

**University of Dayton**  
**Dept. Electrical and Computer Engineering**

**ECE 202 – Signals & Systems – Winter 2007**

**Instructor:** Prof. Raúl Ordóñez, KL341-E, raul.ordonez@notes.udayton.edu

**Office Hours:** You can come almost any time I am there, but please try to make an appointment if not during office hours. Official office hours are T, Th, 14h00-15h30.

**Text:** B.P. Lathi, *Linear Systems and Signals*, 2<sup>nd</sup> Ed., Oxford University Press, New York, 2005.

**Reference:** Matlab: An Introduction with Applications, Wiley, A. Gilat, 2004.

**Objective:** The goal of this course is to expand your problem solving range to include generalized systems. You will acquire additional knowledge relating to system analysis in the frequency and complex frequency domain, using both the Laplace and the Fourier transforms. By the end of the course, you will be able to design and analyze frequency selective filters.

<b>Grading:</b>	Homework	25%
(Tentative)	Midterm 1	25%
	Midterm 2	25%
	Final Exam	25%

**Miscellaneous:**

- Homework will be assigned regularly (possibly every Thursday) and a 0/100% grading scheme will be used (you get full credit for turning the homework in and attempting all problems assigned; you get zero credit in all other instances). Homework solutions will be provided to allow you to verify your work.
- All assignments must be completed as a course requirement; penalty for late work will be severe – however, talk to me if you have special circumstances.
- You are responsible for any and all alterations in homework assignments, exam and other dates, and course announcements in general that occur during the lecture. In other words, come to class!
- All tests are closed book.
- You will use the CAD package MATLAB extensively to test and better understand theoretical concepts from the course. Additionally, PSpice will be used in some homework assignments as well.

**Course homepage:** <http://homepages.udayton.edu/~ordonez/courses.html>

Click on ECE202/202L for the syllabus and 'quickplace' for a link to the quickplace page, where additional course material will be located. You can access the page using the '202student' account. Note: *do not try to log in using your Novell username/password, as these will not work.*

**Outline of topics**

1. Classification of signals & systems (Ch. 1)
2. Decomposition of signals, solution of linear differential equations (Ch. 2)
3. Convolution (Ch. 2)
4. Laplace transform (Ch. 4)
5. Frequency analysis of systems, resonance phenomena, filter design (Ch. 4)
6. Fourier series (Ch. 6)
7. Fourier transform (Ch. 7)
8. State variables (Ch. 10, time permitting)