

EE 3610 Signals and Systems

Department of Electrical and Computer Engineering
Louisiana State University
Spring 2009

Room: 2162 P. Taylor

Time: 3:40~4:30 p.m. MWF

Instructor: Dr. Xue-Bin Liang <http://www.ee.lsu.edu/liang/teaching.html>
E-mail: xbliang@ee.lsu.edu Phone: 578-5550
Office: EE Building Room 317 Office Hours: 10:20-11:50 a.m., MWF

Prerequisites:

EE 2130 (Circuits II). In terms of topics: Complex variable, Linear algebra, Calculus and differential equations, Modeling of basic linear circuits.

Course Description:

This course provides the students with mathematical tools for the analysis of signals and linear systems, and it is mainly focused on continuous time signals and systems. The materials in this course will facilitate the fundamental knowledge for the future courses in control, communications, circuits and signal processing, etc.

Outline:

Tentative course outline over the entire semester: Chapters 1-4, 6-7 of the textbook will be covered.

1. Continuous time signals and systems. (Chapter 1)
2. Linear time-invariant systems. (Chapter 2)
3. Convolution: integrals and sums. (Chapter 2)
4. Frequency domain representations: Fourier series and Fourier transforms. (Chapters 3 and 4)
5. Characterization of filtering in time and frequency domain. (Chapter 6)
6. Sampling theorem. (Chapter 7)

Textbook:

Oppenheim and Wilsky, *Signals and Systems*, Second Edition. Prentice Hall, © 1997.

Grading:

Homework	25%
Midterm Exam	35%
Final Exam	40%

Grade A: $\geq 90\%$ Grade B: $\geq 75\%$ Grade C: $\geq 60\%$

Grade D: $\geq 45\%$ Grade F: $\leq 44\%$