UAB
Universitat Autònoma de Barcelona

Bachelors Degree Final Project

Code: 106601
ECTS Credits: 12

2025/2026

Degree	Type	Year
Artificial Intelligence	OB	4

Contact

Name: Javier Panadero Martinez

Email: javier.panadero@uab.cat

Teaching groups languages

You can view this information at the of this document.

Prerequisites

The prerequisites are those established in the UAB's enrolment progression regulations, which specify that, in order to enrol in the Bachelor's Degree Final Project (TFG), students must have passed, at a minimum, all first-year courses and at least two-thirds of the total ECTS credits of the programme (i.e., 160 ECTS).

In any case, it is recommended that students enrol in the TFG when they are in a position to complete their degree studies within the same academic year.

Objectives and Contextualisation

The Bachelor's Degree Final Project (TFG) should be understood as a globalising subject aimed at the integrated assessment of the competences associated with the degree. It represents the culmination of the learning process, in which students must demonstrate maturity in multiple competences and learning outcomes. They must show their ability to integrate and apply the knowledge, skills, and attitudes acquired throughout their studies, thereby allowing the assessment of their professional capacity in the development of a project.

Competences

- Act with ethical responsibility and respect for fundamental rights and duties, diversity and democratic values.
- Act within the field of knowledge by evaluating sex/gender inequalities.
- Act within the field of knowledge by evaluating the social, economic and environmental impact beforehand.
- Analyse and solve problems effectively, generating innovative and creative proposals to achieve objectives.
- Communicate effectively, both orally and in writing, adequately using the necessary communicative resources and adapting to the characteristics of the situation and the audience.
- Conceptualize and model alternatives of complex solutions to problems of application of artificial intelligence in different fields and create prototypes that demonstrate the validity of the proposed system.

- Identify, analyse and evaluate the ethical and social impact, the human and cultural context, and the legal implications of the development of artificial intelligence and data manipulation applications in different fields.
- Introduce changes to methods and processes in the field of knowledge in order to provide innovative responses to society's needs and demands.
- Know and apply the innovation, technology transfer and citizen participation processes in the field of artificial intelligence.
- Students can apply the knowledge to their own work or vocation in a professional manner and have the powers generally demonstrated by preparing and defending arguments and solving problems 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.
- Work independently, with responsibility and initiative, planning and managing time and available resources, and adapting to unforeseen situations.

Learning Outcomes

1. Analyse and solve problems effectively, generating innovative and creative proposals to achieve objectives.
2. Apply citizen participation and social innovation processes when relevant to the project to be undertaken.
3. Communicate effectively, both orally and in writing, adequately using the necessary communicative resources and adapting to the characteristics of the situation and the audience.
4. Communicate in a non-sexist and non-discriminatory way.
5. Define the criteria and tests in order to assess the validity of a proposed solution.
6. Establish a work plan and methodology that allow the project objectives to be adequately addressed.
7. Identify and analyse the innovation and transfer potential of the proposed solution.
8. Identify the ethical aspects relevant to the project and draw up an action plan that minimises ethical risks in the design of the proposed solution.
9. Identify the projects objectives and define its specifications.
10. Identify the regulations applicable to the project and apply them correctly when designing and implementing the proposed solution.
11. Properly use bibliographic tools and other electronic resources to obtain relevant information for the development of the project.
12. Propose a solution design, integrating the appropriate techniques and tools in order to solve a problem, based on the indicated objectives and specifications.
13. Propose evaluation methods for projects and actions to improve sustainability.
14. Propose new ways of measuring the success or failure of implementing innovative proposals or ideas.
15. Propose projects and actions that conform to the principles of ethical responsibility and respect for fundamental rights and responsibilities, diversity and democratic values.
16. Propose projects and actions that incorporate the gender perspective.
17. Propose viable projects and actions that enhance social, economic and environmental benefits.
18. Students can apply the knowledge to their own work or vocation in a professional manner and have the powers generally demonstrated by preparing and defending arguments and solving problems within their area of study.
19. 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.
20. Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
21. Study the technical and economic feasibility of the project.
22. Validate the proposed solution by implementing a prototype that fits the specifications of the problem.
23. Weigh up the risks and opportunities of both your own and others' proposals for improvement.
24. Work independently, with responsibility and initiative, planning and managing time and available resources, and adapting to unforeseen situations.

