The Hebrew University of Jerusalem

Syllabus

Probability for Statistics students - 52324

Last update 04-10-2019

HU Credits: 4

Degree/Cycle: 1st degree (Bachelor)

Responsible Department: Statistics

Academic year: 0

Semester: 2nd Semester

Teaching Languages: Hebrew

Campus: Mt. Scopus

Course/Module Coordinator: Prof Pavel Chigansky

Coordinator Email: benjamin.yakir@mail.huji.ac.il

Coordinator Office Hours: By appointment

Teaching Staff:

Ms. rachel buchuk
Prof Pavel Chigansky

Course/Module description:
  The course enhances the basic knowledge that is acquired in the course "Basic Probability" (52220). The topics that were presented in the basic course will be developed and generalized. New topics will be introduced and models that form the basic toolbox of the statistician will be described.

Course/Module aims:
  The main aim of this course is to solidify the knowledge in probability theory that is required of students of statistics for their subsequent studies in statistics, operational research, and applied probability. Another goal is to enhance the students' computational skills.

Learning outcomes - On successful completion of this module, students should be able to:
  1. Quote and apply the definitions that were presented in the course.
2. Solve simple probabilistic problems and carryout theoretical probabilistic computations.
3. Quote the probabilistic theorems that were described at class and produce at least one example in the context of each theorem.
4. Prove simple corollaries using the theorems.

Attendance requirements(%):
  No attendance requirement

Teaching arrangement and method of instruction: Lecture and exercise.

Course/Module Content:
  1. Probability and the distribution of a single random variable
2. The joint distribution of a pair of random variables
3. Multivariate distributions and the multi-normal distribution
4. An introduction to limit theorems and to stochastic processes

Required Reading:
 Class notes.

Additional Reading Material:
1. A first course in statistics, 8th edition, by Sheldon Ross.

2. Introduction to Probability, second edition, by Bertsekas and Tsitsiklis

Course/Module evaluation:
End of year written/oral examination 80 %
Presentation 0 %
Participation in Tutorials 0 %
Project work 0 %
Assignments 0 %
Reports 0 %
Research project 0 %
Quizzes 20 %
Other 0 %

Additional information: