Universitat Autònoma de Barcelona

2023/2024

Analysis and Management of Natural Landscapes

Code: 43054
ECTS Credits: 6

Degree	Type	Year	Semester
4313784 Interdisciplinary Studies in Environmental, Economic and Social Sustainability	OT	0	1

Contact

Name: Antoni Mas Ponce

Email: antoni.mas.ponce@uab.cat

Teaching groups languages

You can check it through this link. To consult the language you will need to enter the CODE of the subject. Please note that this information is provisional until 30 November 2023.

Teachers

Raquel Cunill Artigas

Prerequisites

Students must have basic knowledge in environmental sciences and ability to follow lectures in English.

Objectives and Contextualisation

To understand the landscape as an expression of natural and social history.

Methodological approach to understand and analyse examples in Europe and the Mediterranean region.

Comprehend a historical perspective on the conservation origins and Natural Protected Areas (NPA), as well as the existing legislative figures of protection.

To study tools for management and biodiversity monitoring and conservation in Natural Protected Areas (NPA), in the context of global change and its socioecological implications.

Explain criteria and analytical and legal tools for diagnosis and assessment of NPA management.

Competences

- Analyse how the Earth functions on a global scale in order to understand and interpret environmental changes on the global and local scales.
- Communicate and justify conclusions clearly and unambiguously to both specialised and non-specialised audiences.
- Integrate knowledge and use it to make judgements in complex situations, with incomplete information, while keeping in mind social and ethical responsibilities.
- Seek out information in the scientific literature using appropriate channels, and use this information to formulate and contextualise research in environmental sciences.
- Solve problems in new or little-known situations within broader (or multidisciplinary) contexts related to the field of study.
- Work in an international, multidisciplinary context.

Learning Outcomes

1. Assess human impact on coastal areas and the function of marine nature reserves, both coastal and oceanic, in biodiversity conservation and the capacity to generate biomass.
2. Communicate and justify conclusions clearly and unambiguously to both specialised and non-specialised audiences.
3. Integrate knowledge and use it to make judgements in complex situations, with incomplete information, while keeping in mind social and ethical responsibilities.
4. Interpret current models for protected natural areas with local and worldwide cases, both marine and terrestrial.
5. Locate and analyse the great biogeographical regions and their situation regarding the conservation of biodiversity.
6. Seek out information in the scientific literature using appropriate channels, and use this information to formulate and contextualise research in environmental sciences.
7. Solve problems in new or little-known situations within broader (or multidisciplinary) contexts related to the field of study.
8. Work in an international, multidisciplinary context.

Content

Module presentation.

Sub-Module 1: Protected areas (TM)

PROTECTED AREAS

The origin and the evolution of Protected Areas. Protection schemes.

Biosphere reserves as science for sustainability support sites.

The case of the network of Mediterranean Biosphere Reserves.

Global change indicators in protected areas: forests and Mediterranean river basins.

EXPERIENCES FROM THE ANALYSIS AND THE MANAGEMENT IN PROTECTED AREAS

Natural Park and Biosphere Reserve of Montseny. Objectives and interactions between protection figures.

The Pyrenees as a trans-frontier conservation area.

Cajas National Park and Biosphere Reserve (Ecuador): management experience.

Tourism management in protected areas. The case of Costa Rica.

Sub-Module 2: Landscape (RC)

Landscape and Landscapes

Socioecological heritage and rural landscapes.

Sub-Module 3: Fieldworks*

Besòs and Tordera river basin(TM)

* In case the excursions cannot be carried out, they will be replaced by activities.

Methodology

Lectures

Active participation in the classroom

Field trip

Essays/works

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Field work	3	0.12	4, 7, 5
Theorical presentations	30	1.2	2
Type: Supervised			
Tutorships	30	1.2	
Type: Autonomous			
Fieldwork essay	20	0.8	6, 2
Lectures	64	2.56	3

Assessment

The final mark will be the result of:

Exam (40 %).

Fieldwork and assignments (25%).

Critical essays scientific papers (25%).

Attendance and participation (10%).

This module does not offer Single Assessment, as agreed with the coordination of the degree and with the Dean's Office of the Faculty of Sciences.

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Active participation in the classroom	10%	0	0	6, 3, 7, 2
Critical essays scientific papers	25%	0	0	6, 4, 3, 7, 5, 8, 1
Exam	40%	3	0.12	6, 4, 3, 7, 2, 5, 8, 1
Fieldwork and assignments	25%	0	0	3, 7, 5

Bibliography

References

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McGarigal, K. i Marks, B. (1995): FRAGSTATS: Spatial Pattern Analysis Program for Quantifying Landscape Structure. Washington: Department of Agriculture General Technical Report.

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Otero, I.; Boada, M. i Tàbara, J.D. (2013): Social-ecological heritage and the conservation of Mediterranean landscapes under global change: a case study in Olzinelles (Catalonia). Land Use Policy. 30, pp. 25 - 37. Butterworth Scientific. ISSN 0264-8377

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Sluiter, R. i de Jong, S. M. (2007): Spatial patterns of Mediterranean land abandonament and related land cover transitions. Landscape Ecology 22:559-576.

Further reading

Adams, W., Aveling, R., Brockington, D., Dickson, B., Elliott, J., Hutton, J., Vira, B., Wolmer, W. 2004. Biodiversity Conservation and the Eradication of Poverty. Science 306:1146-1149.

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IUCN. Protected Areas. <https://www.iucn.org/theme/protected-areas>

Protected Planet. https://www.protectedplanet.net/

UNEP. <https://www.unep-wcmc.org/resources-and-data/united-nations-list-of-protected-areas>

Software

Knowledge of GIS is an option valued in the subject.