EECS 206
Signals and Systems I
Fall 2001

Section I, MWF 10:30-12:30, 1504 GGBL. Section II, MWF 2:30-3:30, 1500 EECS.

Faculty Instructors:

Section I

Prof. David Neuhoff
4215 EECS Bldg.
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764-6586

Section II

Prof. Gregory Wakefield
142 ATL Bldg.
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763-1254

Though each instructor has primary responsibility for his section, the course will be "team-taught". That is, the lectures will be divided among the instructors by topic, both sections will have the same homework, midterms and lab assignments. The final exams will be closely coordinated.

Graduate Student Instructors:

Mark Bartsch (head GSI), Chih-fan Hsin, Tom Kragh, Baptiste Poupard, Fred Zeitz. Email addresses will be provided later.

Office hours:

To be announced. However, even when they are announced, you may make appointments at times other than those listed, by emailing an instructor.

Prerequisites:

Math 116 (second semester of calculus) and Engin 101 (computer programming).

Note: The course will require a considerable amount of programming in Matlab. (Mostly a lot of short programs.) It is anticipated that most students have had three weeks or so of Matlab coverage in Engin 101. See the discussion of Matlab below.

Textbook:

DSP First, a Multimedia Approach
J. H. McClellan, R. W. Schafer, and M.A. Yoder

Course coverage:

Most of *DSP First*.

First reading assignment:

Chapter 1 of *DSP First*

Other potential purchases:

A calculator that handles complex arithmetic easily.

Student Matlab with the Signal Processing Toolbox. This is for students who would like to do their lab assignments on their own computer. See the discussion of Matlab below.

Email mailing list:

Important announcements will be made via the class email mailing list.

It is essential that you enroll in the class email list. To do so, send email to the address listed below with the word "subscribe" as the subject:

eecs206-request@eecs.umich.edu

A test email will be sent Monday, Sept. 10 and announced in class. If you do not receive it, contact your instructor.

Course web site:

http://www.eecs.umich.edu/courses/eecs206

Though currently under construction, it will contain homework assignments, homework solutions, and various class notes. Important email announcements will be archived there. It's a good idea to check the "Quick News" page frequently.

Homework:

Weekly homework assignments are an important part of the course. They will be posted on the class website and announced in class. On the assigned due date, your homework paper must be submitted at your lecture section, *before* the lecture begins. No homework will be accepted after the lecture begins, except for unforeseen emergencies, or for foreseeable situations for which you have made arrangements with the faculty member in charge of your lecture session by email 48 hours in advance of the due date. Please do not expect all such requests to be granted!

Homework must be stapled with your name, lecture section number and recitation number written clearly at the top. Illegible homework will not be graded.

Homework solutions will be posted on the class website after the due date. Graded homework will be returned to the GSI of your lab session approximately one week after the due date. (Hence, the need to identify your recitation section number.) You may collect it from him/her during office hours, or at your next lab session.

Laboratories:

In weekly laboratory assignments, students will gain hands-on experience with signals and systems, principally through Matlab programming experiments. Each lab session will be divided into groups of two students (one or three in exceptional cases), who will work together throughout the term. Each group will submit one report for each lab, for which all group members will share the same grade. You are free to choose your own lab partner. Alternatively, there will be a period of time set aside in the first lab to partner up. Please try to make sure your lab partner is someone you can work with, and try to avoid having to ask the faculty or the GSI's to step in to help out a bad-partner situation. This is something you should attempt to handle yourself.

Lab reports are due at the start of the next lab session. Late lab reports are not accepted, except for unforeseen emergencies, or for foreseeable situations for which you have made arrangements with the GSI in charge of your lab session by email 48 hours in advance of the due date. Please do not expect all such requests to be granted!

Graded labs will ordinarily be returned one week after submission. As with homework, labs should be stapled with your name, lecture section number and lab session number written clearly at the top. Illegible labs will not be graded.

There will be no labs during the week of Sept. 4. Labs will begin the week of Sept. 10.

Important Notice: During the week of Sept. 10, all labs will be held in the CAEN Lab in Room 2341 of the EECS Building (not the room assigned in time schedule). This is the room labeled "CAD VLSI Lab" across from Room 2340.

Exams:

There will be two midterm exams. These exams will be given in the evening, at the days/times listed below. Rooms will be announced. Both sections of 206 will take the same midterm exams.

Exam I: Monday, October 8, 6-8 PM
Exam II: Monday, November 5, 6-8 PM

As listed in the University time schedule, the Final Exams are:

Section I: Tues, Dec. 18, 1:30-3:30
Section II: Mon., Dec. 17, 1:30-3:30

Course Grade:

The course grade will be based on the average of the scores in exams, homework and labs, with the following weights. The lowest homework grade will be dropped.

Homework	15%
Lab	20%
Midterm 1	15%
Midterm 2	20%
Final exam	30%

Matlab:

The first lab of this class will review and exercise Matlab skills. Also, Appendix B of our text introduces Matlab and discusses some advanced programming techniques. The "Warm-Up" to Lab C.1 on pp. 417-422 of the text is another good way to become familiar with various Matlab features.

Students not familiar with Matlab will be expected to learn it at the beginning of the term. It has been found that students with experience in standard programming languages such as C generally find Matlab simple and intuitive. However, we plan to offer an evening tutorial on Matlab at a time and date to be announced. This is intended only for students who have not covered Matlab in Engin 101 and who are not already familiar with Matlab.

Students who would like to do lab assignments on their own computers may purchase Student Matlab, along with the signal processing toolbox. Matlab is widely used in academia and industry, and is likely to be useful in many classes and projects beyond 206.

Honor code:

The College of Engineering honor code applies to all exams. See

http://www.engin.umich.edu/org/ehc/index.html

Collaboration:

All homework assignments are to be completed on your own. You are allowed to consult with other students during the conceptualization of a solution, but all written work, whether in scrap or final form, is to be generated by you working alone. Violation of this policy is an honor code violation. If you have questions about this policy, please do not hesitate to contact an instructor.

The same policy applies to lab assignments, except of course, that lab partners are permitted to work jointly in all respects. Note that programs written by one lab group are not to be shared with other groups.

Lecture attendance:

Please come on time. Late arrivals disturb the lecturer and the students who are already seated. If you are late, please be quiet when entering. Don't unpack at your seat. Have your coat off and your notebook and pen out before you enter the lecture hall. Late arrivals cannot be allowed to detract from the learning environment.