

Degree	Type	Year
2501915 Environmental Sciences	OT	4

Contact

Name: Angela Ribas Artola

Email: angela.ribas@uab.cat

Teaching groups languages

You can view this information at the [end](#) of this document.

Prerequisites

There are no specific pre-requisites although it is to have passed those subjects related with Organism Biology and Ecology.

Objectives and Contextualisation

The objective of this subject is to make known main concepts and methodologies related with Conservation Biology, its research and application into the management of Ecosystems. The specific objectives are:

- (1) To get the main concepts on the study of biodiversity conservation and its management, from populations to ecosystems.
- (2) To identify what are the main processes that are currently threatening biodiversity in our ecosystems.
- (3) To set a scientific framework that allows the analysis of environmental impacts in order to define more sustainable management strategies.
- (4) To reflect on management in the field of Conservation Biology.

Competences

- Adequately convey information verbally, written and graphic, including the use of new communication and information technologies.
- Analyze and use information critically.
- Collect, analyze and represent data and observations, both qualitative and quantitative, using secure adequate classroom, field and laboratory techniques
- Demonstrate adequate knowledge and use the most relevant environmental tools and concepts of biology, geology, chemistry, physics and chemical engineering.
- Demonstrate concern for quality and praxis.
- Demonstrate initiative and adapt to new situations and problems.
- Learn and apply in practice the knowledge acquired and to solve problems.

- Quickly apply the knowledge and skills in the various fields involved in environmental issues, providing innovative proposals.
- Teaming developing personal values regarding social skills and teamwork.
- Work autonomously

Learning Outcomes

1. Adequately convey information verbally, written and graphic, including the use of new communication and information technologies.
2. Analyze and use information critically.
3. Demonstrate concern for quality and praxis.
4. Demonstrate initiative and adapt to new situations and problems.
5. Describe, analyze and evaluate the environment.
6. Diagnose and solve environmental problems concerning the biological environment.
7. Identify and interpret the diversity of organisms in the environment.
8. Identify organisms and biological processes in the surrounding environment and evaluate them properly and originally.
9. Learn and apply in practice the knowledge acquired and to solve problems.
10. Manage and conserve populations and ecosystems.
11. Observe, recognize, analyze, measure and properly and safely represent organisms and biological processes.
12. Participate in environmental assessments as to the biological environment.
13. Teaming developing personal values regarding social skills and teamwork.
14. Work autonomously

Content

The subject includes aspects related to the use of natural resources, and the conservation and restoration of the environment. The subject is organized in these three large blocks.

Block I: Uses and exploitation of natural resources. Hunting and fishing. Agriculture, livestock and aquaculture. Forest uses. Impact of these uses on biodiversity. Ecological bases for the sustainable use of natural resources.

Block II: Conservation of the natural environment. Species conservation: threat categories. Threats to biodiversity. In-situ and ex-situ conservation. Conservation genetics. Conservation of habitats: protected areas (terrestrial and marine). Connectivity of protected areas. Biological corridors. Ecological bases for the conservation of biodiversity.

Block III: Restoration of the natural environment. Introduction to Ecological Restoration: Basis on Restoration Ecology. The Nature based Solutions. Examples of application at local level: restoration of coastal and freshwater communities, restoration of soils and forests. Examples of application at the landscape level: *rewilding* and restoration of major ecological processes and recovery of the natural disturbance regimes (fires and floods).

The field practical sessions, related to *Land management and Action planning*, consist of a visit to a natural park. Its objective is to know daily management problems of a protected area.

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
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Type: Directed

Laboratory and field practices	8	0.32	1, 2, 6, 7, 8, 9, 11, 13, 14
Practice sessions of field and lab	12	0.48	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Theory classes	28	1.12	2, 3, 4, 7, 8, 11

Type: Supervised

Analysis of scientific works	20	0.8	2, 3, 4, 7, 8, 11
Study case resolution	20	0.8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13

Type: Autonomous

Analysis of scientific works	15.5	0.62	2, 7, 8, 11, 14
Cases of study	32	1.28	1, 2, 7, 8, 9, 11, 14

Directed activities

1) Theoretical lessons aims to give the student the basic contents in the field of sustainable conservation of natural systems and their ecosystem services. In addition (i) students are asked to analyze current scientific work; and (ii) do case studies where students must use the knowledge acquired to solve them.

