

**Bachelor's Degree Final Project**

Code: 105031  
ECTS Credits: 12

Degree	Type	Year	Semester
2501915 Environmental Sciences	OB	4	0

The proposed teaching and assessment methodology that appear in the guide may be subject to changes as a result of the restrictions to face-to-face class attendance imposed by the health authorities.

### Contact

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### 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

### Teachers

David Molina Gallart  
Graham Mortyn  
Pere Muñoz Odina  
Sarah Paradis Vilar  
Eduard Ariza Sole  
Roser Maneja Zaragoza  
Carlos Martínez Gasol  
Raquel Barrena Gomez

### Prerequisites

The prerequisites for taking this course are those included in the Academic Regulations of the UAB. In the article 134 of this regulation, it is established that, in order to be able to enroll in the TFG, it is necessary to have passed at least two thirds of the total credits of the syllabus. However, since it is a subject with cross-curricular content, it is recommended that you have passed most of the subjects of the previous courses.

It is also recommended to be studying or to have studied the subject of Organization and Project Management, since in this subject the project bases, management and the methodological, graphic and IT tools necessary to be able to make a project with guarantees, are explained.

### Objectives and Contextualisation

The Final Thesis is understood as a subject that collects and integrates the competencies associated with the degree in Environmental Sciences. The student must, therefore, demonstrate that he has assumed the skills and learning outcomes of the degree and put them into practice in the execution of a project.

### Competences

- Adequately convey information verbally, written and graphic, including the use of new communication and information technologies.
- Analyze and use information critically.
- Collect, analyze and represent data and observations, both qualitative and quantitative, using secure adequate classroom, field and laboratory techniques
- Demonstrate adequate knowledge and use the most relevant environmental tools and concepts of biology, geology, chemistry, physics and chemical engineering.
- Demonstrate adequate knowledge and use the tools and concepts of mathematics, computer science and statistics to analyze and manage environmental issues.
- Demonstrate adequate knowledge and use the tools and concepts of the most relevant social science environment.
- Demonstrate concern for quality and praxis.
- Demonstrate initiative and adapt to new situations and problems.
- Develop analysis and synthesis strategies regarding the environmental implications of industrial processes and urban management
- Develop communication strategies on environmental issues, including environmental risks
- Information from texts written in foreign languages.
- Integrate environmental information in order to formulate and test hypotheses.
- Integrate physical, technological and social aspects that characterize environmental problems.
- Learn and apply in practice the knowledge acquired and to solve problems.
- Quickly apply the knowledge and skills in the various fields involved in environmental issues, providing innovative proposals.
- Teaming developing personal values regarding social skills and teamwork.
- Work autonomously

## Learning Outcomes

1. Adequately convey information verbally, written and graphic, including the use of new communication and information technologies.
2. Analyze and synthesize environmental implications in industrial and land management processes.
3. Analyze and use information critically.
4. Apply knowledge of any of the main areas of scientific disciplines in the environment to a draft final grade.
5. Apply knowledge of any of the main areas of the social sciences in the environment to a draft final grade.
6. Communicate environmental problems with proper attention to the problems of environmental risk and the relevant regulations in the fields of safety and environmental health.
7. Communicate orally and in writing a job final grade.
8. Demonstrate concern for quality and praxis.
9. Demonstrate initiative and adapt to new situations and problems.
10. Identify processes sciences, life sciences and social sciences in the surrounding environment and evaluate them properly and originally.
11. Information from texts written in foreign languages.
12. Integrate environmental information with environmental knowledge acquired from the sequence of observation, recognition, synthesis and modeling.
13. Integrate environmental knowledge into practice.
14. Integrate the acquired knowledge and skills to solve problems arising at the end of degree project.
15. Learn and apply in practice the knowledge acquired and to solve problems.
16. Observe, recognize, analyze, measure and properly and safely represent environmental processes.
17. Prepare a report explaining the results obtained in carrying out a research project in the field of environmental sciences.
18. Teaming developing personal values regarding social skills and teamwork.
19. Work autonomously

## Content

Those related to each Bachelor Thesis.

