



The Hebrew University of Jerusalem

Syllabus

INTRO. TO ECOLOGY & POPULATION BIOLOGY - 72107

Last update 26-10-2015

HU Credits: 5

Degree/Cycle: 1st degree (Bachelor)

Responsible Department: life sciences

Academic year: 0

Semester: 1st Semester

Teaching Languages: Hebrew

Campus: E. Safra

Course/Module Coordinator: Amatzia Genin

Coordinator Email: a.genin@mail.huji.ac.il

Coordinator Office Hours: Mondays, pre-coordination required

Teaching Staff:

Dr. Dror Hawlena
Prof Amatzia Genin
Mr. Michael Kalyuzhny
Ms. Dorin Arad
Mr. Ron Efrat

Course/Module description:

The course focuses on principal processes in ecology at levels ranging from individuals, through populations and communities through the global biosphere. Emphasis is given to relationships between organisms and their biotic and abiotic environment and their adaptation to the ambient conditions.

Course/Module aims:

Basic knowledge of the biotic and abiotic environment on Earth and the understanding of key ecological processes that determine the abundance and distribution of organisms.

Learning outcomes - On successful completion of this module, students should be able to:

1. To identify biotic and abiotic environment on Earth
2. To analyze ecological processes and effects of environmental conditions on organisms from the scale of the individual to the biosphere.

Attendance requirements(%):

None

Teaching arrangement and method of instruction: Two weekly lectures, 2 hours each, and a weekly, 1 hr long, exercise. (Hour \approx academic unit of 45 min).

Assignments: a total of 8 written exercises on which the grade is "passed" (of a total of 12 possible exercises)

Course/Module Content:

Environmental conditions on land, in lakes, and in the ocean. Limiting factors. Trophic structure and dynamics. Population genetics- Hardy-Weinberg equilibrium. Selection-mutation. Competition. Predator-prey relationships. Predation risk. Direct and indirect effects of predators. Fundamentals of biogeochemistry. Global changes. Human effects on ecosystems.

Required Reading:

Begon, Harper and Townsend/ Ecology.
Ricklefs/ Ecology.
Selected papers.

Additional Reading Material:

Selected papers.

Course/Module evaluation:

End of year written/oral examination 75 %
Presentation 0 %
Participation in Tutorials 0 %
Project work 0 %
Assignments 25 %
Reports 0 %
Research project 0 %
Quizzes 0 %
Other 0 %

Additional information:

Grade for assignments will be given for the best 5 of 6 six assignments.