

## COURSE OUTLINE

### (1) General

<b>School:</b>	Social Sciences		
<b>Academic Unit:</b>	Geography		
<b>Level of studies</b>	Undergraduate		
<b>Course Code:</b>	GEO 314	<b>Semester:</b>	F
<b>Course Title:</b>	Ecogeography of the Mediterranean and Greece		
<b>Independent Teaching Activities</b>	<b>Weekly Teaching Hours</b>	<b>Credits</b>	
Lecture		3	
Fieldwork		3	
		<b>Course total</b>	5
<b>Course Type:</b>	Required Elective		
<b>Prerequisite Courses:</b>	Environment and Ecology		
<b>Language of Instruction and Examinations</b>	Greek		
<b>Is the course offered to Erasmus students:</b>	No		
<b>Course Website (Url):</b>	<a href="https://geography.aegean.gr/pps/index_en.php?content=0&amp;lesson=314">https://geography.aegean.gr/pps/index_en.php?content=0&amp;lesson=314</a>		

### (2) Learning Outcomes

#### Learning Outcomes

At the end of the course, the student is expected to:

- recognize the peculiarities of the Mediterranean physical and natural environment, as well as the mediterranean ecosystems of the world
- recognize the most important elements and features of the human geography of the Mediterranean as stemming from the Basin's physical/natural geography
- make the link between physical features and processes with human-made features of the Basin
- be able to distinguish and analyze the Mediterranean environment in its components, as well as make the synthesis on the basis of the constituting factors
- realize the processes concerning the present state of the art of the Basin, and propose solutions for problems related to environmental degradation
- be better advised to contribute to Environmental Impact Assessment Studies concerning the Mediterranean Basin.

#### General Competences

1. Search for, analysis and synthesis of data and information, with the use of the necessary technology
2. Working independently
3. Team work
4. Working in an interdisciplinary environment
5. Respect for the natural environment

## 6. Production of free, creative and inductive thinking

### (3) Syllabus

**The natural environment:** Geological history of the area - geomorphology, archipelagos, mountains. Climate. Biological, climatic, and bioclimatic delimitation of the Mediterranean Basin. Evolution of life: biogeography and biodiversity of the palaeo- and, contemporary environment, future predictions. The ecosystem patchwork. The divergent character of Mediterranean ecosystems. Natural resources - ecosystems, wildlife, soil, water as a limiting factor, cultivations, the sea as a resource. Aspects of the maintenance of human life in the Mediterranean: agriculture, food production - the catalytic role of religion.

**The manmade and human environment:** The Mediterranean as cradle. Ecosystems for yield (agro-ecosystems, terraces for agriculture, saltworks), livestock (pastures, grazing, transhumance). Trade. Mediterranean people - settlements, cities (city-states, bastions, castles, acropolis), migration, and aging. Mediterranean diet: the role of natural resources, religions, and customs. Mediterranean landscape: natural characteristics, man as sculptor (terraces, dehesas and montados, transhumance).

**Problems and hazards:** Soil erosion, wild fires, water drought, global change (climate and land use change), urbanization, pollution, exotics and invasives, species extinction, ecosystem disturbance. Tourism in the Mediterranean. Towards a sustainable use of natural resources and development: natural and cultural resources, and the existing legislative frame.

#### Practical exercises:

1. Climate and climatic diagrams
- 2.
3. Population structure: assessment of the age structure of selected Mediterranean forests including field excursion
- 4.
5. Insect biodiversity assessment in typical Mediterranean ecosystems (phrygana and olive grove) - application of the software EstimateS
- 6.
7. Post-fire succession in Mediterranean ecosystems: post-fire plant diversity assessment in selected ecosystems on Lesbos with excursion and field work/sampling
- 8.
9. Lessepsian Migration: prediction of biological invasions in the Mediterranean Sea on the basis of sea current, temperature and salinity models
- 10.
11. Full-day excursion to selected, representative habitats on Lesbos Island
- 12.
13. Ecological niche modeling: Prediction of current and future distributions of typical Mediterranean plant and animal species (e.g. *Achillea holosericea*, *Olea europaea*, *Testudo graeca*) taking into account climate change scenarios.

### (4) Teaching and Learning Methods - Evaluation

<b>Delivery:</b>	The course includes face-to-face teaching, i.e.: lectures in a lecture room, practical exercises in nature (data collection) and in the informatics lab (data analysis), as well as a day-long field excursion to get-to-know the habitats of the Island of Lesbos.	
<b>Use of Information and Communication Technology:</b>	Lectures are carried out using powerpoint and other high tec methods. Data analysis in the informatics lab employs the following stat packages: EstimateS, Excel και DivaGIS.	
<b>Teaching Methods:</b>	<b>Activity</b>	<b>Semester workload</b>

Lecture	39
Laboratory practice	39
Educational visit	9
Project	8
Non-supervised study	52
Performance evaluation/Exams	3

**Course total** 150

Both theory and exercises are evaluated and the final mark is the average of these evaluations: Exercises: 1. Physical presence in 6 out of the 7 exercises is obligatory. 2. Students are evaluated on 2 exercise reports (average of the two reports) Theory: A written exam at the end of the course

### Student Performance Evaluation

### (5) Attached Bibliography

- Lecture notes and Practical exercises' handouts provided electronically by teachers at: \geofscoursesPPSEcogeography of the Mediteranean
- Blondel, J. Aronson, J.-Y. Bodiou, G. Boeuf (2010). The mediterranean Region: Biological Diversity in Space and Time. 2nd ed., Oxford UP, Oxford and NY.
- Petanidou T. (2015). *Terraces of the Aegean - the example of Dodecanese*. Parisianou Scientific Publications, Athens, pp. 280. [in Greek].
- Modinos M (2001). Η οικολογία της Μεσογείου. Stohastis - DIPE publications, Athens.
- Grove AT, Rackham O (2001). The nature of the Mediterranean Europe. Yale University Press, New Haven and London.
- Allen DA (2001). Mediterranean ecogeography. Prendice Hall, Essex.
- Attenborough D (1989). The first Eden - The Mediterranean world and man. London: Fontana - Collins.
- Braudel F (1979). La Méditerranée et la monde méditerranéen à l'époque de Philippe II. Librairie Armand Colin, Paris.
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- Montanari M (1997). Πείνα και αφθονία στην Ευρώπη. Αθήνα: Ελληνικά Γράμματα.
- Rackham O, Moody J (2004). Η δημιουργία του Κρητικού τοπίου. Πανεπιστημιακές εκδόσεις Κρήτης, Ηράκλειο.
- Rundel PW, Montenegro G, Jaksic FM (eds.) (1998). Landscape disturbance and biodiversity in Mediterranean-type ecosystems. Springer, Berlin and New York.
- Thirgood JV (1981). Man and the Mediterranean forest: a history of resource depletion. Academic, London.
- Zohary D, Hopf M (2000). Domestication of Plants in the Old World - The origin and spread of cultivated plants in W. Asia, Europe and the Nile valley, third edition. Oxford, New York: Oxford UP