

25244 - Landscape analysis and interpretation

Información del Plan Docente

Academic Year	2018/19
Subject	25244 - Landscape analysis and interpretation
Faculty / School	201 - Escuela Politécnica Superior
Degree	277 - Degree in Environmental Sciences
ECTS	6.0
Year	
Semester	Four-month period
Subject Type	Optional
Module	---

1.General information

1.1.Aims of the course

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

This subject is offered in the [English Friendly](#) form

2.Learning goals

2.1.Competences

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

The methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as lectures, fieldwork, laboratory sessions and practice sessions.

4.2.Learning tasks

This course is organized as follows:

25244 - Landscape analysis and interpretation

- **Lectures:** Offering a general synthesis of the course. Main lines of the course will be explained in broad terms to provide guidance to the student, focusing on difficult concepts. For each topic a schematic presentation will be provided through Moodle. The teacher will provide scientific and technical publications. Participation of the students will be encouraged. If possible, external experts will be invited to lecture the students.
- **Practice sessions:** A guide for the practical activities will be provided explaining face-to-face and non face-to-face activities to be done by the students. It includes students presentations on their activities. Such presentations will be assessed.
- **Fieldwork** (16 hours): 2 field trips to the Pyrenees and to the Hoya de Huesca.
- **Tutorials:** To follow up the theory and practical activities the teacher will be available for tutorial sessions as needed.

4.3.Syllabus

This course will address the following topics:

Lectures

- **Unit 1.** Landscape in ecology and the ecology of landscape. The birth of landscape ecology. The first steps in landscape ecology; ecological cartography. Environmental issues inextricably linked to landscape transformations.
- **Unit 2.** The origin of landscape. Historical, spatial and isolated processes.
- **Unit 3.** The modern concept of landscape. Landscape; a multidisciplinary concept. Elements and components of landscape. The first landscapes. Landscape scale. Perception. Factors influencing vision. Visual quality and impact.
- **Unit 4.** Conceptual models of landscape. Different landscape elements. Basic metrics. Concepts of heterogeneity, habitat fragmentation and connectivity. Theories and models of landscape ecology.
- **Unit 5.** Landscape fragmentation. Disturbances. Fragmentation. Ecological effects and environmental measures. Landscape connectivity, habitat corridors and linkage.
- **Unit 6.** Project execution related to landscape. Landscape legislation. Basic project content. The concept of ecological cartography. Production of ecological maps. Resistance-connectivity maps. Multivariate techniques.
- **Unit 7.** Landscape scale approach to ecological restoration.

Practice sessions

- Use of the QGIS software to study de visibility y landscape metrics.
- Role playing and analysis on participative processes for decision making.
- Landscape patch-corridor-matrix identification. Environmental units. Practical session and field work.
- Multivariate ordination techniques and summary of variables.

4.4.Course planning and calendar

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course will be provided on the first day of class or please refer to the Faculty of Sciences website and Moodle.

4.5.Bibliography and recommended resources

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|-----------|--|
| BB | González Bernáldez, Fernando. Ecología y paisaje ; Invitación a la ecología humana : la adaptación afectiva al entorno / Fernando González Bernáldez. Madrid : Fundación Interuniversitaria Fernando González Bernáldez para los Espacios Naturales, D.L. 2011 |
| BB | Landscape ecology and resource management : linking theory with practice / |

25244 - Landscape analysis and interpretation

- edited by John A. Bissonette and Ilse Storch . Washington [etc.] : Island Press, cop. 2003
- BB** Learning landscape ecology : a practical guide to concepts and techniques / Sarah E. Gergel, Monica G. Turner, editors . New York : Springer, cop. 2002
- BB** Managing and designing landscapes for conservation : moving from perspectives to principles / edited by David B. Lindenmayer, Richard J. Hobbs . 1st ed. Malden, MA : Blackwell, 2007
- BB** Turner, M.G., Gardner, R.H., O'Neill, R.V. (2001). Landscape Ecology in Theory and Practice. Pattern and Process. 2001. Springer
- BC** oise. Ecología del paisaje : conceptos, métodos y aplicaciones / Françoise Burel, Jacques Baudry ; ilustraciones, Yannic Le Flem ; fotografías, R.T.T. Forman ; versión española de Susana Suarez Seoane . Madrid[etc.] : Mundi-Prensa, 2002
- BC** El paisaje / M.^a del Milagro Escribano... [et al.] . Madrid : Ministerio de Obras Públicas y Urbanismo, Centro de Publicaciones, 1987
- BC** Estudios sobre el paisaje / Eduardo Martínez de Pisón, Concepción Sanz Herráiz (editores) . Madrid : UAM Ediciones ; Soria : Fundación Duques de Soria, D.L. 2000
- BC** Farina, Almo. Principles and methods in landscape ecology : toward a science of landscape / by Almo Farina . Dordrecht : Springer, cop. 2006

URLs LIST:

Moreno, F., García-Abad, J. (1996). Cartografía de la calidad visual del paisaje: reflexiones teóricas y ejemplo de aplicación. Serie Geográfica, 6, 115-129

Sancho, J. (1996). La función del paisaje: cartografía analítica y sintética. Serie Geográfica, 6, 179-212

[<http://dspace.uah.es/dspace/bitstream/handle/10017/1054/La%20Funci%C3%B3n>

The updated recommended bibliography can be consulted in:

<http://psfunizar7.unizar.es/br13/egAsignaturas.php?id=2207>