



The Hebrew University of Jerusalem

Syllabus

Biology basic - 72160

Last update 05-09-2023

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: Michael Brandeis

Coordinator Email: michael.brandeis@mail.huji.ac.il

Coordinator Office Hours: By appointment

Teaching Staff:

Prof Michael Brandeis,
Mr. Elad Meilin,
Mr. David Rasin

Course/Module description:

Basic introductory course in biology to students of special programs.

Course/Module aims:

A basic introduction to a wide range of topics in life sciences from the molecular all the way to the ecological level. The course will both form a basis for more advanced courses but will also focus on many subjects that most of the student might not encounter in their future studies.

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

1. Understanding the mechanism and significance of evolution.
2. Getting to know the major groups of animals and plants.
3. Acquiring basic knowledge the structure of eukaryotic cells.
4. Acquaintance with the chemical basis of life from elements to polymers.
5. Understanding how DNA encodes the genetic information and is translated to structure and function – from DNA to proteins.
6. Appreciating major evolutionary innovations – sex, movement, sensing etc.
7. Getting to know the biological history of our planet.
8. Awareness of ecological interactions.

Attendance requirements(%):

0

Teaching arrangement and method of instruction: Lectures, asynchronic online learning TA sessions by zoom and computerised assignments.

Course/Module Content:

The history of life, animals and plants, the chemical and molecular basis of life, polymers, DNA, RNA and proteins, evolution, heredity, the cell as basic biological unit, sexual reproduction, movement, sensing, ecological system.

Required Reading:

Most of the learning material will consist of videos and reading material uploaded

to the Moodle LMS. In addition there will be a limited amount of reading from - "Life, The Science of Biology" textbook.
9th edition.

Additional Reading Material:

-

Grading Scheme:

Written / Oral / Practical Exam 30 %
Active Participation / Team Assignment 12 %
Submission assignments during the semester: Exercises / Essays / Audits / Reports
/ Forum / Simulation / others 48 %
Presentation / Poster Presentation / Lecture 10 %

Additional information:

The course is intended for students of the Faculty of Mathematics & Sciences who don't study biology.