האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

Probability for Statistics students - 52324

Last update 29-09-2024

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: *Hagit Glickman*

Coordinator Email: *hagit.glickman@mail.huji.ac.il*

Coordinator Office Hours: *By appointment*

Teaching Staff:

Ms. Laura Segal Sinha,
Dr. Hagit Glickman

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 several random variables
3. Multinormal 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

Grading Scheme:

Written / Oral / Practical Exam 90 %
Mid-terms exams 10 %

Additional information: