

**COURSE DATA****Data Subject**

Code	33109
Name	Strategic environmental evaluation
Cycle	Grade
ECTS Credits	4.5
Academic year	2022 - 2023

Study (s)

Degree	Center	Acad. year	Period
1104 - Degree in Environmental Sciences	Faculty of Biological Sciences	4	First term

Subject-matter

Degree	Subject-matter	Character
1104 - Degree in Environmental Sciences	177 - Strategic environmental assessment	Optional

Coordination

Name	Department
CARBO VALVERDE, ESTER	25 - Plant Biology
SACRISTAN MORAGA, DANIEL	25 - Plant Biology

SUMMARY

The subject “Strategic Environmental Assessment” is an elective course taught in the fourth year of the Degree of Environmental Sciences, within the Module XI Elective Courses in Thematic Block “Assessment and Management of the Natural Environment”, and consists of 4.5 credits. It is a methodological subject on which it is intended that students acquire the basic knowledge to application of the methodologies and procedures for the evaluation of policies, plans and programs, including the selection and evaluation of alternatives. In this context, with the completion of the course students should develop skills and abilities to address the contents of an environmental assessment study of policies, plans and programs, in accordance with applicable laws and regulations. The course has a methodological and theoretical and practical type, so that knowledge of theoretical concepts are developed and applied in practice sessions on resolution of issues and problems, and performing work in the seminar in which procedures and methodologies from publications in scientific articles will be presented and discussed, and also in processed real studies in the local government or state. The basic lines of the curricula deal with concepts, methodologies and procedures of the SEA. Specifically, the program was organized on 4 and 7 themes and related practices (see description contained in paragraph 6):



BLOCK I. AND LEGAL FRAMEWORK (Themes 1 and 2)

BLOCK II. CONTENTS OF A STUDY OF STRATEGIC ENVIRONMENTAL ASSESSMENT (Theme 3)

BLOCK III. METHODS AND TECHNIQUES FOR STRATEGIC ENVIRONMENTAL ASSESSMENT (Themes 4, 5, and 6)

BLOCK IV. ENVIRONMENTAL MONITORING (Theme 7)

PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

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

Other requirements

Be enrolled or have completed the subjects of modules "Environmental Technology", "Management and Environmental Quality" and "Social Sciences, economics and law", and have passed a minimum of 120 ECTS.

COMPETENCES (RD 1393/2007) // LEARNING OUTCOMES (RD 822/2021)

1104 - Degree in Environmental Sciences

- Desarrollar y aplicar las metodologías utilizadas en la evaluación ambiental estratégica.
- Capacidad para seleccionar y evaluar alternativas en el marco de la evaluación ambiental estratégica.

LEARNING OUTCOMES (RD 1393/2007) // NO CONTENT (RD 822/2021)

With the completion of the course students should acquire the basic knowledge needed to:

- Understand the scientific basis of the Strategic Environmental Assessment (SEA)
- Analyze legislation to implement SEA in the preparation of Environmental Impact Assessments of policies, plans and programs,
- Develop the process and content of an environmental assessment of policies, plans and programs,
- Define criteria and proper application methods and techniques to address the various stages of the SEA,
- Identify the limitations in the assessment of environmental impacts and implement procedures to try to address them,



- Develop and implement methods and techniques for the generation, evaluation and selection of alternative land use allocation in the territory.

DESCRIPTION OF CONTENTS

1. THEME 1. STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA) AND LAND USE-PLANNING. (BLOCK I. CONCEPTUAL AND LEGAL FRAMEWORK)

Conceptual framework of the Strategic Environmental Assessment (SEA). Land-Use Planning: Tools. Land-Use Planning and Strategic Environmental Assessment: application levels.

2. THEME 2. LEGISLATION ON STRATEGIC ENVIRONMENTAL ASSESSMENT (BLOCK I. CONCEPTUAL AND LEGAL FRAMEWORK)

Origin and History of the Strategic Environmental Assessment. SEA legislation in the European Union. SEA legislation in Spain. SEA legislation in Valencia. Administrative procedure for the evaluation of policies, plans and programs. Basics.

3. THE STRATEGIC ENVIRONMENTAL ASSESSMENT STUDY AND THE STRATEGIC ENVIRONMENTAL RECORD OF DECISION (BLOCK. CONTENTS OF A STRATEGIC ENVIRONMENTAL ASSESSMENT STUDY)

Initial strategic document. Scoping Document. Strategic Environmental Assessment Study: content. Strategic Environmental Record of Decision: content. Other Documents.

4. THEME 4. METHODOLOGY FOR STRATEGIC ENVIRONMENTAL ASSESSMENT. (BLOCK III. METHODS AND TECHNIQUES FOR STRATEGIC ENVIRONMENTAL ASSESSMENT)

Methodology for the evaluation of policies, plans and programs: phases and stages. Diagnosis of the environment. Information and consultation. Proposals. Alternatives.

5. THEME 5. METHODS AND TECHNIQUES FOR IDENTIFICATION AND ASSESSMENT OF IMPACTS ON STRATEGIC ENVIRONMENTAL ASSESSMENT. (BLOCK III. METHODS AND TECHNIQUES FOR STRATEGIC ENVIRONMENTAL ASSESSMENT)

Methods and Techniques for the identification and evaluation of impacts in SEA. Listings and Questionnaires. Matrices. Networks. Spatial methods: overlay.

