Kamesh Namuduri, Discovery Park B234, (940) 369-8960,

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TA: Anusha Ravuru, Room B245

Class Hours: T/Th 11 AM to 12:20 PM, Discovery Park B

Office Hours: Tuesday and Thursday 2:00 – 2:00 PM, or by appointment.

Textbook: Signals and Systems, by Alan V. Oppenheim, Alan S. Wilsky, and S. Hamid Nawab, ISBN 0-13-814757-4, second edition, Prentice Hall. Supplemental text: MATLAB 7 R14 Student Edition

Grading: Attendance and Participation (10%), Weekly Homework (30%), Three Exams (60%)

Syllabus

Lecture 1: Introduction: Types of Signals, Continuous-Time Signals, Discrete-Time Signals, Signal Energy and Power (HW-1)

Lecture 2: Linear Time Invariant (LTI) Systems, Convolution, Properties of LTI Systems, Causal LTI Systems (HW-2)

Lecture 3: The Fourier Series Representation (HW-3)

Exam I

Lecture 4: The Continuous-Time Fourier Transform (HW-4)

Lecture 5: Discrete-Time Fourier Transform (HW-5)

Lecture 6: Time and Frequency Characterization of Signals and Systems (HW-6)

Exam II

Lecture 7: Sampling (HW-7)

Lecture 8: Laplace Transform (HW-8)

Lecture 9: Z Transform (HW-9)

Final Exam

Academic Dishonesty: Any form of cheating in home works, assignments, and examinations may result in "F" grade for the entire course.