

## 25244 - Landscape analysis and interpretation

### Información del Plan Docente

Academic Year	2017/18
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.Introduction

#### 1.2.Recommendations to take this course

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

#### 1.3.Context and importance of this course in the degree

#### 1.4.Activities and key dates

### 2.Learning goals

#### 2.1.Learning goals

#### 2.2.Importance of learning goals

### 3.Aims of the course and competences

#### 3.1.Aims of the course

#### 3.2.Competences

### 4.Assessment (1st and 2nd call)

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

### 5.Methodology, learning tasks, syllabus and resources

#### 5.1.Methodological overview

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.

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### 5.2. Learning tasks

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

Classroom theory sessions: Offering a general synthesis of the subject. Main lines of the subject will be explained in broad strokes to provide guidance to the student. Focusing in difficult concepts. For each topic an eschematic presentation will be provided through Moodle. The teacher will provide cientifical and technical publications. Most of the sessions will consist on lectures but encouraging participation of the students. If possible external explerts will be invited to lecture the students. Classroom practical sessions: A guide for the practical activities will be provided explaining off-site and on-site activities to be done by the students. It includes students presentations on their activities. Such presentations will be assesed. Field trips: 16 hours of field trips are programmed sonsiting of 2 fieldtrips to 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.

### 5.3. Syllabus

#### 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

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.

### 5.4. Course planning and calendar

Activity and 1 week	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total
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<b>ac</b>																			
Theory	2	2	2	2	2			2	2	2	2					<b>20</b>			
Problem solving	2			2	2			2	2	2	2					<b>14</b>			
Lab																<b>0</b>			
Team work		2	2							2	2	2				<b>10</b>			
Field trips				8							8					<b>16</b>			
tutorials																<b>0</b>			
Assessment activities											3		3			<b>6</b>			
<b>Oi</b>																			
<b>ac</b>																			
Autonomous work	2	2	2	2	2		6	5	4	4	4	4	4	4	4	8	8	5	<b>66</b>
Team work	2	2	2	2	2	4		4											<b>18</b>
<b>TOTAL</b>	<b>6</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>6</b>	<b>9</b>	<b>8</b>	<b>8</b>	<b>6</b>	<b>8</b>	<b>8</b>	<b>10</b>	<b>9</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>150</b>

### 5.5. Bibliography and recommended resources

- 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 / 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.<sup>a</sup> del Milagro Escribano... [et al.] . Madrid : Ministerio de Obras Públicas y Urbanismo, Centro de Publicaciones,

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- 1987  
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
- BC

### LISTADO DE URLs:

- Moreno, F., García-Abad, J. (1996).  
Cartografía de la calidad visual del paisaje:  
reflexiones teóricas y ejemplo de  
aplicación. Serie Geográfica, 6, 115-129  
[[http://dspace.uah.es/dspace/bitstream/handle/10017/1048/Cartograf%C3%ADa%](http://dspace.uah.es/dspace/bitstream/handle/10017/1048/Cartograf%C3%ADa%20de%20la%20calidad%20visual%20del%20paisaje)  
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%](http://dspace.uah.es/dspace/bitstream/handle/10017/1054/La%20Funci%C3%B3n%20del%20paisaje)

The updated recommended bibliography can be consulted in:  
<http://psfunizar7.unizar.es/br13/egAsignaturas.php?id=2207>