

IE 255
Probability for Industrial Engineers
Fall 2015

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Lecture Hours : Tuesday 9:00-11:00, Friday 9:00-11:00

Office Hours: Tuesday 13:00-14:00, Thursday 10:00-11:00

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Office Hours: Tuesday 11:00-12:00, Friday 11:00-12:00

This course is intended as an elementary introduction to the theory of probability, probabilistic models, and decision making under uncertainty. At the end of the course, the students should be equipped with basic skills for building and analyzing IE models that involve uncertainties. Through this end we'll discuss IE related models and applications as a supplement of the course. This course also provides necessary background for the statistical decision making and data analysis concepts that will be covered in IE 256 (Statistics for Industrial Engineers). The main outline of the course is as follows.

- Introduction
- A review of sets
- Definition and axioms of probability
- Conditional probability and independence
- Random variables
- Expected values and higher moments
- Important discrete and continuous random variables
- Functions of a random variable
- Joint probability distributions and conditional expectations
- The normal distribution and the Central Limit Theorem

Textbook : Sheldon Ross, "A First Course in Probability", 8th Edition, Pearson International Edition

Grading: Quizzes (25 %), Midterm (35 %), Final Exam (40 %).

Midterm Date: Friday, November 20, 2015 (please mark your calendar)

Quiz Dates: There will be 4 quizzes (6.25 % each). Quiz dates are: October 16th, November 6th, December 4th, December 18th (please mark your calendar).

Course page: Please check frequently, <http://moodle.ie.boun.edu.tr/>, enrollment key: centrallimit

Eligibility for the Final Exam: (1) Having a grade from the midterm exam (unless you have a proven medical excuse), (2) Obtaining at least 20 % of the midterm and quiz total (that is, 12 out of 100).