EE324: Signals and Systems II
Fall 2008

Instructor: Sang W. Kim, 3112 Coover, 294-2726, swkim@iastate.edu

Teaching Assistants: Jon R. Watson, jonwat@iastate.edu (lecture), ALC #7
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Lectures: MWF 2:10-3:00 Hoover 1312

Labs: R 9:00-11:50, R 2:10-5:00

Office Hours: Instructor: W 3:00-4:30
TA: T,R 11-12 ALC#7

Course Description:

Prerequisite: EE224 (Signals and Systems I)


Tentative Course Outline:
Review of 224 (Ch.1 and 2)
Elementary signals
System models: input-output, state space
Basic system properties: linearity, time-invariance, causality
Testing of linearity, time-invariance, causality
Response of LTI systems: Convolution and the impulse response
Differential/difference equations for LTI systems
Laplace transform, bilateral, unilateral (Ch.6)
Region of convergence.
Properties of Laplace transform
Transfer functions, poles and zeros, unit impulse response
Stability of transfer functions
Z-transform (Ch. 7)
Region of convergence
Properties of z-transform
Transfer functions, poles and zeros, unit impulse response
Stability of transfer functions
Filters (Ch. 8)
Design of filters

Feedback systems (Ch. 9)
  Sensitivity, stabilization, disturbance rejection
  Stability of feedback systems, simple controllers (PID), unstable pole/zero cancellation
  Stability criterion

Homework:
  Homework will be assigned approximately once a week, and is due a week later. Late homework will not be accepted without prior permission.

Labs:
  Labs are intended for providing you a place where you get hands on, practical experience, and more examples on the course material, which has a theoretical basis. With this objective in mind, the lab meeting time will include a review session that covers review of various topics covered in class and in the lab experiments, as well as guides solutions to typical HW and exams problems.

Grading:
  Homeworks: 15%
  Labs: 15%
  Attendance, Participation, Short-Quizzes: 20% (sum of individual quiz scores - worst quiz score) / (number of quizzes -1) normalized to 100
  Midterm Exam: 20%
  Final Exam: 30%
  No make up exam/quizzes except for documented emergencies.

Disability Statement:
  If you have a documented disability and anticipate needing accommodations in this course, please make arrangements to meet with me soon. Please request that a Disability Resources (DR) staff send a Student Academic Accommodation Request (SAAR) form verifying your disability and specifying the accommodations you will need. DR is located in Room 1076 of the Student Services Building.