

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

<b>Code</b>	44717
<b>Name</b>	Regional planning
<b>Cycle</b>	Master's degree
<b>ECTS Credits</b>	4.5
<b>Academic year</b>	2022 - 2023

**Study (s)**

<b>Degree</b>	<b>Center</b>	<b>Acad. year</b>	<b>Period</b>
2227 - M.U. en Ingeniería Ambiental	School of Engineering	1	First term

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
2227 - M.U. en Ingeniería Ambiental	11 - Land management	Obligatory

**Coordination**

<b>Name</b>	<b>Department</b>
SECO TORRECILLAS, AURORA	245 - Chemical Engineering

**SUMMARY**

Professor UPV: Vicent J. Altur Grau, Eric Gielen and José M<sup>a</sup> Torner Borda

The growing awareness of society regarding the degradation of the environment and the need to mitigate the impacts of pollution on the environment require the action of a new professional, the environmental engineer, who guarantees the development of society by combining the competitiveness of industries with a sustainable and environmentally friendly perspective. The need to respond to these new challenges has given rise to the worldwide consolidation of Environmental Engineering studies such as those proposed in this Master.

In this line, the present subject will allow the student to be able to form part of multidisciplinary teams in the field of environmental planning. The preparation of territorial, urban and environmental plans requires knowledge of the procedures and tools necessary for their correct drafting. Aspects such as territorial analysis and diagnosis, the contents of the plans and the use of tools such as Geographic Information Systems are always treated in this subject from an environmental perspective.

Other aspects closely linked to territorial planning such as strategic environmental assessment and landscaping are also part of the course content.



## PREVIOUS KNOWLEDGE

### Relationship to other subjects of the same degree

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

### Other requirements

(34327) GIS and remote sensing

Previous knowledge of basic statistics and management of geographic information systems is necessary

## OUTCOMES

### 2227 - M.U. en Ingeniería Ambiental

- Students should apply acquired knowledge to solve problems in unfamiliar contexts within their field of study, including multidisciplinary scenarios.
- Students should be able to integrate knowledge and address the complexity of making informed judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities associated with the application of their knowledge and judgments.
- Students should communicate conclusions and underlying knowledge clearly and unambiguously to both specialized and non-specialized audiences.
- Students should demonstrate self-directed learning skills for continued academic growth.
- Students should possess and understand foundational knowledge that enables original thinking and research in the field.
- Identify and apply technologies, tools and techniques in the field of environmental engineering.
- Assume with responsibility and ethics the Environmental Engineer role in a professional context.
- Promote and apply the principles of sustainability.
- Adapt to changes, being able to apply the principles of Environmental Engineering to unknown cases and use new and advanced technologies and other relevant developments, with initiative and entrepreneurial spirit.
- Identify, declare and entirely analyze environmental problems.
- Assess the application of measures for the pollution prevention and the recovery, protection and improvement of environmental quality.
- Carry out theoretical analyzes of environmental systems, both natural and artificial, and develop and apply mathematical models for their simulation, optimization or control.
- Design and calculate engineering solutions to environmental problems, comparing and selecting technical alternatives and identifying emerging technologies.



- Understand and apply environmental national and international legislation, adapting environmental solutions to these regulations.
- Apply methodologies for evaluation and correction of environmental impact.
- Apply standard methodologies for the analysis and evaluation of environmental risks.
- Apply different tools and environmental management systems.
- Apply techniques for the analysis and resolution of regional planning problems.

## LEARNING OUTCOMES

- 1.- Know the basic concepts of spatial planning.
- 2.- Know the typology of territorial plans, their content and normative consequences.
- 3.- Know the main territorial conditions conditioning the territorial model.
- 4.- Apply specific methodologies to determine the fitness of the physical medium for the location of uses and activities.
- 5.- Be able to evaluate the information of a territorial plan.
- 6.- Apply procedures to carry out a territorial diagnosis, define the corresponding SWOT matrix and rank the components of said matrix.
- 7.- Be able to apply multicriteria evaluation procedures for the establishment of alternative courses of action.
- 8.- To understand the socio-economic, environmental and territorial effects that the infrastructures generate, as well as the territorial potentials that derive from them, can have a positive or negative character on the territorial system or some of its elements.
- 9.- Know the possibilities of geographic information systems (GIS) in the analysis and diagnosis of the territory.
- 10.- To know the main sources of cartographic and alphanumeric information currently available in the most important state, autonomous and European databases, which are of use in territorial planning works.

## DESCRIPTION OF CONTENTS

### 1. ANALYSIS AND DIAGNOSIS OF THE TERRITORIAL SYSTEM

1. The green infrastructure of the territory.
2. The valuation of the physical and natural environment: territorial aptitude in urban uses
3. The study of the population and the city system.
4. The legal and institutional framework: administrative organization and territorial conditions.

### 2. THE PLANNING PROCESS: THE ELABORATION OF PLANS AND PROGRAMS.

1. Territorial and urban plans.
2. Sector planning.
3. Instruments for the protection, organization and management of the landscape.
4. Natural and anthropogenic risks with incidence in territorial planning processes.
5. The strategic environmental and territorial evaluation.

**3. MUNICIPAL PLANNING**

1. The classification and urban zoning.
2. The regime of undevelopable land.
3. Urban planning standards and normalization of urban determinations.

**WORKLOAD**

ACTIVITY	Hours	% To be attended
Classroom practices	21,00	100
Theory classes	21,00	100
Theoretical and practical classes	3,00	100
Study and independent work	30,00	0
Readings supplementary material	7,50	0
Preparation of evaluation activities	15,00	0
Preparation of practical classes and problem	15,00	0
<b>TOTAL</b>	<b>112,50</b>	

**TEACHING METHODOLOGY**

The training activities will be developed according to the following distribution:

· Theoretical activities.

