COURSE TITLE:

ECOLOGY PRACTICE II.

COURSE DESCRIPTION:

The course provides deeper insight in a few selected topics of ecology, including population interactions and community ecology. During this indoor class, the students prepare reviews of specific fields, learn to plan ecological experiment, learn computer based methods and get familiar with the analysis of ecological data. Some of the tasks are performed in longer block of lessons to provide sufficient time. The students often work in teams of 3-5 person, but they are evaluated based on their individual reports.

Plant ecology part. Students are given an introduction into the most widely used plant ecological research methods such as measurement of habitat microclimate, experimental tools for testing negative interactions between plants (competiton, allelopathy), vegetation mapping, following temporal changes in vegetation (vegetation dynamics), methods for studying the soil seed bank, using data bases in ecological research, and remote sensing used in plant ecological research. In addition to these, each student receives a plant ecological problem at the beginning of the semester for which a detailed research plan (including theoretical background, workplan and budget) have to be worked out by the end of the semester.

Animal ecology part usually include longer blocks of the tasks below:
- The students learn to use a program for estimating niche width and niche overlap.
- The students learn the basics of a geoinformatics and apply it to available data.
- The students investigate the numeric and functional response of predators to prey density (Holling-curves).
- The students simulate processes of island biogeography using the EcoBeaker program.
- The students investigate factors influencing the accuracy of the mark-recapture method.

LITERATURE:

Krebs, C.J. 1989. Ecological Methodology. Harper & Row, Publ., New York.

Magurran, A.E. 1988. Ecological Diversity and Its Measurement. Princeton Univ. Press, Princeton, 179.

Southwood, T.R.E. 2000. Ecological Methods. Wiley-Blackwell.

Eli Meir. 1996. EcoBeaker 1.0. An Ecological Simulation Program. Sinauer Assoc. Inc., Sunderland.

TEACHER:

Balázs Rosivall

assistant professor