האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

ANIMAL BEHAVIOR - 72585

Last update 16-10-2018

HU Credits: *3*

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 Guy Bloch*

Coordinator Email: *guy.bloch@mail.huji.ac.il*

Coordinator Office Hours: *By appointment, Sunday 14-16*

Teaching Staff:

Prof Guy Bloch

Course/Module description:

The course presents an integrative multi-level approach to the scientific study of animal behavior in a natural ecologically relevant context. Animal behavior is influenced by genes, the environment, and the interaction between genes and the environment. In order to fully understand behavior it is therefore necessary to know both the mechanisms underlying behavior, its adaptive value, and the evolutionary processes that shaped behavior over time. In the course we will learn that behavior is an integral part of animal adaptation to its environment. We will see how molecular, endocrine, and molecular processes are integrated to produce behavior. Among the topics to be studied: the evolution and ecology of behavior, behavioral genetics, hormones and behavior, neuroethology, the development of behavior, biological rhythms, learning and cognition, finding food and habitat, anti-predator behavior, communication, mating and courtship, parental care, and social behavior.

Course/Module aims:

Learning the methods and scopes of animal behavior research, understanding the physiological, genetic, and neuronal bases of animal behavior, as well as its ecological and adaptive value.

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

At the end of the course the students will be acquainted with the scientific research on animal behavior and will understand the complexity of the mechanisms controlling behavior. The students will understand how ecological and evolutionary processes have shaped the behavior of contemporary animal species. The students will distinguish between mechanistic (proximate) and evolutionary (ultimate) causations of behavior and will be able to integrate studies at broad levels of biological organization, spanning from molecules and cells to societies and ecosystems.

Attendance requirements(%):

None

Teaching arrangement and method of instruction: Frontal lectures

Course/Module Content:

1) The history of animal behavior research
2) The evolution and ecology of animal behavior

3) Genes and behavior
4) The neuronal bases of behavior (neuroethology)
6) the development of behavior
7) Learning, memory, and cognition
8) Biological rhythms
9) Migration and navigation
10) Finding food and habitat, anti-predator behavior
11) Mating and reproduction
12) Mating systems and parental care
13) Communication
14) Social behavior

Required Reading:
None

Additional Reading Material:
§ Judith Goodenough, Betty McGuire, Elizabeth Jakob (2010) Perspectives on Animal Behavior, 3rd Edition

§ John Alcock (2009) Animal Behavior: An Evolutionary Approach, Ninth Edition

Course/Module evaluation:
End of year written/oral examination 100 %
Presentation 0 %
Participation in Tutorials 0 %
Project work 0 %
Assignments 0 %
Reports 0 %
Research project 0 %
Quizzes 0 %
Other 0 %

Additional information:
None