Description: In the theoretical classes the topics will be developed providing a global vision and integrating, analyzing in greater detail the key aspects and of greater complexity, fostering the student's participation.

· Practical activities.

Description: They complement the theoretical activities with the aim of applying the basic concepts and expand them with the knowledge and experience that they acquire during the realization of proposed works. They comprise the following types of face-to-face activities:

- Classes of problems and questions in the classroom
- Discussion and problem solving sessions and exercises previously worked by the students
- Computer practices of specific software management.
- Oral presentations
- Visits to soil recovery facilities
- Programmed tutoring (individualized or in groups)

· Student's personal work.

Description: Realization (outside the classroom) of monographic works, directed bibliographic search, issues and problems, as well as the preparation of classes and exams (study). This task is will be done individually and tries to promote autonomous work.



· Work in small groups.

Description: Realization, by small groups of students (2-4) of works, questions, problems outside the classroom. This task complements individual work and fosters the ability of integration in work groups.

The e-learning platform (Virtual Classroom of the Universitat de València and / or PoliformaT of the Polytechnic University of Valencia) as a communication support with the students. Through it access to the didactic material used in class, as well as the problems and exercises solve.

## EVALUATION

The evaluation method will be as follows:

-1 individual open answer tests: 20%

-1 individual objective test type test: 20%

-5 theoretical-practical classroom exercises on certain situations raised (Case): 20% of the final grade.

-4 practical exercises in computer room on aspects of the subject taught: 30% of the final grade.

-1 internship trip (Case): 5% of the final grade.

In order to be able to pass the subject, an average mark of 5 (passed) has been obtained in the individual tests of open answer and test type. If the mark is less than 5, the average will not be averaged with the rest of the practice marks.

The recovery procedure will be as follows:

Students who do not obtain an average of approved 5 in the individual tests of open answer and type test will be able to recover the tests with the realization of a test of recovery written of open answer and exercise type test on the matters imparted in the date reserved for the official call (January). In the case of not obtaining the mark of 5 in the average of the individual tests, the final mark of the subject will be the highest of the individual tests of open answer and type test.

Name: Open-ended written test - Description: Timed test, performed under control, in which the student constructs his answer. You may or may not be granted the right to consult supporting material. - Quantity: 1 - Weight: 20

Name: Objective tests (test type) - Description: Structured written exam with various questions or items in which the student does not prepare the answer; you just have to point it out or complete it with very precise elements. - Quantity: 1 - Weight: 20

Name: Project - Description: It is a didactic strategy in which students develop a new and unique product by performing a series of tasks and the effective use of resources. - Quantity: 4 - Weight: 30

Name: Case - Description: It supposes the analysis and the resolution of a posed situation that presents



problems of multiple solution, through the reflection and the dialogue for a group learning, integrated and significant. - Quantity: 6 - Weight: 30



Maximum Absence

Theory: 25%

Seminar: 25%

## REFERENCES

### Additional

- Ordenación territorial(Gómez Orea, Domingo | Gómez Villarino, Alejandro) URL:

[https://polibuscador.upv.es/primo-explore/search?](https://polibuscador.upv.es/primo-explore/search?institution=UPV&query=any,contains,990004745840203706&vid=bibupv)

[institution=UPV&query=any,contains,990004745840203706&vid=bibupv](https://polibuscador.upv.es/primo-explore/search?institution=UPV&query=any,contains,990004745840203706&vid=bibupv)

Elementos y Técnicas de Análisis Territorial(Troitiño Vinuesa, M.A.) URL: <http://hdrnet.org/190>

Sistemas de información geográfica y evaluación multicriterio en la ordenación del territorio(Gómez Delgado, Montserrat | Barredo Cano, José Ignacio) URL: [https://polibuscador.upv.es/primo-explore/search?](https://polibuscador.upv.es/primo-explore/search?institution=UPV&query=any,contains,990002088330203706&vid=bibupv)

[institution=UPV&query=any,contains,990002088330203706&vid=bibupv](https://polibuscador.upv.es/primo-explore/search?institution=UPV&query=any,contains,990002088330203706&vid=bibupv)

Sistemas de ayuda a la decisión espacial para la ordenación del territorio(Bosque Sendra, J y Gómez Delgado, M) URL:

[http://faces.unah.edu.hn/decanato/images/stories/PDF/Revista\\_Congreso\\_Vol1/Sistema\\_ayuda\\_decision\\_espacial.pdf](http://faces.unah.edu.hn/decanato/images/stories/PDF/Revista_Congreso_Vol1/Sistema_ayuda_decision_espacial.pdf)

Planificación territorial y sectorial(Generalitat Valenciana) URL: <http://www.habitatge.gva.es/>

Portal de Infraestructura de Datos Espaciales de la Comunitat Valenciana(Instituto Cartográfico Valenciano) URL: <http://www.iddev.gva.es/es>

Portal de Infraestructura de Datos Espaciales de España (IDEE)(Instituto Geográfico Nacional) URL: <http://idee.es/>

Identificación de factores y evaluación ambiental de planes(Almenar - Muñoz, Mercedes - Angulo - Ibáñez, Quiteria) URL: [https://polibuscador.upv.es/primo-explore/search?](https://polibuscador.upv.es/primo-explore/search?institution=UPV&query=any,contains,cbuc_racoarticle/339756&vid=bibupv)

[institution=UPV&query=any,contains,cbuc\\_racoarticle/339756&vid=bibupv](https://polibuscador.upv.es/primo-explore/search?institution=UPV&query=any,contains,cbuc_racoarticle/339756&vid=bibupv)