2) In the practical fieldwork and classroom sessions, students apply different techniques for species management and conservation, and natural habitats and ecosystems. There are different activities:

- Computer-based and classroom practices: database analyses based on biodiversity trends and land use changes are carried out for applying some of the concepts and methods explained in the theoretical sessions.
- Visit to a Natural Park: A guided tour of a Natural Park is carried out to know the day-to-day management and conservation of a protected area.

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.

Assessment

Continuous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Case studies	30	7.5	0.3	1, 2, 3, 4, 5, 6, 10, 11, 13, 14
Practice exams	20	3	0.12	2, 8, 12, 14
Theory exams	50	4	0.16	5, 6, 7, 9

The evaluation of the subject is distributed as follows:

- Individual exams of theory and practices (2 partials of 35%).

b) Case of studies resolution (30%).

To participate in the recovery students must have previously been evaluated in a set of activities whose weight equals to a minimum of two thirds of the total grade of the subject.

In order to compute a global average for the subject including all the activities (i.e. exams and resolution of case studies), it will be necessary to take an average mark of the two partial exams higher than 3.5. In case of the average note of the two partials does not reach 3.5, the note of the partial ones would not be considered and a reassessment examination would be necessary. This re-assessment exam corresponds to 70% of the mark. In this reassessment examination is maintained the requirement of a 3.5 minimum mark to consider the remaining notes of the student (cases of study); otherwise the subject would be suspended.

For the rest of assessment activities, you do not need to obtain any minimum mark to make averages.

The non-delivery of any of the assessment activities within the established period implies a zero note for that activity. If you do not see any of the practice sessions, the corresponding block note is zero.

Students who can not attend an individual assessment test due to a justified reason (such as illness, death of a first-degree relative or accident) and provide the official documentation to the corresponding professor, will be entitled to take the test in question on another date.

Single Evaluation:

The unique evaluation consists of an exam that includes the contents of the whole theory program (corresponding to 75%), and questions on all practical sessions (corresponding to 25%). The score obtained in this exam corresponds to the 70% of the final score. This exam shall be carried out on the same date scheduled for the last continuous exam and the same recovery system shall apply as for the continuous assessment.

It should be noted that attendance at the practical sessions is mandatory.

The evaluation of the case studies will follow a similar process to that of the continuous evaluation. The students who accept this kind of evaluation will deliver all evaluation evidences together on the date of the exam. This mark will represent 30% of the final score of the subject.

At the beginning of the course, students who want to follow the single evaluation must contact angela.ribas@uab.cat.

Bibliography

Bibliography:

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http://www.unep-wcmc.org/system/dataset_file_fields/files/000/000/289/original/Protected_Planet_Report_2014_C

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https://livereport.protectedplanet.net/pdf/Protected_Planet_Report_2018.pdf

https://cataleg.uab.cat/iii/encore/record/C__Rb2017184;jsessionid=4471C03DAAF8486E69ADFB915BBB364A?

<https://www.ted.com/topics/conservation>

<https://natura.llocs.iec.cat/>

Web Links:

Medi natural , Generalitat de Catalunya: amb algùn "Medi natural I , Generalitat de Catalunya"

Ministerio de Medio Ambiente d'Espanya: www.magrama.gob.es/es/biodiversidad/temas/default.aspx

AEMA: Agència Europeadel Medi Ambient (EEA; European Environment Agency) www.eea.europa.eu

Medi Ambient, Comissió Europea: http://ec.europa.eu/environment/index_en.htm

CBD: Conveni per a la Diversitat Biològica www.cbd.int

UICN (IUCN): Unió Internacional per la Conservació de la Natura <http://cms.iucn.org>

WCMC: World Conservation Monitoring Centre www.unep-wcmc.org

: www.greenfacts.org/en/digests/index.htm

WWF: World Wide Fund for Nature (World Wildlife Fund) www.panda.org

Conservation International: www.conservation.org

Portal de la "Sociedad de Biología de Conservación de Plantas"
<http://www.conservacionvegetal.org/sebicop.php>

Software

There isn't a specific software.

Language list

Name	Group	Language	Semester	Turn
(PAUL) Classroom practices	1	Catalan/Spanish	first semester	morning-mixed
(PCAM) Field practices	1	Catalan/Spanish	first semester	morning-mixed
(TE) Theory	1	Catalan/Spanish	first semester	morning-mixed

PROVISIONAL