The Hebrew University of Jerusalem

Syllabus

Statistics - 1109

Last update 03-12-2019

<u>HU Credits:</u> 0

<u>Degree/Cycle:</u> 1st degree (Bachelor)

<u>Responsible Department:</u> Prep. - Humanities & Social Sciences Track

<u>Academic year:</u> 0

<u>Semester:</u> Yearly

<u>Teaching Languages:</u> Hebrew

<u>Campus:</u> Mt. Scopus

<u>Course/Module Coordinator:</u> Mr. Ilan Tsitsianov

<u>Coordinator Email:</u> Ilan.tsitsianov@mail.huji.ac.il

<u>Coordinator Office Hours:</u>

<u>Teaching Staff:</u>

Mr. Ilan Tsitsianov

Course/Module description:
  The course presents the basic principles of data analysis, descriptive statistics, basic concepts of probability, basic concepts in statistics and the main ideas of statistical inference.

Course/Module aims:
  The aim of the course is to provide students with an understanding of basic concepts in statistics, and the basic ability to interpret and analyze quantitative data.

Learning outcomes - On successful completion of this module, students should be able to:
  Describing and organizing quantitative information, generalizing from a sample to the population, making statistical inference, explaining statistical finding.

Attendance requirements(%):
  100%

Teaching arrangement and method of instruction: Lectures followed with practice sessions.
Three quizzes will be given in each semester.

Course/Module Content:
  1. Descriptive Statistics- Describing and organizing quantitative information, Measures of central tendency, Measures of Dispersion, Pearson's correlation, Normal distribution.
2. Basic concepts in Probability- introduction to probability and set theory, random variables: expectation and variation.
3. Principles in sampling and estimation- Distribution of sample's sum and average, central limit theorem, confidence interval for mean and proportion.
4. Hypothesis testing- defining hypotheses, type I error, type II error, p-value, power calculation.

Required Reading:
1. פולק משה. חושבים אחרת – המבוא הידידותי לסטטיסטיקה. הוצאת ספרים ע"ש י"ל מאגנס,

2012.

2. מבוא לסטטיסטיקה לתלמידי מדעי החברה – א' (כרך ראשון – סטטיסטיקה תיאורית, כרך שני - הסתברות). הוצאת האוניברסיטה הפתוחה, 1993, 1995.

3. סטטיסטיקה חברתית לחברה מגוונת (תרגום: פרנקפורט-נחמיאס ולאון גררו) – הוצאת האוניברסיטה הפתוחה, 2014.

4. ורדה ליברמן ועמוס טברסקי. חשיבה ביקורתית – שיקולים סטטיסטיים ושיפוט אינטואיטיבי. הוצאת האוניברסיטה הפתוחה, 1996.

5. R. Falk. Understanding probability and statistics – A book of problems. A.K. Peters, 1993

6. J. M. Utts. Seeing Through Statistics, 2nd edition. Duxbury Press, 1999

Additional Reading Material:

Course/Module evaluation:
End of year written/oral examination 65 %
Presentation 0 %
Participation in Tutorials 0 %
Project work 0 %
Assignments 0 %
Reports 0 %
Research project 0 %
Quizzes 35 %
Other 0 %

Additional information: