

## 66708 - Evaluation of environmental effects and restoration

### Información del Plan Docente

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| Academic Year    | 2017/18   |
| Faculty / School | 103 - Facultad de Filosofía y Letras              |
| Degree           | 328 - Master's in Land and Environmental Planning |
| ECTS             | 6.0   |
| Year             | 1   |
| Semester         | Annual  |
| Subject Type     | Optional  |
| Module           | ---   |

### **1.General information**

#### **1.1.Introduction**

#### **1.2.Recommendations to take this course**

#### **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**

The course combines theoretical conceptual parts with case examples and practical work.

The practice charge allows strengthen the use of analysis tools and diagnostics in order to strengthen teamwork.

The analysis of specific and complex cases is taken by the teachers, who have selected a set of examples of various

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subjects and application results, some of which are visited in the field practices.

In the development of training activities the theoretical and practical sessions are interspersed with case presentations, always following a consistent thread with the two main sections: impact and restoration. This organization leads to better learning outcomes and enables students to continue developing their personal study and teamwork, achieving a continuous follow the course.

### **5.2.Learning tasks**

*Lecture sessions. 25 hours*

They are used to present the basic concepts of Environmental Impact Assessment and Environmental Restoration. 10 sessions of 2.5 hours are devoted each to these lectures.

*Practical activities. 20 hours*

There are 8 sessions of 2.5 hours, aimed at the realization of different phases that are included in Environmental Impact Assessment projects and studies.

Lecture sessions and practical activities will alternate.

*Directed activities*

Apart from lecture sessions, students will develop an Environmental Impact Assessment whose design will be done in class. The study was undertaken in group. Monitoring their implementation will be carried out in tutoring sessions.

The students should also apply to four specific cases the restoration activities evaluation system previously designed in class. The study was undertaken in group. Monitoring their implementation will be carried out in tutoring sessions.

*Field work*

Two field trips will be made in the course. They serve as a essential complement for the development of practices in Environmental Impact Assessment and Environmental Restoration projects.

*Tutoring sessions*

Tutoring sessions aim to monitor the orders that students must solve (those contemplated in programming, different of the optional tutorials to which every student is entitled). The tutorials sessions are developed in the offices of teachers.

*Assessment*

There are four assessment activities subject: Written exam of the lectures lessons, preparation of an Environmental Impact Assessment, design and implementation of a system for evaluating actions in environmental Restoration Projects, and summary of field trips. Only the written test needs a specific time to do (about one hour).

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### **5.3.Syllabus**

**The program offered includes the following sections**

Lecture sessions (**Structured in six chapters**)

1. Introduction and environmental impact general concepts.
  - 1.1. Introduction.
  - 1.2. General concepts.
  - 1.3. Main principles of Environmental Impact Assessment.
  - 1.4. Levels of Environmental Impact Assessment.
  - 1.5. Typology of impacts.
2. Legal and administrative framework on Environmental Impact Assessment.
  - 2.1. Background.
  - 2.2. The Community legislation.
  - 2.3. State and Aragonese legislation.
  - 2.4. Projects subject to Environmental Impact Assessment.
  - 2.5. The administrative procedure in Environmental Impact Assessment.
3. Methodology for preparing Environmental Impact Assessments.
  - 3.1. Minimum contents of the Strategic Environmental Study.
  - 3.2. Minimum contents of the Environmental Impact Assessment.
  - 3.3. Structure of the Environmental Impact Assessment.
  - 3.4. Environmental Impact Assessment development methodology.
  - 3.5. Corrective measures and environmental surveillance.

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4. Ecological concepts, general concepts and environmental restoration rules and regulations.

4.1. General concepts.

4.2. Environmental restoration rules and regulations.

4.3. Ecological and environmental principles.

5. Methodology for restoration projects.

5.1. Restoration process planning.

5.2. Restoration process structure.

5.3. Restoration techniques and examples of projects.

6. Monitoring and evaluation of restoration projects.

Practical activities.

In these classes the activities performed are:

1. Review of legislation.

2. Internet access servers with environmental information.

3. Revision of examples of environmental impact assessments.

4. Design and production different sections of an environmental impact assessment (project description, environmental inventory, environmental factors tree, selection of alternatives, evaluation of alternatives, identification and assessment of impacts).

5. Revision of examples of environmental restoration projects.

6. Design of a system of assessment of environmental restoration actions

### **5.4.Course planning and calendar**

Schedule sessions and presentation of works

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We develop the classroom activity during February and March. The activity of the course finishes after the assessment test of the theoretical part.

Lecture sessions and practical activities take place in a classroom with capacity for 18 students, computers with Internet access, projector and blackboard. Field trips will be held in different parts of the Aragonese geography.

| <b>Session</b> | <b>Thematic section</b> | <b>Activities</b>   |
|----------------|-------------------------|---|
| 1              | 1                       | Lecture sessions, practical activities: Internet access servers, Revision of examples of environmental impact assessments |
| 2              | 2                       | Lecture sessions, practical activities: Review of legislation   |
| 3              | 3                       | Lecture sessions, practical activities: Design and production of an environmental impact assessment                       |
| 4              | 3                       | Lecture sessions, practical activities: Design and production of an environmental impact assessment                       |
| 5              | 3                       | Lecture sessions, practical activities: Design and production of an environmental impact assessment                       |
| 6              | 3                       | Lecture sessions, practical activities: Design and production of an environmental impact assessment                       |
| 7              | 3                       | Lecture sessions, practical activities: Design and production of an environmental impact assessment                       |

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|    |   | assessment  |
| 8  | 3 | Lecture sessions, practical activities: presentation and case assessment                                      |
| 9  | 3 | Lecture sessions, practical activities: presentation and case assessment                                      |
| 10 | 4 | Lecture sessions, practical activities: Design of a system of assessment of environmental restoration actions |
| 11 | 4 | Lecture sessions, practical activities: Design of a system of assessment of environmental restoration actions |
| 12 | 4 | Lecture sessions, practical activities: Design of a system of assessment of environmental restoration actions |
| 13 |   | Field work  |
| 14 | 5 | Lecture sessions, practical activities: study cases presentation  |
| 15 | 5 | Lecture sessions, practical activities: study cases presentation  |
| 16 | 5 | Lecture sessions, practical activities: study cases presentation  |
| 17 |   | Field work  |
| 18 | 5 | Lecture sessions, practical activities: Applying a system of assessment in                                    |

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|    |   | restoration projects  |
| 19 | 6 | Lecture sessions, practical activities: Applying a system of assessment in restoration projects |
| 20 |   | Workgroup presentation  |
| 21 |   | Written test  |

### 5.5.Bibliography and recommended resources

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