## Methodology

The subject is programmed in the two semesters of the course. Students have to choose which semester they will take and they need to be evaluated in that semester.

Teaching activities of the subject will be structured as follows:

- Tutorials: The follow-up and direction of the Final Project will be done through weekly tutorials on the schedule established by the degree.
- Field trips of one day or more will be carried out, depending on the chosen work.

### Typology and allocation of TFGs

The TFG will be proposed by the TFG Unit based on proposals received from institutions that collaborate with the subject such as Fundació Catalunya la Pedrera (La Vall d 'Alinyà), Barcelona Municipal Services, the Municipalities of Sabadell or Arenys de Mar among others. Therefore, the execution of the TFG will entail the displacement and the collection of data in the study areas.

A list of works offered by researchers from the UAB will occasionally be offered, these are the TFG-S. The Project Unit will evaluate and accept, or not, the proposals as TFG-S.

The information of Thesis titles will be published on the UAB's environmental sciences website and/or on the Virtual Campus prior to the beginning of each semester. The assignment of the TFG to each group of students will be done on the first day of tutoring.

The works must be done in groups of 3 or 4 students and a minimum of 2 for the TFG-S. One-person Thesis will not be accepted. The TFG Teachers Unit will assign the tutors for each TFG. In the case of the TFG-S, there will be the tutor who has proposed the work and a tutor from the TFG Teachers Unit.

### Documents and presentations content

(Delivery contents presented below are indicative and will be clearly specified at the beginning of each semester)

Throughout the TFG different delivery of documents and presentations will be made.

#### *First Delivery*

Document with the following contents:

- Authors and Final Title of the project
- Objectives of the project
- Temporary programming
- Budget: Estimation of the cost of drafting the project

The delivery of the documentation will be done in a unique pdf file through the Virtual Campus. Therefore, a date and time limit will be established to do the delivery.

#### *Second Delivery*

This partial delivery will consist of an oral presentation and its associated documentation. Delivery and defense will be held between the 8th and 10th week of the subject. The first delivery documentation will be:

- Cover
- Index
- Introduction
- Objective of the project
- Methodology, materials and study and calculation basis

- Task programming
- Budget: Cost estimation for the elaboration of the TFG
- References

The delivery of the documentation will be done in a soil pdf file through the virtual Campus. Therefore, a date and time limit will be established to make the delivery.

The oral presentation will have a maximum duration of 10 minutes and will be followed by a discussion with the committee of a maximum of 15 minutes. The presentation will be done in PowerPoint or similar software. If PowerPoint will be not used students will have to make sure that the software is installed on the computer or should bring their own computer.

### *Final delivery*

The final delivery corresponds to the final report of the document with a maximum extension of 50 pages plus the annexes. This report must include all the recommendations and modifications raised by the committee in the partial delivery. The final delivery and defense will be done in the last weeks of the semester. The final report will include the following sections:

- Cover: with the title, the name of the authors and the tutors, the reference of the course and indicating that it is a Final Project of the Degree in Environmental Sciences of the UAB. The institutions that have collaborated in the TFG will also be indicated, when appropriate.
- Acknowledgments (optional)
- Index
- Executive summary
- Introduction
- Objective of the project
- Methodology, materials and study and calculation bases
- Results and discussion
- Conclusions
- Annexes
  - Graphic documentation: Cartography, plans (if necessary).
  - Task Programming: planned and real.
  - Budget. Cost estimation for the elaboration of the TFG (expected and real).
  - Calculation of the Carbon Footprint associated with the writing of the work.

Prior to the date and time limit set, the final reports will be delivered through the Virtual Campus. The court will evaluate the contents and the format of the memory based on the copy presented by the Virtual Campus.

On the day of the defense, the groups that have made the TFG with one of the institutions that collaborate with the subject will deliver a paper copy of their work, so that their tutor can send it to the institution.

