האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

Syllabus

FROM CELL TO ORGANISM - LAB - 72110

Last update 28-09-2023

HU Credits: 3

Responsible Department: Life Sciences

Academic year: 0

Semester: 1st Semester

Teaching Languages: Hebrew

Campus: E. Safra

Course/Module Coordinator: Ariel Chipman

Coordinator Email: ariel.chipman@huji.ac.il

Coordinator Office Hours: By appointment, Berman building, room 206

Teaching Staff:
Prof CHIPMAN ARIEL

Course/Module description:
An introductory to the diversity of the animal kingdom and to princiles of

organismic biology. The course presents the various taxonomic groups and their characteristics, while using the different groups to demonstrate general principles of organization of the body and its systems.
This is the lab course only, and is meant for student who took the course without the lab and need to compete the lab.

Course/Module aims:
To give an organismic basis to the study of biology in general. To develop organismioc and evolutionary thinking.

Learning outcomes - On successful completion of this module, students should be able to:
- To identify the main animal taxa at the Phylum and Class levels.
- To predict organismic function based on morphology.
- To place various organisms on teh phylogenetic tree of teh animal kingdom.
- To appreciate the importance of understanding the whole organism in all branches of Life Sciences
- To describe histological sections of different tissues and dissections of select members of different animal taxa.

Attendance requirements(%):
90%

Teaching arrangement and method of instruction: Laboratory

Course/Module Content:
1) Protists: Diversity, structure, behavior.
2) Histology. Use of a light microscope. Epithelia and connective tissues. Muscle types. Compound organs: intestine, skin.
3) Simple multicellular organisms. Introduction to Porifera. Major groups in Cnidaria. Feeding behavior in Hydra. Cnidarian life cycles.
4) Lophotrochozoa I: Platyhelminthes. Parasitic groups. Regeneration in Planaria. Mollusca.
5) Lophotrochozoa II: Annelida. Earthworm dissection.
6) Ecdysozoa I: Nematodes, tardigrades. Arthropod diversity.
7) Ecdysozoa II: Insects. Grasshopper dissection.
8) Deuterostomia I: Echinoderms. Fertilization and development in sea urchins.
9) Deuterostomia II: Vertebrates. Dogfish

Required Reading:
Select chapters from the course textbook available online.

Additional Reading Material:
None

Grading Scheme:
Submission assignments during the semester: Exercises / Essays / Audits / Reports / Forum / Simulation / others 60 %
Mid-terms exams 20 %
Personal Guide / Tutor / Team Evaluation 10 %
Presentation / Poster Presentation / Lecture 10 %

Additional information:
None