

**Degree Project**

Code: 101885  
ECTS Credits: 6

| Degree                      | Type | Year | Semester |
|-----------------------------|------|------|----------|
| 2501230 Biomedical Sciences | OB   | 4    | A        |

**Contact**

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**Use of Languages**

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

**Other comments on languages**

The three official languages of the UAB can be used: Catalan, Spanish and English.

**Prerequisites**

To be admitted, students must meet the requirements established in the Regulations of the Faculty of Biosciences on the Degree Final Project (TFG) that can be found at the Faculty website.

**Objectives and Contextualisation**

The Degree Final Project (TFG) aims at the training objectives that are mentioned in the official memory of the degree and constitutes the culmination of the learning process where students will demonstrate the maturity acquired throughout the studies.

**Competences**

- Act with ethical responsibility and respect for fundamental rights and duties, diversity and democratic values.
- Apply knowledge acquired to the planning and implementation of research, development and innovation projects in a biomedical research laboratory, a clinical department laboratory or the biomedical industry.
- Display knowledge of the concepts and language of biomedical sciences in order to follow biomedical literature correctly.
- Make changes to methods and processes in the area of knowledge in order to provide innovative responses to society's needs and demands.
- Present the objectives, development and findings of a biomedical research/innovation project, orally or in writing, to an expert or non-expert audience.
- Read and critically analyse original and review papers on biomedical issues and assess and choose the appropriate methodological descriptions for biomedical laboratory research work.
- 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.
- Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.

- Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
- Students must develop the necessary learning skills to undertake further training with a high degree of autonomy.
- Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.
- Take account of social, economic and environmental impacts when operating within one's own area of knowledge.
- Take sex- or gender-based inequalities into consideration when operating within one's own area of knowledge.
- Use bioinformatic tools, databases and methods for analysing experimental data.
- Work as part of a group with members of other professions, understanding their viewpoint and establishing a constructive collaboration.

## Learning Outcomes

1. Act with ethical responsibility and respect for fundamental rights and duties, diversity and democratic values.
2. Analyse information from experimental studies and clinical trials.
3. Display knowledge of the principal experimental techniques in biomedicine and their use in basic and applied research.
4. Identify suitable concepts and methodologies for research projects in biomedicine.
5. Interpret scientific literature and the findings of scientific studies.
6. Interpret scientific texts and write review papers on biomedicine.
7. Interpret the results of experimental techniques in biomedicine.
8. Make changes to methods and processes in the area of knowledge in order to provide innovative responses to society's needs and demands.
9. Obtain information from biomedical databases.
10. Orally present a structured summary of the review paper.
11. 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.
12. Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
13. Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
14. Students must develop the necessary learning skills to undertake further training with a high degree of autonomy.
15. Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.
16. Take account of social, economic and environmental impacts when operating within one's own area of knowledge.
17. Take sex- or gender-based inequalities into consideration when operating within one's own area of knowledge.
18. Work as part of a group with members of other professions, understanding their viewpoint and establishing a constructive collaboration.
19. Write a review paper on a topical issue in biomedicine.

## Content

The TFG is an autonomous and individual work based on topics related to any of the subjects within the field of Biomedical Sciences.

The content of the TFG varies with and depends on the annually renewed offer that is made public during the month of July for each Degree. The public offer contains a summary description of the subject under each heading, whose content will be developed and defined by the student under the supervision of a tutor throughout the period of execution of the TFG.

## Methodology

The management of the TFG is in charge of the following figures:

- The professor responsible for the subject
- The Faculty committee of the TFG, made up by the professors held responsible for each of the Faculty's TFG
- The professors acting as tutors
- The TFG evaluation committee

The schedule of the administrative and academic steps to be followed is outlined in the website of the Faculty of Biosciences. As for the latter:

- Each student will be assigned an instructor (tutor), who will maintain a follow-up of the student's work through four tutorials; the first one will be aimed at giving the appropriate instructions to carry out the work and to define the temporary pattern of follow-up throughout the course; the three full sessions will be scheduled at the beginning, at the middle and at the end of the work; in those occasions, the students will explain their progress via a personal interview and the presentation of a portfolio.
- When students enrolled in the TFG are part of a mobility program, a way will be offered to attend online tutorials.
- During the TFG term, the student will prepare and update a portfolio that will contain in an orderly manner all the materials collected and elaborated.
- Depending on the TFG typology chosen, the student will prepare the appropriate materials on written, graphic or digital media
- A poster will be the common format for the public presentation of the TFG in the Faculty of Biosciences.

