

**221.4002 Selected Subjects in Organismic Evolution
Semester A**

Time: Monday 13-15

Lecturer: Dr. Ram Reshef, **Email:** reshefr@sci.haifa.ac.il

Office Hours: Tuesday, 12-13.

Course Level: BA+MA

Course Type & Format: Mandatory for MA students of our department

Number of Hours/Credits: 2

Prerequisites:

Course Overview (Short Abstract):

The course deals with the evolution of life on Earth and the revolutionary ideas that provided mechanistic explanations for its existence.

Learning Outcomes (What are the skills, abilities, or major concepts a student is expected to acquire in this course?) – At the end of the course students will be able to:

Extending knowledge about the concept of biological evolution.

Assessment (Assessment Method and Grade Composition):

Final exam – 100%

Week-by-Week Content and Assignments:

Week #	Topic
1	The idea of organic evolution and the various disciplines in its research.
2	Evidence for the existence and action of evolution.
3	Historical background for the development of the evolutionary theory.
4	Historical background for the development of the evolutionary theory.
5	The Darwinian theory, the modern synthesis and their implications in life sciences research.
6	The history of life on Earth.
7	Principles of Macro-evolution – creation and development of new species.

8	Sexual selection as an evolutionary force.
9	The discipline of Comparative Anatomy.
10	Mass extinctions.
11	The discipline of evo-devo
12	Human evolution.
13	Human evolution.
14	Evolution and creationism.

Reading List:

1. The problems of evolution – Mark Ridley.
2. Evolutionary Biology – Douglas Futuyma
3. Evolution – Douglas Futuyma
4. Evolution - A developmental Approach – Wallace Arthur
5. Evolutionary Analysis – Scott Freeman and Jon Herron