Content

What is the TFG?

The Bachelor's Degree Final Project (TFG) is an original, individual piece of work that must be presented and defended before a university panel. It consists of a professionally oriented project in the field of Artificial Intelligence technologies, in which students synthesise and integrate the competences acquired throughout their studies. The project represents a workload of 300 hours of personal effort by the student.

A single type of TFG is defined, referred to as an "applied project", which should not be understood solely as a development project. The objective of this project may be any problem, system, or situation that can be addressed by applying techniques, practices, and resources from the professional field.

Naturally, the proposals must take into account the competences associated with the subject to which the project belongs. Furthermore, the project must have a clearly defined beginning and end, as it must be completed within 300 hours over the course of one semester. Therefore, both the required competences and the time constraints must be considered when drafting and defining the proposal.

Each project must be considered unique. This does not mean it must be innovative or improve upon existing solutions, but rather that it must be unique in terms of how it is approached and solved. From this perspective, it is possible for different students to work on the same project, or for a large project to be divided among several students.

The ultimate goal of the project does not necessarily have to be the delivery of a fully developed application or production system, given the time and resource constraints. What must be ensured is that the entire process is properly carried out and that thedesign and analysis make the implementation of the proposed system or application feasible. However, the ability to develop part of the application or a prototype will be positively valued.

Who can propose projects?

a) Academic staff / Departments: Following the schedule approved by the School, academic staff must submit their proposals using the designated software platform. If deemed necessary, the course coordinator and/or the TFG Committee will review the suitability of the proposed topics.

b) Companies or external institutions: The project can be carried out within the framework of a collaboration agreement with an external company or institution. The entity must submit a written proposal (following the established template and within the specified deadlines) to the course coordinator. The coordinator and/or the TFG Committee will assess whether the proposed project is appropriate (i.e., whether it allows for the assessment of the degree competences and fits within the expected workload and duration). If accepted, an academic tutor will be assigned and the details will be entered into the system. These projects will be jointly supervised by an academic tutor from the School and a company tutor.

c) Students: Students may submit a written proposal (using the official template and within the specified deadlines) for a specific topic or project to the TFG course coordinator. Acceptance will not be automatic, as the proposal must be assessed to ensure that the required competences can be evaluated and that the workload is appropriate. The coordinator willdecide whether to accept or reject the proposal and, if accepted, will inform the student that they may begin searching for a tutor. If no tutor is found, onewill be assigned at the end of the allocation process.

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes

Type: Supervised		
Follow-up meetings with the academic supervisor.	9	0.36
Preparation of the initial, follow-up, and final documentation, as well as the oral defence.	30	1.2
Type: Autonomous		
Project Development	260	10.4

The Moodle classroom of the Virtual Campus and/or the TFG tracking application will specify the schedule/timeline to follow, the consultation and proposal selection mechanism, and the project assignment system.

Students must complete the TFG (Final Degree Project) within one semester and will have only one examination period: the February session (for those completing it in the 1st semester) and the July session (for those completing it in the 2nd semester).

TFG registration takes place in mid-July (during the regular registration period along with the rest of the subjects in the curriculum), and students must choose the semester.

A computer application (Sigma-TFE) will be used for the offering, registration, and assignment of projects. Assignments must be completed the week before the start of the semester.

Once the TFG is assigned, during the first week of the semester, the tutor and the student will meet to define the project to be developed and establish the general supervision guidelines.

The tutor will supervise the project through a minimum of 4 tutorial/supervision sessions. Before each session, the student must submit a document describing the project's development status, detailing the work done at each stage and the procedures followed. These documents will be compiled into a TFG dossier, which will include both the original documents submitted for each milestone and the improvements made to the reports based on the tutor's feedback and comments.

The TFG dossier will be a compilation of all the work carried out during the project (reports, feasibility studies, planning diagrams, code, user manuals, data specifications, analysis and design diagrams, use cases, business plans, legal and ethical studies, etc.) and must be submitted digitally at the end of the process. It must be well-organized and easily accessible. If applicable, it should also reflect the changes made to the documents based on the tutor's comments or suggestions during the meetings. These changes must be verifiable through a "change log."

