

Ecology of the Arava

Lecturers: Dr. Elli Groner , Dr Anton Khalilieh, Guest lecturer: Dr Omer Polak,
3 weekly hours , short field work sessions and a one-day tour.
3 academic credits

Course description

This course will present an overview of the ecology of the Arava desert. In this course, both basic principles of ecology followed by desert ecology will be introduced. Students will learn about desert food webs, the interaction between ecosystems, pollution and other risks to the conservation of the Arava. Students will study the link between the Arava ecosystems; they will study about plants, arthropods, mammals and birds of the terrestrial ecosystem and the principles and wildlife of the sea. While learning about different ecosystem and taxon students will study the anthropogenic impact on wildlife.

Grade components:

Final exam 45%
Quizzes 10%
Midterm exam 5%
Attendance, Participation, discussions 10%
Projects, exercises, assignments 30%

Readings:

The Biology of Deserts. David Ward 2009. Oxford university press. 339 pp

Syllabus:

- Part A :**Getting to know the desert** – Introduction to the desert, learning tools to study desert ecology.
- Part B :**Sea and Air of the Arava** – marine biology (taught by Dr Omer Polak),
- Part C :**Socio-ecology** – policy, ecosystem services, planning, conservation and conservation in Palestine (taught by Dr Anton Khalilieh)

Course Schedule:

#Session	Lecturer	Title
1	E. Groner	Introductions to deserts
2	E. Groner	Plant adaptation to desert life
3	E. Groner	Ecosystem services of the Arava
4	A. Khalilieh	Animal adaptation to desert life
5	A. Khalilieh	Bird's adaptation to desert life
6	E. Groner	Acacia as a keystone species
7	E. Groner	Monitoring Acacia
8	A. Khalilieh	Migration - introduction
9	A. Khalilieh	Bird migration
10	O.Polak	The Aqaba Gulf oceanography
11	E. Groner	Desert ecosystem processes
12	E. Groner	Bird physiology
13	A. Khalilieh	Bird behavior
14	E. Groner	Mid term exam
15	O. Polak	The coral reef
16	E. Groner	Local Arava hike
17	E. Groner	Marine trip
18	A. Khalilieh	Fasting in animals-Introduction
19	A. Khalilieh	Physiological responses to fasting in animals (Focusing on Birds)
20	E. Groner	Ecological integrity
21	E. Groner	DPSIR
22	A. Khalilieh	Conservation in Palestine
23	A. Khalilieh	Birds of Palestine
24	E. Groner	Does nature know borders?
25	E. Groner	Summary
26	E. Groner	Final exam