EE 120: SIGNALS AND SYSTEMS

Spring 2015

Instructor: Dr. Murat Arcak. Email: arcak@berkeley.edu, Office: Cory 569, Phone: (510) 642-4804.

Teaching Assistants: Ana Ferreira (anaferreira@berkeley.edu)
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Office Hours and Rooms: Please see bCourses for up-to-date information

Class Hours and Rooms: Monday and Wednesday, 2:00-4:00 pm, 106 Stanley

Recitations: Friday 1:00-2:00 pm (247 Cory), 2:00-3:00 pm (241 Cory), 3:00-4:00 pm (12 Haviland)

Course Web site: bCourses will be used for announcements, lecture notes, grades, and solutions to tests and homework sets. Piazza will be used for discussion and polls. A link to Piazza is included in the left navigation bar of bCourses.

Prerequisite: EE 20 or consent of instructor

Textbook: We will provide typed lecture notes. The following textbook is recommended but not required:
"Signals and Systems," by A.V. Oppenheim and A.S. Willsky, Prentice-Hall, 2nd ed., 1997.
It is available for rental at the campus bookstore and for one-day loan at the Engineering Library.
"The Structure of Signals and Systems" by Lee & Varaiya may also be used as a further supplement:
http://ptolemy.eecs.berkeley.edu/~eal/books/LeeVaraiya_SigSys_Prepub.pdf

Grading:

Homework:	15 points
Midterm 1:	25 points
Midterm 2:	25 points
Final:	35 points

Homework: Weekly homework sets will be assigned. 20% penalty for each session late.
Submission will **NOT** be accepted if more than a week late.

Midterm and final dates:

February 25, Wednesday:	Midterm 1 (in class)
April 8, Wednesday:	Midterm 2 (in class)
May 12, Tuesday:	Final (11:30 – 2:30 pm; location TBA)

Course Outline:

- Linear time-invariant systems, Fourier transforms, and applications to signal processing
- Sampling of continuous-time signals, upsampling and downsampling of discrete-time signals
- System analysis using Laplace and z-Transforms
- Using transform techniques to design feedback control systems
- Sample engineering application: guidance and navigation of autonomous systems

Policy on Academic Dishonesty: Copying all or part of another person's work, allowing another student to copy your work, or using material not specifically allowed (such as online solution manuals for homework problems), are forms of cheating and are not tolerated in this course. All forms of cheating will be referred to the Office of Student Conduct. Note that the policy for students involved in a second incident of cheating is dismissal from the University.