



Course title: Experimental Design, data sampling and statistical analysis

Course number: 221.4020

Course credits: 4

Name of the lecturer: Nir Sapir

Name of instructors: Inbal Schekler, Neta Sa'ar

Office hours: Appointments should be made in advance - please contact by e-mail

Requirements: Weekly exercise, final exam, participation in all lessons and field excursions

E-mails:

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Inbal Schekler: goldinbal@gmail.com

Neta Sa'ar: netasaar@gmail.com

Attendance: Obligatory

Prerequisites: Introduction to Statistics

Course program: How to plan a study by asking good scientific questions, the basics of sampling design, sampling from a population, measuring biotic and abiotic factors, measures of central tendency and dispersion, normality, fit data to distributions, Basic regression, t-tests, ANOVAs and ANCOVA, Goodness of fit, multiple regression, logistic regression, estimate population size, spatial distribution, richness and diversity.

Basis of final grades: Final Exam (60%), Exercises (40%).

Bibliography:

1. Grafen, A. and Hails, R. 2002. Modern Statistics for the Life Sciences. Oxford.
2. Field, A. 2005. Discovering Statistics Using SPSS. Sage. London.
3. Sokal, R.R. and Rohlf, F.J. 1995. Biometry. 3rd Edition. Freeman.
4. Southwood, R. 2000. Ecological Methods. Blackwell Science, Oxford. 3rd Edition.
5. Sutherland, W.J. 1996. Ecological Census, Techniques. Cambridge University Press.
6. Underwood, A.J. 1997. Experiments in Ecology. Cambridge University Press.
7. Zar, J.H. 1999. Biostatistical Analysis. 4th Edition. Prentice Hall.