

Introduction to Signal Analysis

ECE 201

Summer 2009

Instructor Dr. B.-Peter Paris
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Time and Place Tuesday and Thursday, 5/18-6/19, 7:00-10:05pm and Saturday, 5/30-6/13, 9:00am-12:05pm.
Innovation Hall, room 222.

Office Hours Tuesday and Thursday 4:00-5:00.

Required Textbook J.H. McClellan, R.W. Schafer, and Mark A. Yoder, *DSP First-A Multimedia Approach*, Prentice Hall, 1997.

Lab One lab sections meets Tuesdays and Thursdays before class and Saturdays after class in Innovation Hall 222. Lab experiments are designed and intended to complement material discussed in class. Students are expected to be well prepared for the lab sessions to maximize the use of time in the lab.

Recommended Further Reading *The Student Edition of MATLAB*.

Homework will be assigned every class meeting and is due the following class. You are encouraged to work on the assignments in small groups.

Multiple Quizzes, one Midterm Exam and a Final Exam will be given during the semester. Quizzes will not be announced and are given at the beginning of class. Make-up exams are rarely given. In case of an emergency, contact the instructor as soon as possible and always *before* the exam. Failure to take an exam, will result in no credit for the exam.

All exams are conducted under the rules and regulations of the **Honor Code** (see University Catalog).

Teaching Assistant Anish Mitra (amitra1@gmu.edu)

On-line Class Material Class and lab material will be distributed electronically via the World-Wide Web. Use a browser to find the ECE 201 homepage at URL:

<http://www.spec.gmu.edu/~pparis/classes/ece201.html>. Additionally, selected material will also be posted on Blackboard.

I will also correspond with you through your Mason e-mail account - check your e-mail regularly.

Final Grades are determined by a weighted average of homeworks, projects, exams, and labs in the following manner:

Homework and in-class work	20%
Midterm Exam	20%
Final Exam	40%
Labs	20%

Tentative Class Schedule

- 5/19:** Introduction to DSP; Sinusoids
- 5/21:** Sinusoids; Introduction to MATLAB
- 5/26:** Complex Numbers; MATLAB plotting and programming
- 5/28:** Complex Exponential Signals and Phasors; MATLAB programming
- 5/30:** Phasor Addition Rule
- 6/2:** Midterm Exam
- 6/4:** Frequency domain and spectrum representation of signals
- 6/6:** Beat Notes and amplitude modulation.
- 6/9:** Sampling and Aliasing
- 6/11:** Introduction to FIR filters and convolution
- 6/13:** Convolution and linearity and time-invariance
- 6/16:** Superposition and frequency response
- 6/18:** Final Exam