האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

EXPERIMENTAL DESIGN AND STATISTICAL ANALYSES - 73954

Last update 14-10-2024

HU Credits: 4

Degree/Cycle: 2nd degree (Master)

Responsible Department: Nutritional Sciences - International Prog.

Academic year: 0

Semester: 1st Semester

Teaching Languages: English

Campus: Rehovot

Course/Module Coordinator: dr. Dan Ramon

Coordinator Email: dnrmon@gmail.com

Coordinator Office Hours: by appointment

Teaching Staff:
Dr. Dan Ramon,
Dr. hadas Don

Course/Module description:
Students will learn a scientific approach to basic statistical analysis and specific methods relevant to their field of study. The course will include basic experimental designs, and performing, analyzing and evaluation of statistical analyses used in research.

Course/Module aims:
To establish basic statistics skills for research students.
To present basic concepts of ethics in statistics.
To promote critical thinking in statistics.

Learning outcomes - On successful completion of this module, students should be able to:
• Apply statistical inference in their research field.
• Use the basic principles of statistics.
Analyze data with statistics tools

Attendance requirements(%):
Optional

Teaching arrangement and method of instruction: Frontal lectures and practical exercises.

Course/Module Content:
Brief review of statistical concepts
Summary and presentation of numerical variables
One sample t-test
Paired sample t-test
Two-sample t-tests
One way analysis of variance
Pair wise comparisons (Tukey-Kramer HSD, Fisher LSD)
Two way analysis of variance
Repeated measures analysis
A brief review of more complex experimental designs

Correlation coefficients
Simple linear regression
Multiple linear regression
Summary and presentation of categorical variables
Analysis of contingency tables

Required Reading:
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Additional Reading Material:
Rosner, B. (2016). Fundamentals of biostatistics. Cengage Learning.

Grading Scheme:
Essay / Project / Final Assignment / Home Exam / Referat 70 %
Submission assignments during the semester: Exercises / Essays / Audits / Reports / Forum / Simulation / others 30 %

Additional information:
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