

25244 - Landscape analysis and interpretation

Información del Plan Docente

Academic Year 2016/17

Academic center 201 - Escuela Politécnica Superior

Degree 277 - Degree in Environmental Sciences

ECTS 6.0

Course

Period Four-month period

Subject Type Optional

Module ---

1.Basic info

1.1.Recommendations to take this course

This subject is offered in the English Friendly form

- 1.2. Activities and key dates for the course
- 2.Initiation
- 2.1.Learning outcomes that define the subject
- 2.2.Introduction
- 3. Context and competences
- 3.1.Goals
- 3.2.Context and meaning of the subject in the degree
- 3.3.Competences
- 3.4.Importance of learning outcomes
- 4.Evaluation
- 5. Activities and resources

5.1.General methodological presentation

Theory sessions in which external expert communications are also included and participation is encourage.

Practical sessions consist of field, lab and study work with materials supplied by lecturers.



25244 - Landscape analysis and interpretation

5.2.Learning activities

The program offered to achieve the expected results include the next learning activities:

Theory sessions: Lectures introduce the main concepts and lines of the subject. In addition, most difficult issues will be reviewed thoroughly. Bibliography and auto-evaluation tools are provided. Readings and instructions for all practical exercises will be provided on the course website (moodle).

Practical sessions: Practical classes form part of the required activities for this course. If you miss a lecture or tutorial through illness or some other serious reason, it is your responsibility to attend an equivalent class from another stream. Some content and activities will not be available except by physically attending the classes, and missing material will disadvantage you in the course assessment.

5.3.Program

Theoretical Programme

- 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.
- The origin of landscape. Historical, spatial and isolated processes.
- 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.
- Conceptual models of landscape. Different landscape elements. Basic metrics. Concepts of heterogeneity, habitat fragmentation and connectivity. Theories and models of landscape ecology.
- Landscape fragmentation. Disturbances. Fragmentation. Ecological effects and environmental measures.
 Landscape connectivity, habitat corridors and linkage.
- Project execution related to landscape. Landscape legislation. Basic project content. The concept of ecological cartography. Production of ecological maps. Resistance-connectivity maps. Multivariate techniques.
- Landscape scale approach to ecological restoration.

Practical Programme

- Practical case study; interpretation, summary and presentation of a scientific article.
- Landscape patch-corridor-matrix identification. Environmental units. Practical session and field work.
- Use of Fragstats software to determine essential landscape metrics.
- Production of resistance and connectivity maps.
- Multivariate ordination techniques and summary of variables.
- Restoration project relating to the connectivity of a flagship species habitat.

5.4. Planning and scheduling

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25244 - Landscape analysis and interpretation

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5.5.Bibliography and recomended resources

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BB- Bissonette, J.A. and Storch I. Landscape ecology and resource management: linking theory with practice. 2003. Washington. Island Press. pp

BB- González Bernáldez, Fernando. Ecología y paisaje; Invitación a la ecología humana: la adaptación afectiva al entorno. 2011. Madrid: Fundación Interuniversitaria Fernando González Bernáldez para los Espacios Naturales, D.L.pp

BB- Gergel S.E., Turner M.G. (ed.) Learning landscape ecology: a practical guide to concepts and techniques. 2002. New York: Springer.

BB- Lindenmayer, D.B. and Hobbs R.J. Managing and designing landscapes for conservation: moving from perspectives to principles. 2007. Malden, MA: Blackwell, 2007

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- Farina, Almo. Principles and methods in landscape ecology / Almo Farina. [1st ed.] London [etc.] : Chapman & Hall, 1998

BC- Forman, R., Godron, M. (1986). Landscape ecology. New York: Wiley

BC- Estudios sobre el paisaje / Eduardo Martínez de Pisón, Concepción Sanz Herráiz (editores) . Madrid : UAM Ediciones ; Soria : Fundación Duques de Soria, D.L. 2000