

DETERMINISTIC SIGNALS AND SYSTEMS

Tue Thu 11:20 am — 12:40 pm, Light Engineering, Room 152

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Office Hours: Mon Wed 2:00 pm — 4:00 pm; also by appointment

Course Outline: The course is an introduction to signal and system theory. Particular topics include:

1. Signals and Systems: continuous- and discrete-time signals and systems, unit impulse and step functions, periodicity, causality, stability, time-invariance and linearity.
2. Linear Time Invariance (LTI) Systems: impulse response, convolution sum and integral, properties of LTI systems, differential and difference equation.
3. Fourier Representation: Fourier series of periodic signals, Fourier transform of discrete-time and continuous-time signals, convergence of Fourier representation, convolution property.
4. Applications: filter design, amplitude modulation, sampling theorem.

Prerequisites: A strong math background (calculus) and ESE 271 (corequisite).

Textbook: C. L. Phillips and J. M. Parr, *Signals, Systems, and Transforms*, 2nd edition, Prentice-Hall, 1999 (chapters 2, 9, 3, 10, 4, 5, 12, 6).

Homeworks: will be given once a week and will count toward 10% of the final grade. Late homework assignment will *not* be accepted.

Quizzes: A 40-minute quiz will be given once every two weeks. Quizzes will be given at the beginning of class on the following dates: 9/21/99, 10/05/99, 10/19/99, 11/02/99, 11/16/99, 12/02/99. Only the five highest quiz scores will be counted toward the final grade. Any student who misses a quiz will be given a “zero” for that quiz. Absolutely no make-up quiz will be given. Each student must bring a photo ID in order to take the quizzes and the final exam.

Project: A MATLAB computer project will be assigned in the middle of the semester and will be due towards the end of the semester.

Grading:

Quizzes	50%
Homeworks	10%
Project	10%
Final Exam	30%

The Final Exam will be held on **Thursday, December 16, 1999** at **NOON–3:00 pm**.

If you have a physical, psychological, medical or learning disability that may impact on your ability to carry out assigned course work, I would urge that you contact the staff in the Disabled Student Services office (DSS), room 133 Humanites, 632-6748/TDD. DSS will review your concerns and determine, with you, what accommodations are necessary and appropriate. All information and documentation of disability is confidential.