EECS 206 - Signals and Systems I
Winter 2002

Course Information[1]

- **Course Web site:** `www.eecs.umich.edu/courses/eecs206`
  Please make sure you consult the Web site on a regular basis.

- **Class Times:**

  - Section 1: M-W-F, 11:30-12:30, 1013 Dow – Prof. Lafortune
  - Section 2: M-W-F, 1:30-2:30, 1001 EECS – Prof. Neuhoff

- **Faculty Instructors:**

  - Prof. Stéphane Lafortune
    4234A EECS Bldg., stephane@umich.edu, 763-0591
  - Prof. David Neuhoff
    4215 EECS Bldg., neuhoff@umich.edu, 764-6586

  Though each instructor will have primary responsibility for his section, the course will be "team-taught." That is, the lectures will be divided among the instructors by topic, with each instructor teaching his topics to the two sections. Both sections will have the same homework assignments, laboratory assignments, quizzes, midterm exams, and final exam.

- **Graduate Student Instructors:**
  Head GSI: Mark Bartsch (mbartsch@umich.edu).
  GSIs: Norm Adams (nhadams@engin.umich.edu), Chih-fan (Charles) Hsin (chsin@eecs.umich.edu), Dongsook Kim (kimds@umich.edu), Fred Zeitz (fzeitz@engin.umich.edu).
  The GSIs will hold office hours in room 4338 EECS.

- **Office Hours:**
  TBA

- **Prerequisites:**
  Math 116 (second semester of calculus) and Engin 101 (computer programming).
  Note: The software package Matlab will be used extensively in this course. It is anticipated that students will have some familiarity with Matlab from Engin 101. In the first week of classes (Jan. 7-11), the GSIs will present an introduction to Matlab in the lab sessions.

- **Textbook:**
  DSP First - A Multimedia Approach, by J. H. McClellan, R. W. Schafer, and M. A. Yoder, Prentice-Hall, 1998.
  Most of the textbook will be covered in class, along with some material not in the book (handouts will be provided in this case). Please refer to the "Syllabus" handout.

[1] Last updated: January 6, 2002

- **Other potential purchases:**
  A calculator that handles complex arithmetic easily.
  Matlab (if you own your own computer). Discounted copies of Matlab will be available shortly at UM Computer Showcase; details TBA in class.

- **Email Mailing List:**
  It is essential that you subscribe to the class email list. To do so, send email to the address below, with the word `subscribe` in the subject line:

  ```
  eecs206-request@eecs.umich.edu
  ```

  Test messages will be sent to make sure students have subscribed; announcements to that effect will be made in class.

- **Homework:**

  Weekly homework assignments are an important part of the course. They will be assigned and due on *Fridays*, starting with HW 1 assigned on Jan. 11th and ending with HW 12 due on Apr. 12th.

  Homework assignments (and their solutions) will be posted on the course Web site. No hard copies will be given in class.

  Homework assignments will be due at the end of class on Fridays. However, an extension will be given until 4:30pm to turn in the homework. Homeworks not turned in in class should be put in the drop box by room 4234 EECS before 4:30pm on the Friday they are due. No homeworks will be accepted after 4:30pm.

  The lowest homework score will be dropped when computing the homework grade.

  Graded homeworks will be returned in laboratory sessions.

  Please staple and print your name, lecture section number, laboratory section number, and homework number on every homework assignment you turn in!

- **Laboratories:**

  The laboratory is an important part of the course. In weekly laboratory assignments, students will gain "hands-on" experience with signals and systems through Matlab programming experiments. Laboratory sessions will be held in the new "Signals and Systems Laboratory" in 2331 EECS. This CAEN Lab will be reserved for EECS 206 students during laboratory sections and open to all CAEN users the rest of the time.

  Students should work in **groups of two** in the lab, with each group submitting a single lab report. All members of the group will get the same grade. You are free to choose your lab partner. Each group should use one workstation in room 2331 EECS.

  During the lab sessions, the GSIs will explain the laboratory assignment and relevant Matlab commands/code in an interactive manner. Part of the laboratory assignment will be completed during the lab session, while the remainder is to be completed afterwards by the members of the group, using any of the CAEN labs or their own computers for those who purchase Matlab.

  Laboratory sessions begin on Tuesday Jan. 8th! Laboratory sessions will meet every week of the semester. There will be a total of 9 laboratory assignments. The remaining lab sessions will be used

for Matlab introduction (week of Jan. 7th) and midterm and final exam reviews (weeks of Feb. 4th, Mar. 11th, and Apr. 8th).

Laboratory reports will be due for each laboratory assignment. Lab reports should be turned in at the next lab session. Late lab reports will not be accepted.

Please staple and print your name, lecture section number, laboratory section number, and laboratory number on every lab report you turn in!

- **Exams:**

  There will be quizzes in laboratory sessions, two evening midterm exams, and a final exam. All exams/quizzes are **closed book and notes** except for:
  one 8 1/2 $\times$ 11 "cheat-sheet" for midterm exam 1,
  two 8 1/2 $\times$ 11 "cheat-sheets" for midterm exam 2, and
  three 8 1/2 $\times$ 11 "cheat-sheets" for the final exam.

  The large majority of the questions in the exams will be of the multiple-choice format.

  1. **Quizzes:** These will be given at the beginning (10-15 minutes) of some/most laboratory sessions. They will cover some basic recent material seen in class or in the lab.
     The lowest quiz score will be dropped when computing the quiz grade.
  2. **Midterm 1: Wednesday February 13th, 6-8pm**, room TBA
  3. **Midterm 2: Tuesday March 19th, 6-8pm**, room TBA
  4. **Final: Monday April 22nd, 4-6pm**, room TBA.
     This is the final exam time slot for Section 2; however, both sections will take the final exam at that time.

  Exceptions to these times will only be made for family/medical/religious reasons or unforeseen family/medical emergencies. Students in these situations must notify the instructors as soon as possible to make alternate arrangements.

- **Course Grade:**

Homework	14%
Lab reports	19%
Quizzes	5%
Midterm 1	14%
Midterm 2	19%
Final Exam	29%

  Recall that the lowest homework and quiz scores will be dropped.

  Letter grades will be assigned based on the total course grade computed according to the above weights. In the past, the average grade for this class and other related sophomore-level EECS classes has been around 2.6-2.9 out of 4.

- **Honor Code and Collaboration:**

  The College of Engineering Honor Code applies to all homework, lab reports (for the group as a whole), quizzes, and exams. See

`www.engin.umich.edu/org/ehc/index.html`

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 the instructors.

The same policy applies to laboratory assignments, except of course that lab partners in a team are permitted to work jointly in all respects.

- **Lecture and Laboratory Attendance:**

  You are expected to attend lectures and laboratory sections, and to arrive on time!

- **"Late" Policy:**

  In general, late homeworks or lab reports will not be accepted. However, instructors may make exceptions to this rule for unforeseen family/medical emergencies. Should such a situation arise, please contact Prof. Lafortune as soon as possible to discuss and make arrangements.