

Planning and Management of Water

Code: 104265
ECTS Credits: 6

Degree	Type	Year	Semester
2503710 Geography, Environmental Management and Spatial Planning	OT	4	2

Contact

Name: Angel Cebollada Frontera
Email: angel.cebollada@uab.cat

Use of Languages

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: Yes
Some groups entirely in Spanish: No

Prerequisites

None

Objectives and Contextualisation

This subject offers the tools for the water planning and management in a Mediterranean context. For more details, see contents.

Competences

- Apply the basic regional, environmental and urban legal regulations for regional and environmental planning.
- Design and manage regional, environmental and urban planning instruments.
- Draw up action and intervention plans in the territory which respond to sociodemographic and environmental problems.
- Generate innovative and competitive proposals in professional activity.
- Introduce theoretical and applied aspects of the main regional, environmental and urban policies in professional practice.
- Students must be capable of applying their knowledge to their work or vocation in a professional way and they should have building arguments and problem resolution skills within their area of study.
- Work cooperatively in multidisciplinary teams.

Learning Outcomes

1. Describe the water cycle from a physical, socioeconomic and systematic viewpoint.
2. Generate innovative and competitive proposals in professional activity.
3. Identify methods and techniques for managing the water cycle.
4. Propose ways of managing water and energy within the Catalan regulatory framework.
5. Students must be capable of applying their knowledge to their work or vocation in a professional way and they should have building arguments and problem resolution skills within their area of study.
6. Understand water legislation.
7. Work cooperatively in multidisciplinary teams.

Content

1. Introduction to the integral water cycle

2. Application of GIS in the planning and management of water
3. Planning and evaluation of water systems
4. Wastewater management and reuse
5. Drinking water management
6. Economic water management

Methodology

Docent methodology will be lectures, practices and field work

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Field work	12.5	0.5	1, 3, 7
Lab	12.5	0.5	2, 5, 7
Lectures	23.5	0.94	6, 1, 3, 5
Type: Supervised			
Tutorials	15	0.6	5, 7
Type: Autonomous			
Lab	15	0.6	2, 5, 7
Oral speech	10	0.4	5
Report	40	1.6	2, 3, 7
Report field work	20	0.8	1, 3, 5

Assessment

GIS practice (10%)

A specific case to be carried out with GIS is set out: Finding a body of water and associating and calculating the percentages and / or surface area of its uses and land cover. Export this map with topographic base and orthophotomap.

Work Outing from the river field (analyzing the effects, causes and consequences of the quality status of the different river courses) (25%)

After the field trip to the river Tordera / Besòs where we will have known the different main courses that make it up and its ecological status, each student will have to do a work (maximum 3 pages) which defines in general the basin visited with its main characteristics (municipalities, river courses, temperature, sociodemography,

etc.) and a descriptive analysis is made of the main components that have defined the ecological status for each river course. Finally, it will have to explain what future consequences can be derived and what solutions could be considered for these specific spaces.

Oral presentation on cities with problems related to water resources (25%)

Each student will receive at random a problem related to the planning and management of water in a specific case. In an oral presentation of 10-15 minutes, you will have to present to the class group the specific case, its problems and what solutions could be applied. At the end of the presentation the student will have to present 2 or 3 questions to create a discussion in class.

Conflict planning (40%)

Group work: they will have to search for a problem related to water planning and management, detect the main actors involved, identify the problems and create a series of solutions that can be applied to what most of the actors involved they benefit from it. This work will be divided into an oral presentation (20%) and a written work (20%).

Evaluation criteria

In the event that two of the assessable points have not been presented c
Not Evaluable

The student will receive the grade of "Not assessable" as long as he has
Review of marks

At the time of carrying out each assessment activity, the teacher will inform

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Lab	10	0	0	5
Oral Speech	25	1.5	0.06	3, 4
Project	40	0	0	6, 1, 3, 4, 7
Report field work	25	0	0	2, 4, 7

Bibliography

At the beginning will be gives the reading list

Software

Office and QGIS