EE 640: Applied Random Processes

Instructors:
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Web page: http://www-ee.eng.hawaii.edu/~alek/ee640.html

Classes:
MW 8:30-9:45; Holmes Hall 388

Office hours:
Immediately after class.

Homework:
Problem sets will be assigned every week on Wednesdays, to be turned in at the beginning of the class when they are due (typically Wednesdays).

Textbook:
None. Notes distributed by instructor.

Course contents:
Probability Space, Random Functions (variables, sequences, processes), Probability Functions (distributions, densities, characteristic functions), Averaging (expectation and time averaging), Stationarity, Second Order Moments and Spectral Characterization, Bounds, Ergodicity (laws of large numbers, central limit theorem), Convergence and L2 Calculus, Classes of Processes (independent increment, white noise, Brownian motion, Gaussian processes, Poisson processes, Martingales, Markov processes), Least Squares Estimation, Wiener Filter, Kalman Filter.

Grading:
Homework: 25%
Midterm 1 (October): 25%
Midterm 2 (November): 25%
Midterm 3 (December): 25%

Policy on cheating:
Zero tolerance. All homework assignments and midterm exams should correspond to the individual work of each student. Students caught cheating will be disciplined in accordance with UH policy.

KOKUA program:
If you feel you need reasonable accommodations because of the impact of a disability, please contact the KOKUA program (V/T) at 956-7511 or 956-7612 in room 013 of the QLCSS.