



The Hebrew University of Jerusalem

Syllabus

NATURAL COLLECTIONS AND ZOOS - 71154

Last update 04-11-2025

HU Credits: 2

Degree/Cycle: 2nd degree (Master)

Responsible Department: Animal Husbandry and Veterinary Sciences

Academic year: 2026

Semester: 2nd Semester

Teaching Languages: English

Campus: Rehovot

Course/Module Coordinator: Prof. Gila Kahila Bar-Gal

Coordinator Email: gila.kahila@mail.huji.ac.il

Coordinator Office Hours:

Teaching Staff:

Prof. Gila Kahila Bar-Gal,
Dr. Efrat Gavish-Regev,
Prof. Rivka Rabinovich,
Dr. Noam Werner

Course/Module description:

Humans and animals have had a special relationship since the dawn of history. Human development, and especially the process of urbanization, led to environmental changes, disruption of ecological systems, habitat destruction and a reduction of biodiversity. The biological and paleontological collections at The Hebrew University and The Jerusalem Biblical Zoo include a unique sample of animal and plant diversity from the Middle East and adjacent seas, and serve as a testament to the connection between humans and animals. The Natural History Collections of the Hebrew University are an important milestone in the study of evolutionary changes and biological diversity in the Southern Levant. Furthermore, they are an important resource for improving public and scientific awareness of the importance of biodiversity and conservation. The Jerusalem Biblical Zoo is a living collection that represents the biodiversity of Israel and of the world. In addition to presenting animals to the public, the Zoo also serves as a breeding nucleus and as a protected environment for wild species, and especially for endangered species. The course deals with the importance of natural history collections and zoos for conservation, and with the social and scientific aspects of collections and zoos.

Course/Module aims:

The students will be introduced to the rationale behind zoos and natural history collections throughout history and to the conceptual changes in their management and in their objectives in the past century and especially in the last few decades, with an emphasis on the scientific context. The students will understand the importance of collections and zoos from the scientific aspects of biodiversity research, conservation and education.

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

On completion of the course the students will understand the importance of taxonomy as a crucial basic science for practical research in conservation and biodiversity. They will learn what collections-based research is and about its great contribution to the life sciences. The students will be familiar with issues in biodiversity and conservation that are brought before collections and zoos, and will receive tools for informed decision making about collection-based research management and conservation research management in zoos.

Attendance requirements(%):

Teaching arrangement and method of instruction: Lectures and field trips

Course/Module Content:

Day 1: Species concepts in the context of collections and zoos, higher level taxonomy, ecology and population genetics of conservation, curation and management of natural history collections.

Day 2: The history of collections and zoos, ethics, practical conservation, education in zoos and collections.

Day 3: Tour of the Jerusalem Biblical Zoo and aquarium, zoo-based research.

Day 4: Invasive species, collection-based research, advantages and disadvantages of collections and zoos, tour of the natural history collections.

Required Reading:

- Frankham, Ballou, Dudash, Eldridge, Fenster, Lacy, Mendelson, Porton, Ralls, and Ryder. 2012. *Implications of different species concepts for conserving biodiversity.*

- Hoage, Roskell, and Mansour. 1996. *Menageries and Zoos to 1900. In: New Worlds, New Animals: From Menagerie to Zoological Park in the Nineteenth Century.* Eds. Hoage and Deiss. Baltimore: Johns Hopkins University Press

- Miller, Conway, Reading, Wemmer, Wildt, Kleiman, Monfort, Rabinowitz, Armstrong, and Hutchins. 2004. *Evaluating the Conservation Mission of Zoos, Aquariums, Botanical Gardens, and Natural History Museums.*

- Schindel and Cook. 2018. *The next generation of natural history collections.*

Additional Reading Material:

Grading Scheme:

*Essay / Project / Final Assignment / Home Exam / Referat 85 %
Submission assignments during the semester: Exercises / Essays / Audits / Reports / Forum / Simulation / others 10 %*

Attendance / Participation in Field Excursion 5 %

Additional information:

*This is a concentrated course that will be held at Safra campus, Giva'at Ram,
Jerusalem
22-24 January 2024*