Supervision sessions:

1st supervision session (week 6): before the session, the student must submit an Initial Report.

2nd supervision session (week 12): before the session, the student must submit a Progress Report.

3rd supervision session (week 17): the student presents the Final Report proposal.

All reports are mandatory and must be submitted by the deadlines specified by the TFG coordination. Late submissions may be accepted if there is a justified reason. This delay may result in a grade penalty at the tutor's discretion.

Rubrics have been defined to assess each of the reports, aiming to make final grades more consistent, objective, and traceable. Once each report is assessed, the corresponding rubric, along with (provisional) grades and feedback to improve the report for inclusion in the final dossier, will be published in the tracking application.

Each document must include the student and project identification data: student name, academic year, project title, tutor's name, and date. Furthermore, students are reminded that correct use of written communication (writing, spelling, presentation, etc.) is mandatory, as well as following the recommended formatting guidelines where applicable.

As a guideline, the reports should include:

Initial Report. The main objective of thisreport is to providea detailed proposal of the TFG, defining its objectives, context, and motivation, and proposing a methodology and work plan to achieve the stated goals, including a timeline of tasks to be performed during the project. This proposal requires prior reflection by the student, who must consult relevant sources to justify their choices and work plan. It must include, at a minimum:

- A detailed definition of the problem or application to be addressed in the TFG, justifying the need for and/or contribution of the work.

- Background information relevant to the project, depending on the type of work: review of the state of the art, theoretical foundations, existing similar applications, etc., highlighting gaps in previous work that justify the TFG development.

- Specific objectives and contributions of the TFG, explaining their relationship to the background.

- General explanation of the methodology and work plan to achieve the proposed objectives, identifying the steps required for project development and planning the tasks accordingly.

- Bibliography and additional sources.

Progress Report. The main objective is to document the progress made in developing the TFG. It should also confirm the definition of objectives and the planning done at the end of the initial phase or, if necessary, propose adjustments to ensure successful project completion within the scheduled academic period. It must include, at a minimum:

- A revised version of the Initial Report including the changes requested by the tutor, as well as any adjustments made to objectives, methodology, or work plan during the project.

- If changes were made, an explanatory and justified section must be added within the project context.

- Detailed description of the work completed so far: tasks, methods, experiments, etc.

- Presentation and analysis of key results.

- Bibliography and additional sources.

In addition to this supervision, students will carry out the TFG autonomously.

FINAL TFG DELIVERABLES

The Final Degree Project concludes with the submission of a written report in article format and an oral presentation and public defense. Students wishing to submit and defend their project must inform their tutor during the 3rd supervision meeting. The tutor will then mark the project as Completed in the tracking application. In week 19 or 20 (on the date specified by the coordination), the student must submit the final TFG dossier and the final report through the application.

For each submitted TFG, the TFG committee will appoint an evaluation panel composed of three faculty members: the academic tutor (whenever possible) and two other teaching staff from the degree. The committee will also set, with at least three calendar days' notice, the date and location of the defense, which will be available in the tracking application.

Final report

The final report must be written in article format, with a maximum length of 12 pages, following the template provided on the virtual campus. Additional pages may be added for appendix material. The specified format must be strictly followed and include, at a minimum, the following contents: project introduction, objectives, context and state of the art, methodology and development, results, conclusions, and references. The language used must be clear, accurate, and concise. The evaluation will be carried out by the evaluation panel using a predefined rubric, and the final grade will be the average of the individual scores assigned by each panel member.

Oral defense

The final stage of the TFG is the public defense. The student must present their work clearly and coherently before a panel of three faculty members. The presentation must not exceed 15 minutes, followed by a Q&A session with the panel, lasting a maximum of 15 additional minutes. The evaluation will be based on a public rubric. The final grade will be the average of the evaluations provided by the panel members.

TFG poster

Each year, the Academic Committee of the degree organizes a TFG poster competition, open to students who have defended their TFG during the academic year, provided they have the approval of their tutor and, where applicable, the external company or institution where the project was developed. Students must consult the contest guidelines to check the format, submission conditions, and prizes.