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                                                   |       |      |                                          |
| TFG presentation and defense                                     | 0.5   | 0.02 | 1, 17, 2, 3, 4, 7, 5, 6, 10, 18          |
| Type: Supervised                                                 |       |      |                                          |
| Tutorials                                                        | 7     | 0.28 | 17, 2, 3, 4, 7, 5, 6, 10, 15, 13, 11, 18 |
| Type: Autonomous                                                 |       |      |                                          |
| Preparation of the TFG (portfolio, poster and/or other material) | 37.5  | 1.5  | 7, 5, 10, 15, 14, 13, 11, 12, 19         |
| REading, studing and information processing                      | 50    | 2    | 2, 3, 4, 7, 5, 6, 18                     |
| Search and evaluation of information                             | 50    | 2    | 2, 3, 4, 7, 5, 6, 9, 15, 14, 12          |

## Assessment

The evaluation of the TFG consists of two parts:

1. Evaluation by the Evaluation Committee of the TFG (weight: 60% of the final grade). The common format of public presentation of the TFG in the Faculty of Biosciences is that of a poster and will be evaluated by the Degree's Evaluation Commission; three members of this commission will be present during poster presentations. The delivery will be made according to the instructions of the TFG regulations. In exceptional and justified situations, not contemplated in the evaluation regulations of the Faculty, the delay in the delivery of up to one week will entail a qualification reduction of 2 points. No deliveries will be accepted later than this deadline. The presentation will be called on a specific date for each degree, set by the person in charge of the subject, who will also specify the schedule in which the students must be present in the exhibition hall to defend their presentations.

The Evaluation Committee will meet with the student in front of his/her poster in order to discuss it. During the time set for the debate, the student must have all the generated documentation available for revision by the commission, including the portfolio, the written memory, videos, handouts or computer programs which may be considered necessary, following an agreement with the tutor, in some of the typologies.

2. Assessment by the tutor (weight: 40% of the final grade). The tutor will evaluate the written memory and the materials that have been generated throughout the work, paying special attention to the evolution of the student's work and the fulfilment of the objectives set. A continuous evaluation approach will be taken, with emphasis in the temporary evolution of the student.

Both the Evaluation Committee and the Academic Tutor will deliver their assessments to the person in charge of the subject, who will calculate the final grades based on the weight of each part.

The qualifications of the tutor and the Evaluation Committee are required to obtain a final, global qualification; otherwise the final grade will be "non-evaluable".

The Evaluation Committee may select a number of works, normally not greater than the double of maximum grade marks that can be awarded, among the students with higher qualifications. The selected students who wish to opt for the maximum grade will be required to make an oral and public presentation and defence of the work on a specific date before the Evaluation Committee that will finally award the magna cum laude grades.

If a TFG student enrolled in any of the mobility programs is not able to attend the public defence of the posters for reasons related to his/her mobility programme, the Evaluation Committee will articulate the appropriate mechanisms for the evaluation. To qualify for this non-standard measure it will be necessary to documentarily justify in due time and before the person responsible for the subject the reasons that prevent him/her from attending the public defence. In addition, the work will have to be deposited following the instructions made public on the website of the Faculty, and the student will send all the documentation referred to his/her TFG before the date of the public presentation to the president of the Evaluation Committee.

According to article 112 of the Academic Regulations of the UAB, the TFG cannot be retaken. However, if any person is unable to present their TFG during the scheduled dates and cannot do so prior to the closing of the evaluation minutes, being, therefore, obliged to make a new course registration, the evaluation committee may schedule an extraordinary call in the month of February of the following year, when the TFGs affected by this circumstance will be presented.

## Assessment Activities

| Title                                 | Weighting | Hours | ECTS | Learning Outcomes                                             |
|---------------------------------------|-----------|-------|------|---------------------------------------------------------------|
| Evaluation by the academic supervisor | 40%       | 4     | 0.16 | 1, 17, 16, 3, 4, 7, 5, 6, 8, 9, 15, 14, 13, 11, 12, 18        |
| Evaluation by the TFG Commission      | 60%       | 1     | 0.04 | 1, 17, 16, 2, 3, 4, 7, 5, 6, 8, 9, 10, 15, 14, 13, 11, 12, 19 |

## **Bibliography**

There is no specific bibliography for the TFG.

As a general reference about the philosophy of the TFG, students can use: "El trabajo de fin de Grado - Guía para estudiantes, docentes y agentes colaboradores" McGrawHill, 2013 (ISBN: 978-84-481-8267-0).

## **Software**

This course does not use any specific software.