The final presentation will have a maximum duration of 20 minutes followed by a discussion with the committee of a maximum of 20 minutes. The presentation will be done in PowerPoint or similar software. If PowerPoint will be not used students will have to make sure that the software is installed on the computer or should bring their own computer. The presentation will contain:

- First slide with the title, name of the authors and directors, logos of the UAB and specifying what it is about a fine project of environmental science career. If it were the case after the collaborating institutions.
- The second one with a Table of contents with the sections of the presentation
- The following will correspond to the explanation of the memory, with the sections that the students believe necessary.
- The last one is the repetition of the first one.

## **Activities**

Title	Hours	ECTS	Learning Outcomes
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Type: Directed

Evaluation	2	0.08	2, 3, 4, 5, 15, 6, 7, 9, 8, 17, 10, 13, 14, 12, 16, 11, 1, 19, 18
Type: Supervised			
Follow-up session	32	1.28	9, 8, 18
Type: Autonomous			
Preparation of the TFG	264	10.56	2, 3, 4, 5, 15, 6, 7, 9, 8, 17, 10, 13, 14, 12, 16, 11, 1, 19, 18

## Assessment

### Evaluation

The evaluation will be done through the delivery of documents and their oral defense. The objective is to evaluate the follow-up of the projects and improve it for the final document. There will be different committees formed by three teachers of the subject, who will be monitoring the project. In the case of the TFG-S, the tutors of these projects will also be part of the committee.

Three deliveries and two oral defenses that will be carried out throughout the course:

- The first delivery, that will be evaluated jointly with the second delivery.
- The second partial delivery will include the delivery of a document and its oral defense. The teachers will evaluate the written documents and the presentation, suggesting improvements for the final document. The weight in the final mark of this partial delivery will be 30% in the final grade of the TFG. The note of this second delivery will include the evaluation of the first delivery.
- Final delivery that will correspond to the totality of the TFG. It will include the delivery of a document and its oral defense. The weight in the final mark of this delivery will be 70% in the final grade of the TFG.

The evaluation of the subject will always be individual, although the project has been elaborated collectively.

In the evaluation of each one of the deliveries, content and format criteria of the written memory, structure and contents of the oral presentation will be taken into account, the use the established time to do the oral presentation, as well as the ability to respond to the committee questions.

### Dates

At the beginning of each semester, the specific dates of deliveries and the defense of follow-up and the final defense will be fixed and the contents of each of the partial documents will be explained. Changes in the dates and times of the partial defense or the final will not be accepted.

### Non-Evaluable qualification

Groups and students that do not enter the documentation or do not participate in the presentation of a delivery will receive a note of Non-Evaluable.

### Honors Qualification

Granting a qualification of honors (MH) is a decision of the teaching staff responsible for the subject. The regulations of the UAB indicate that MH can only be awarded to students who have obtained a final grade of 9.00 or more. It can be granted up to 5% of MH of the total number of students enrolled.

### Reviewing procedure

Students who wish to review the note of any of the deliveries must contact the person responsible of the course within three days after the publication on the grades of each delivery. Revisions after this period will not be accepted.

### Recovery and repeating students

No recovery system is foreseen for the Final Thesis Degree course.

No alternative system is foreseen for repeating students.

Irregularities by the student: plagiarism

The Final Thesis Project must be an original work, based on the collection of data and the study of the related bibliography. When writing the memory, special care must be taken to avoid plagiarizing contents from other documents of any type (paper or digital). Therefore, plagiarism will involve suspending the delivery (partial or final) with a zero without possibility to recover it.

Insurance

Students who include TFG travel, transportation or stay in laboratories (including those of the UAB) will have to take out an additional insurance that must be processed in the Gestió Acadèmica of the Faculty of Sciences.

### Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
1st presentation	30	1	0.04	4, 5, 15, 6, 7, 9, 8, 17, 10, 14, 16, 11, 1, 19, 18
Final presentation	70	1	0.04	2, 3, 4, 5, 15, 6, 7, 9, 8, 17, 10, 13, 14, 12, 16, 11, 1, 19, 18

### Bibliography

That related to each TFG.