COURSE DATA

DATA SUBJECT

Code: 43270
Name: Environmental impact evaluation
Cycle: Master's Degree
ECTS Credits: 3
Academic year: 2026-27

STUDY (S)

Degree	Center	Acad. year	Period

SUBJECT-MATTER

Degree	Subject-matter	Character

COORDINATION

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SUMMARY

The subject Environmental Impact Assessment is taught as an option in the Master's Degree in Biodiversity: Conservation and Evolution, within the specialty Diversity and Conservation of Ecosystems, and consists of a total of 3 credits. It is a methodological subject in which students are expected to acquire the basic knowledge related to environmental impact studies in land-use planning. In this context, with the completion of the subject, students must develop the skills and abilities to a set of evaluative methodologies whose central objective is to assess the environmental impact of an action (tangible or intangible) on a reference scenario. satisfying the legal requirements present in the legislation and regulations applicable in each case.

The subject has a methodological character and is of a theoretical-practical type, so that the knowledge on theoretical concepts is developed and applied in practical sessions, where questions and problems are solved. In addition, seminar sessions will be held, where students will discuss case studies based on publications in scientific articles, and also on actual studies processed in the regional or state administration.

The main lines showed in the program are developed considering the general concepts of Environmental Impact Assessment and Strategic Environmental Assessment, as complementary and necessary instruments for the environmental control of anthropogenic actions at different levels of land-use planning, including the methods and techniques to address the different phases and stages of such studies.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

None.

COMPETENCES / LEARNING OUTCOMES

2148 -

Awaken interest in the social and economic application of science.

Be able to access the information required (databases, scientific articles, etc.) and to interpret and use it sensibly.

Be able to make quick and effective decisions in professional or research practice.

Stimulate the capacity for critical reasoning and for argumentation based on rational criteria.

DESCRIPTION OF CONTENTS

1. Environmental Impact Assessment, Land-Use planning and Strategic Environmental Assessment. (SECTION I: INTRODUCTIÓN).

Concept and charaterization of Environmental Impact. Concept of Planning. Planning and EIA. EAE. Uncertainty and subjectivity.

2. Legislation on Environmental Impact Assessment and Strategic Environmental Assessment. (SECTION I: INTRODUCTIÓN).

Legislation on EIA i EAE in the European Union, Spain and Regional government. Administrative procedures. Public Participation.

Description of the project and the actions it involves. Analysis of the Alternatives. Environmental Inventory and Description of key environmental interactions. Identifying and evaluating Impacts. Establishment of

3. Contents of an Environmental Impact study and a Strategic Assessment Study (SECTION II: CONTENTS OF AN ENVIRONMENTAL IMPACT STUDY).

protective measures. Environmental Monitoring plan.

4. Environmental Inventory and mapping. Impact Indicators (SECTION II: CONTENTS OF AN ENVIRONMENTAL IMPACT STUDY).

Aspects that affect the environmental inventory. Definition of environmental units: methods and techniques for the preparation of environmental mapping. Selecting variables. Selecting and integration of a minimum impact i9ndicator set.

5. Identification and Evaluation methodologies of environmental impacts. Uncertainty Analysis and Evaluation (SECTION III: IMPACT EVALUATION METHODOLOGIES).

Methods based on conventional units. Methods based on physical units. Uncertainty analysis: Compared studies, Scenario Analysis and sensitivity analysis.

6. Land Capacity-Impact Models. Multicriteria methods and techniques (SECTION IV: GENERATING AND SELECTING ALTERNATIVES).

Models based on thematic mapping. Models based on integrated units. Land Capacity methods. Evaluating alternatives: methods and procedures.

7. Environmental Monitoring Program (SECTION V: ENVIRONMENTAL MONITORING IN ENVIRONMENTAL IMPACT ASSESSMENT).

Protective Measures on the actions of the project. Measures for significant impacts. Measures on the location of actions. Environmental monitoring program: the importance of monitoring the impacts. Monitoring indicators.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Total hours	0,00

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	5,00
Independent study and work	0,00
Preparation of lessons	25,00
Preparation for assessment activities	10,00
Resolution of case studies	5,00
Total hours	**45,00**

TEACHING METHODOLOGY

The development of the subject is structured in theory sessions, practice sessions (problems) and in the presentation of a work in a seminar session of 1 hour.