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

Continous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Final report (Evaluation committee)	30%	0	0	4, 3, 5, 6, 21, 8, 9, 7, 16, 18, 19, 11, 22
Presentation and defense (Evaluation committee)	30%	1	0.04	4, 3, 20, 19, 11
Tutor's assessment	40%	0	0	1, 2, 4, 3, 5, 6, 21, 8, 9, 7, 10, 23, 13, 14, 15, 16, 17, 12, 20, 18, 19, 24, 11, 22

The assessment of the Final Degree Project (TFG) consists of two parts:

- Assessment by the tutor (40% of the final grade): The tutor will assess the reports and materials generated throughout the project (interim reports and the final TFG dossier), with special emphasis on the progression of the work and the achievement of the planned objectives. The assessment is continuous and formative. Each submitted activity will receive a provisional grade, which will not have a definitive weight on the course grade until the final submission. Each activity includes specific rubric items that must be evaluated. The final grade for each item will be the one assigned in the latest activity where it was assessed. All activities are mandatory and must be submitted within the deadlines specified by the TFG coordination. Some late submissions may be accepted if a justified reason is provided, though this delay will result in a penalty in the final grade.
- Assessment by the TFG evaluation committee (remaining 60% of the final grade): This committee will assess the final report (30%) and the public oral presentation (30%). Each committee member will assign a grade, and the final grade will be calculated as the average of these scores. The evaluation of the final report will take place before the defense.

Evaluation rubrics will be used for each activity to ensure that final grades are consistent, objective, and traceable. These rubrics will be available within the TFG tracking application.

The final grade for the TFG will be determined bythe evaluation committee and will incorporate both the tutor's assessment and the committee's assessment. In order to pass the course, the student must achieve at least 50% of the grade awarded by both the tutor and the committee. The final grade will be the weighted average of the two scores. If the student fails to achieve 50% in either part of the assessment, the final grade will be recorded as a Fail.

The TFG evaluation committee may propose the award of an "Honors Distinction" (Matrícula d'Honor) if the final grade is equal to or higher than 9.0. Since the number of such distinctions may not exceed 5% of the students enrolled in the subject (unless there are fewer than 20 students, in which case only one distinction may be awarded), if the number of eligible TFGs exceeds the maximum allowed, it will be the responsibility of the TFG Committee to decide to whom these distinctions are awarded. The decision will consider the project grades, the comments in the rubrics from both the committee and the tutor, and the documentation included in the student's Final Dossier.

The final grade will be "Not Assessed" only if no report has been submitted.

If the student fails the TFG, they must re-enroll in the course and start the process again. If both the student and the tutor agree, the same project may be proposed again.

This course acknowledges the growing use of generative artificial intelligence (AI) as a support tool and, therefore, allows its use in a limited manner. As a general rule, the use of such tools will only be accepted for improving formal aspects of the work, such as writing, style, clarity of expression, linguistic correctness, or translation, as well as for occasional assistance with technical matters.

It is not acceptable to use generative AI tools to produce content that is subject to evaluation, such as methodological approaches, designs, execution of experiments, analysis or interpretation of results, development of ideas, or formulation of conclusions. These tasks must be carried out entirely by the student, as they constitute the core intellectual and creative work required to pass the course. Given the wide variety of projects, students are advised to consult their supervisor in case of doubt.

In all cases, students must explicitly state in each report and deliverable whether generative AI tools have been used, specifying which tools were employed, for what purpose, and to what extent. Irresponsible, excessive, or unnecessary use of such tools may negatively impact the final grade of the final degree project. Undeclared or inappropriate use of these tools may result in failing the course.

If it is proven that part of the TFG has been plagiarized and/or produced by a third party or a generative AI tool without the tutor's consent, the project will be automatically failed.

Bibliography

General bibliography:

- Alley, M. (2013). *The Craft of Scientific Presentations: Critical Steps to Succeed and Critical Errors to Avoid.* Springer-Verlag. [Electronic resource] (http://www.writing.engr.psu.edu/csp.html)

- Alley, M. (1996). *The Craft of Scientific Writing.* 3rd ed. Springer-Verlag. (http://writing.engr.psu.edu/csw.html)

- Dawson, C.W. (2009). *Projects in Computing and Information Systems.* 2nd ed. Addison Wesley.

Specific bibliography:

- Will be provided by the supervisor depending on the project.

Software

It will depend on the project.

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.