EEL 5525
Foundations of Digital Signal Processing
Fall 2009

INSTRUCTOR
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CLASS MEETINGS
T period 8-9, Th period 9, NEB 202

CLASS WEB SITE
http://www.yang.ece.ufl.edu/teaching/eel5525f09.htm

TA INFORMATION
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REQUIRED TEXTBOOK

COURSE OBJECTIVES
This course covers topics related to the foundations of digital signal processing. After completing this course, students should understand the essential properties of discrete-time signals and systems; understand the sampling and reconstruction of signals; be able to perform transform analysis of digital signals and systems, and apply filter design techniques; as well as understand the fundamental principles of multirate signal processing.

COURSE TOPICS
1. Introduction to digital signal processing
2. Discrete-time signals and systems
3. Discrete-time Fourier transform
4. Finite-length discrete transforms
5. Z transform
6. LTI discrete-time systems in the transform domain
7. Digital filter structures
8. Digital signal processing applications
9. IIR digital filter design
10. FIR digital filter design
11. Multirate digital signal processing
GRADING

- Homework: 20%
- Exam 1: 35% [October 27, 2009 (tentative)]
- Exam 2: 45% [December 8, 2009 (tentative)]

COURSE POLICIES

Attendance: Regular attendance is strongly encouraged. Students are responsible for all assignments and announcements made in class, and all material covered in class, whether or not it is in the textbook. Students are personally responsible for all information disseminated during lectures, including homework assignments and due dates, exam dates, course material etc. Please check the class web site, E-Learning System and your GatorLink email account regularly for announcements and homework assignments.

Homework: Collaboration on homework is permitted unless explicitly prohibited, provided that: 1) collaboration is restricted to students currently in this class; 2) each student must have his/her own contribution and write up his/her homework independently; and 3) on problems involving programming, each student must independently implement every piece of the program(s). Direct copying of another student’s solution will be considered plagiarism and a violation of the University Honor Code. Each homework assignment is due at the beginning of the class on the due date. In general, late submission will NOT be accepted. Extraordinary cases will be considered on an individual basis and must be discussed with the instructor before the due date of the assignment.

Exams: Disputes in exam grading should be addressed in writing to the instructor within one week from the date the exam is returned to the class. Changes in the exam grade are solely at the discretion of the instructor.

Make-Up Policy: If, in the event of extraordinary circumstances, a student has to miss an exam, the student has to seek prior approval of the instructor with a legitimate excuse, accompanied by some documentation from either a medical doctor or an attorney. Notes from family members are NOT acceptable.

If Exam 2 is missed under the aforementioned conditions, a make-up exam will be arranged. If Exam 1 is missed under the aforementioned conditions, NO make-up exam will be given, but the Exam 2 score of the student will count for his/her grade of the missed Exam 1.

Any missed exam without the prior approval of the instructor will result in a grade of zero for the exam.

Integrity and Honesty: Cheating of any kind is extremely serious and may result in an ‘E’ grade and other consequences. Please refer to the Student Honor Code at http://www.sg.ufl.edu/branches/judicial/honorcode.aspx, and consult Student Judicial Affairs websites http://www.dso.ufl.edu/judicial/ for the Academic Honesty Guidelines and various policies.

ADA Statement: Students with disabilities are encouraged to register with the Office for Student Services to determine the appropriate classroom accommodations. Any student with verification of a disability should contact the instructor as soon as possible, and will be accommodated in an appropriate manner.