The Hebrew University of Jerusalem

Syllabus

Introduction to Ecology - 72107

Last update 28-10-2024

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: Prof. Maoz Fine

Coordinator Email: maoz.fine@mail.huji.ac.il

Coordinator Office Hours: By appointment

Teaching Staff:

Mr. Jonathan Fireman,
Mr. Dan Amichai,
Prof. Maoz Fine,
Dr. Oren Kolodny

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(%):
Full attendance is mandatory

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

Course/Module Content:
Environmental conditions on land, in lakes, and in the ocean. Limiting factors. Trophic structure and dynamics. Microbial ecology. Nutritional ecology. 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.

Grading Scheme:

Written Exam % 70

Submission assignments during the semester: Exercises / Essays / Audits / Reports / Forum / Simulation / others 20 %

Mid-terms exams 10 %

Additional information:

During the course, each student should submit 4 written assignments. The assignment must be written independently by each student and submitted electronically in Word or PDF format through the course's Moodle site. The assignments will be checked and graded by the TAs, with a maximum grade of 110% (to increase the chances of getting a grade of 100% for the excercises' part).