

The Hebrew University of Jerusalem

Syllabus

EXPERIMENTAL DESIGN AND STATISTICAL ANALYSES - 73954

Last update 09-02-2014

HU Credits: 4

Degree/Cycle: 2nd degree (Master)

Responsible Department: Nutritional Sciences - International Prog.

Academic year: 2

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 be taught a scientific approach to basic statistics and specific methods relevant to their field of study. The course will include experimental design, and analyzing and evaluation of statistics 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
Analysis of covariance
Summary and presentation of categorical variables
Analysis of contingency tables

Required Reading:

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Additional Reading Material:

Sokal RR & Rohlf FJ. Biometry: The Principles and Practices of Statistics in Biological Research, 3rd Edition, 1994.

Grading Scheme:

Additional information:

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