

Degree	Type	Year
Environmental Sciences	OB	3

Contact

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Teachers

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Teaching groups languages

You can view this information at the [end](#) of this document.

Prerequisites

Having studied the following subjects:

- Environmental engineering
- Water science and technology
- Prevention, recycling and waste treatment

Objectives and Contextualisation

The objectives of the subject are to integrate the knowledge acquired in the previous subjects in the field of environmental technology, especially on the subject of waste water treatment, the drinking water treatment and the treatment and management of solid wastes.

Learning Outcomes

1. CM30 (Competence) Evaluate real case studies on environmental problems and conflicts.

2. CM31 (Competence) Evaluate factors related to the Sustainable Development Goals associated with a specific environmental problem.
3. CM32 (Competence) Undertake environmental projects based on real case studies, working in small groups.
4. KM40 (Knowledge) Recognise the main infrastructures and processes of water, energy and waste management in an urban environment.
5. SM38 (Skill) Incorporate the scientific, technological and social knowledge associated with a specific available problem.
6. SM39 (Skill) Apply the main techniques and elements for environmental sampling and to obtain qualitative and quantitative data relevant to environmental sciences.
7. SM40 (Skill) Critically examine public and scientific information on the environment, in relation to a specific problem.

Content

The course content will cover different aspects of urban wastewater and waste treatment and management, as well as water purification, through visits to facilities, specific seminars, and laboratory analyses of real samples.

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Laboratory practices	8	0.32	
Seminars	8	0.32	
Theory classes	8	0.32	
Visits to facilities	26	1.04	
Type: Autonomous			
Laboratory report	4	0.16	
Report on a study case	12	0.48	
Study	82	3.28	

The course includes the following activities:

- Visits to waste and water treatment facilities to understand the different configurations and operating systems of these plants. A guided tour of the UAB campus will also be carried out to study some innovative experiences in the fields of waste, water, or energy management.
- Laboratory sessions where key parameters of water and waste samples collected during the visits will be analyzed.
- Theoretical classes presenting different life cycle analysis methodologies for waste and water.
- Seminars held after the visits to delve deeper into the processes carried out at the facilities visited.

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.

Assessment

Continuous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Exam	40	2	0.08	CM30, CM31, KM40, SM38, SM40
Laboratory report	30	0	0	KM40, SM38, SM39, SM40
Report on a study case	30	0	0	CM30, CM31, CM32, KM40, SM38, SM40

The evaluation will be carried out through three different activities:

- The delivery of a report based on the results obtained in the laboratory (25%).
- The delivery and presentation of a technical report on a case study (35%).
- A theoretical exam (40%).

The non-participation in any of the assessment activities will be assessed with a zero. For a student to pass the subject through continuous assessment it is necessary to obtain a minimum mark of 2 in the exam and a 5 in the weighted average of the different activities of the subject. If grade 5 is not achieved globally, the student may undergo a resit exam. In this case, the marks of the laboratory report and the technical report will remain unchanged.

Attendance at the visits is mandatory in order to pass the course.

This course does not provide for a single evaluation system.

Without prejudice to other disciplinary measures, and in accordance with current academic regulations, any irregularities committed by the student that could lead to a variation of the score of an evaluation act will be marked with a zero. Therefore, copying or allowing to copy in an evaluation activity will imply a zero (0).

Bibliography

- Biological Wastewater Treatment: principles, Modelling and Design. DOI: <https://doi.org/10.2166/9781789060362>
- Nielsen, C.M. López-Vázquez, D. Brdjanovic. Experimental Methods in Wastewater Treatment. IWA Publishing. London. 2016
- *Gestión integral de residuos sólidos*. George Tchobanoglous, Hilary Theisen, Samuel A. Vigil. Editorial Mc Graw-Hill. 1994
- The Practical Handbook of Compost Engineering. R. T. Haug. Editorial CRC Press. 1993. (Disponible document electrònic: <https://ebookcentral.proquest.com/lib/uab/detail.action?docID=5389526>)
- Agència de Residus de Catalunya, www.arc.cat
- Agència Catalana de l'Aigua: www.aca.gencat.cat

Software

It is not required a specific software.

Groups and Languages

Please note that this information is provisional until 30 November 2025. You can check it through this [link](#). To consult the language you will need to enter the CODE of the subject.

Name	Group	Language	Semester	Turn
(PLAB) Practical laboratories	1	Catalan	second semester	afternoon
(PLAB) Practical laboratories	2	Catalan	second semester	afternoon
(PLAB) Practical laboratories	3	Catalan	second semester	afternoon
(PLAB) Practical laboratories	4	Catalan	second semester	afternoon
(SEM) Seminars	1	Catalan	second semester	morning-mixed
(SEM) Seminars	2	Catalan	second semester	morning-mixed
(SEM) Seminars	3	Catalan	second semester	morning-mixed
(SEM) Seminars	4	Catalan	second semester	morning-mixed
(TE) Theory	1	Catalan	second semester	morning-mixed