

EE 550 – Random Processes

Fall 2021

Course Objective: This course aims to review probability theory and introduce random processes and their analysis with applications in electrical engineering and information sciences.

Instructor: Özgür Gürbüz, Room #1109
ogurbuz@sabanciuniv.edu

Class Hours: Tuesdays 11:40 – 13:30, FENS L062
Wednesdays 11:40 – 16:30, FENS L063

Course Text: Probability, Statistics, and Random Processes for Electrical Engineering (3rd Edition), by Alberto Leon-Garcia

Grading (Tentative):

Midterm	30%
Final	40%
Project	30%

Topics to be covered (Tentative):

Probability Models in Electrical and Computer Engineering

Basic Concepts of Probability Theory

Random Variables

Multiple Random Variables

Sums of Random Variables and Long Term Averages

Random Processes

Analysis and Processing of Random Signals

Markov Chains

Introduction to Queing Theory

Project:

The students will perform a project that will involve probabilistic modeling and analysis of a problem or part of a problem related to their research topics.

Notes:

There will be *only one make up test* for students who have missed a test (a midterm or the final). The make up grade will replace the grade of the missed test. The make up will take place after the final examination and it will cover the entire the course.

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