



Course Syllabus

Environmental Aspects of Israel's Coastal Sand Dunes

Instructor: Dr. Boaz Shacham

Academic year: 2023-2024
Semester: Spring
Course number: 0920.4043.01
Credit hours: 2
Schedule: Mondays (class), 18:00-20:00, Porter school, Room 101 (or via Zoom)
Sunday and Tuesday (trips) according to the dates below.

Course structure

- The course is comprised of 8 lessons plus 2 field trips during the spring semester.
- On fieldtrip days students should be prepared to be out for the day, until early evening (approximately 10:00-20:00).
- Since the course material is of multi-disciplinary nature, some lessons shall be led by guest lecturers, experts in their respective fields.
- Dates and details are given below.
- This International MA Program course is also open to students of the Hebrew Master's Program (non-thesis track). All course materials and presentations will be in English.

Contact information

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Course website: moodle.tau.ac.il

General course objectives:

To learn various environmental aspects of Israel's Mediterranean coastal sands. Natural resources and natural processes; typical landscapes, flora and fauna and their uniqueness. Anthropogenic influences, conflicts between humans and nature in the Mediterranean coastal sands. Hydrology and water economy of the coastal sands. Questions of environmental ethics, environmental economics. The course focuses on environmental issues of Israel's Mediterranean coastal sands. First, learning of the main natural habitats and landscapes, examples of typical plant and animal species of the coastal sands with emphasis on their evolutionary adaptations to these habitats, and their regional and global uniqueness. Later, human influences on this region, especially





development processes during the last century, conflicts between conservation and development, use and overuse of natural resources in the coastal sands.

Course policies

- A. Attendance is compulsory for all trips and class meetings.
- B. All students are expected to actively participate in class discussions.
- C. In case of absence for any reason please notify the program staff in advance. In case of absence for a medical reason, the student should submit a doctor's letter.
- D. Equipment (field trips) – students must come with closed shoes suitable for walking, a hat and water (and food as needed). Without these students will not be able to participate.

If COVID-19 guidelines do not allow physical fieldtrips, these shall be modified to an online format.

Grading

Attendance of lessons (80% mandatory)

Attendance of both field trips (100% mandatory)

Final grading based on final exam OR written paper (100%)

Recommended literature:

Ahirun-Frumkin, T., Frumkin, R., Rudikh, R., Malul, A., Levin, N. & Papai, N. (2003). Conservation of the coastal sands of Israel – Policy paper. State of Israel Ministry of the Environment, the Society for the Protection of Nature in Israel, Israel Nature & Parks Authority, Jewish National Fund, Hydrological Service of Israel (Israel Water Authority) and the Jerusalem Institute for Israel Studies. Survey unit, DESHE Institute, Tel Aviv (126 pages, in Hebrew).

Cohen, O., Shacham, B. & Rotschild, A. (2011). The Coastal Sand Dunes of Israel: The Importance and Challenges of Conservation. The Society for the Protection of Nature in Israel (SPNI) & Beracha Foundation. (Hebrew, with English summary)

Levanoni, T. (Ed.: Rotschild, A.) (2011). Habitats of the Kurkar (calcareous sandstone) and Hamra (red loam): Beauty marks of the Mediterranean Coastline; Information for policy-makers, field managers and educators. The Society for the Protections of Nature in Israel (SPNI) & Beracha Foundation. (Hebrew, with English summary)



Course Calendar

See table below (and Moodle) for full dates. Dates and actual itineraries (sites) of field trips may be subject to change. Students will be notified by email of any changes.

| Meeting | Date & hours | Topic & details |
|----------------------------|--|--|
| Lesson 1 | Monday 20.05.2024 18:00 – 20:00 | Introduction – borders of Israel's coastal plain, topography, soils, climate. Source of the sand and its voyage from Africa to the shores of Israel. Major landscapes and exemplary flora and fauna species. |
| Lesson 2 | Monday 27.05.2024 18:00 – 20:00 | Flora of the coastal plain: plant adaptations to sand, typical species, endemic species, rare species. |
| Lesson 3 | Monday 03.06.2024 18:00 – 20:00 | Fauna of the coastal plain: animal adaptations to sand, typical species, endemic species, rare species. |
| Trip 1 | Sunday 09.06.2024 10:00 – 20:00 | Southern coastal plain, sites: Palmahim sands; Nizzanim sands & beach; Ziqqim sands & beach; Ashdod sands. |
| Lesson 4 | Monday 17.06.2024 18:00 – 20:00 | Nature conservation in the coastal plain: invasive species and their effects, pollution, off-roading, sand mining. |
| Lesson 5 | Monday 24.06.2024 18:00 – 20:00 | Hydrology of the coastal plain: the coastal aquifer and its exploitation, injection of runoff water and treated sewage water, seawater desalination. |
| Lesson 6 | Monday 01.07.2024 18:00 – 20:00 | Human & nature conflicts in the coastal plain: conservation vs development; Environmental activism. |
| Lesson 7 | Monday 08.07.2024 18:00 – 20:00 | Environmental economics of the coastal plain: what's the value of ecosystem services of the coastal sands? |
| Trip 2 | Sunday 14.07.2024 10:00 – 20:00 | Central coastal plain, sites: Tel Baruch sands; Netanya sands & beach; Caesarea sands & beach; Hadera park. |
| Lesson 8 | Monday 15.07.2024 18:00 – 20:00 | Course summary & retrospect; discussion about the future of the coastal sands, from what we learned. |
| SPARE for trip! | Sunday 21.07.2024 Sunday 28.07.2024 | (backup in case of <i>force major</i> change in field trip date) |



Plagiarism

The strength of the university depends on academic and personal integrity. In this course, you must be honest and truthful. Plagiarism is the use of someone else's work, words, or ideas as if they were your own. Here are three reasons not to do it:

1. By far the deepest consequence to plagiarizing is the detriment to your intellectual and moral development: you won't learn anything, and your ethics will be corrupted.
2. Giving credit where it's due but adding your own reflection will get you higher grades than putting your name on someone else's work. In an academic context, it counts more to show your ideas in conversation than to try to present them as sui generis.
3. Finally, Tel Aviv University punishes academic dishonesty severely. The most common penalty is suspension from the university, but students caught plagiarizing are also subject to lowered or failing grades as well as the possibility of expulsion.