**6. THEME 6. GENERATION AND SELECTION OF ALTERNATIVES IN STRATEGIC ENVIRONMENTAL ASSESSMENT. (SECTION III. METHODS AND TECHNIQUES FOR STRATEGIC ENVIRONMENTAL ASSESSMENT)**

Methods for the generation of alternatives. Evaluation and selection of alternatives: decision models. Spatial Decision Support Systems.

7. THEME 7. ENVIRONMENTAL MONITORING IN STRATEGIC ENVIRONMENTAL ASSESSMENT. (BLOCK IV. ENVIRONMENTAL MONITORING)

Publicity phase. Monitoring: procedure. Methods and techniques for monitoring.

8. PRACTICAL MODULE

INTERNSHIP PROGRAM:

COMPUTING PRACTICES. Analysis and evaluation of environmental impacts on various proposals for land use in a plan, through procedures and methodologies in computerized form.

6 sessions x 2 hours

PRACTICE FIELD. Identification and assessment of environmental impacts of a plan in a representative area of the Mediterranean environment.

1 session x 4 hours

WORKLOAD

ACTIVITY	Hours	% To be attended
Theory classes	27,00	100
Computer classroom practice	12,00	100
Laboratory practices	4,00	100
Tutorials	2,00	100
Study and independent work	7,50	0
Readings supplementary material	5,00	0
Preparation of evaluation activities	20,00	0
Preparing lectures	14,00	0
Preparation of practical classes and problem	21,00	0
TOTAL	112,50	



TEACHING METHODOLOGY

The subject development comprises two theory sessions a week of 1 hour and a practice session (computer) for 2 hours for six weeks, a field trip of 4 hours, tutoring in the classroom (2 hours) and the presentation of a work for 20-30 minutes in a workshop session.

In the **lectures**, the student will receive an overview of the topic by the teacher, who focuses on those key concepts for understanding it. The student will have to be previously prepared material to be worked in class, so there is this active participation in the development of it, by raising issues, the proposal examples, discussion of concepts, and so on. The teacher will tell students the material and resources best suited to study the topic in depth.

In **tutorials**, students will be guided by the teacher on all elements of the learning process, both issues of theoretical and practical. Tutorials are conducted in groups of students to help resolve issues, problems, and also to direct work to prepare for them, both in relation to the development of Practices Reports and in the preparation of work to exhibit at the sessions seminars. There will also be mentoring by email, in which the teacher will assist students in the questions and doubts that arise.

In the **seminar sessions** each group of students will make an oral presentation of work to the whole class, dealing with a case study published in a scientific paper or an environmental impact study handled in a public administration. The objective of doing these seminars is to motivate students in research activities, as well as in analysis and evaluation of information. In addition, also to promote increasing interactions between students for teamwork, so as to encourage the coordination and synergy in the development and resolution of problems, issues of great importance to address an Environmental Impact Study.

In **practical classes**, in computing, and also in the field trip, which is joint with the subject of Practical Cases of Environmental Assessment, students will have to solve a problem posed by the teacher about the program content. The problem statement specifying the objectives to be achieved,

the material used and the methods and techniques to apply. The team will work through the formation of student groups, in order to encourage interaction among students, coordination of teamwork and synergy in tackling and solving problems. The teacher will guide them and help them at all times, explaining the procedures for the development and resolution of each problem.

EVALUATION

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

In the Memories of Practices (Problems, Computer and Field), students should reflect the procedure for solving the problem, discussing the advantages and disadvantages of the methods and techniques



applied, presenting and discussing the results in accordance with the objectives and commenting

conclusions. These memories, which must be submitted to the exam, can influence the final grade up to 20%. Attendance at practical classes is compulsory.

The exhibition of work in workshop sessions in which they discuss a case study related to the contents of the course may be up to 10% of the final grade.

There will be a final written exam will include multiple choice questions 20-30 (type test), of which the right will be the most accurate, and 5-8 questions or problems concerning the program contents, which may be both from the theoretical module as from practical. To pass the exam any student must get a 5 or more in the multiple choice test, accounting for 60% of the exam, and get a 5 or more in the questions or problems part, representing 40% of the note examination. The grade of the exam will account for the 60% of the final grade.

To pass the course, a student must obtain a score greater than or equal to 5 (ranged to 10) in the final written exam. Passed the examination, it will be accounted the% corresponding to the on-going assessment, to the practice reports and the statement of work in the seminar, in order to get a weighted final grade.

REFERENCES

Basic

- GOMEZ OREA D., GÓMEZ VILLARINO A. (2014) Evaluación Ambiental 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.
- BORDERÍAS URIBEONDO, M.P.; MUGURUZA CAÑAS, C. (2013). Evaluación Ambiental. UNED
- WESTMAN, W.E. (1985). Ecology, Impact Assessment and Environmental Planning. John Wiley & Sons. New York.

Additional

- Artículos publicados en revistas científicas especializadas: Environmental Impact Assessment Review, Journal of Environmental Management, Environmental Management, Soil Use and Management, etc.
- GÓMEZ VILLARINO, M. (2010). EVALUACIÓN AMBIENTAL ESTRATÉGICA: Desarrollo de un modelo metodológico para la evaluación de la sostenibilidad ambiental en la planificación urbanística. (Tesis doctoral). Escuela Técnica Superior de Ingenieros Agrónomos. UPM