In theory classes, the student will receive an overview of the topic by the teacher, who will focus on the key concepts necessary to understand the subject. The student will previously have the material that will be worked in class, so that there is an active participation of him/her in class, by means of questions, proposal of examples, discussion of concepts, etc. The teacher will indicate the students the most suitable material and resources for the in-depth study of the subject.

In the **practical classes**, the student will have to solve a problem posed by the teacher about the contents of the program. The approach to the problem will specify the objectives to be achieved, the material to be used and the methods and techniques to be applied. The work will be carried out in groups of 3-5 students, with the purpose of encouraging the interaction between the students, the coordination of the work in a team and the synergy at the time of facing and solving problems . The teacher will be in charge of guiding and helping them at all times, explaining the procedures for the development and resolution of each problem.

The student will be guided by the teacher on all elements of the learning process, both questions related to theoretical and practical classes.

In the **seminar sessions** each group of students (maximum five people) will make an oral presentation of a work to the whole class. The purpose of these seminars is to motivate students in the activity of research, analysis and evaluation of information. In addition, interactions between students for teamwork are enhanced, so that coordination and synergy in the development and resolution of problems are stimulated, aspects of great relevance to address an Environmental Impact Study.

EVALUATION

During the development of the subject, both in the theoretical and practical classes, there will be a continuous evaluation of the attitude, interest and progress made by the student. This assessment may represent up to 10% of the final grade.

In the Practice Report (Problems) students must outline the procedure followed for solving the problem, commenting on the advantages and disadvantages of the methods and techniques applied. Also, they must

present and discuss the results according to the objectives set, and comment on the conclusions achieved. This Report, which must be submitted in order to take the exam, may not affect the final grade, or decrease it or increase it by up to 20%. Attendance to the practical classes will be compulsory. The presentation of the work in the seminar sessions in which a case study related to the contents of the subject will be discussed may represent up to 10% of the final grade.

There will be a final written exam that will include 20-30 multiple choice questions (test type), being the most accurate the correct answer. The questions can be made both from the theory and practical classes. The final mark of the written exam will be 60% of the final grade.

To pass the subject, you must obtain a grade equal to or higher than 5 (out of 10) in the final written exam. After passing the exam, the % corresponding to the continuous assessment, the practical Report and the presentation of work in the seminar will be considered and accounted for, in order to obtain final grade.

REFERENCES

- CANTER, L.W. (1998). Manual de Evaluación de Impacto Ambiental. Técnicas para la Elaboración de Estudios de Impacto. Mc Graw-Hill. Madrid.
- CONESA FERNÁNDEZ-VITORA, V. (2010). Guía Metodológica para la Evaluación de Impacto Ambiental. 4ª Edición. Ed. Mundi-Prensa. Madrid.
- GARMENDIA, A., SALVADOR, A., CRESPO, C. Y GARMENDIA, L. (2007). Evaluación de Impacto Ambiental. Ed. Pearson-Prentice Hall. Madrid.
- GOMEZ OREA, D. (2003). Evaluación del Impacto Ambiental. Segunda Edición. Editorial Agrícola Española, SA-Ed. Mundi-Prensa. Madrid.
- GOMEZ OREA, D. (2007). Evaluación Ambienta Estratégica. Ed. Mundi-Prensa. Madrid.
- OÑATE, J.J., PEREIRA, D., SUAREZ, F., RODRÍGUEZ, J.J. Y CHACON, J. (2002). Evaluación Ambiental Estratégica: la evaluación ambiental de Políticas, Planes y Programas. Ed. Mundi-Prensa. Madrid.
- MOPU (1985). Curso sobre Evaluaciones de Impacto Ambiental. Dirección General del Medio Ambiente. Ministerio de Obras Públicas y Urbanismo. Madrid.
- RECATALÁ, L. (1995). Propuesta metodológica para Planificación de los usos del territorio y Evaluación de Impacto Ambiental en el ámbito Mediterráneo Valenciano. Tesis Doctoral. Universitat de València. Servei de Publicacions de la Universitat de València.

- WESTMAN, W.E. (1985). Ecology, Impact Assessment and Environmental Planning. John Wiley & Sons. New York.

- Artículos publicados en revistas científicas especializadas: Environmental Impact Assessment Review, Journal of Environmental Mnagement, Environmental Management, Soil Use and Management, etc.