



UNIVERSITAT POLITÈCNICA DE CATALUNYA
BARCELONATECH

Escola d'Enginyeria de Barcelona Est

Final Thesis Regulations of the Barcelona East School of Engineering (EEBE)

School Board Decision JEEBE/2021/01/03, of 14 July 2021,
to approve the Final Thesis Regulations of the EEBE

EEBE School Board

- A favourable report on this document was issued by the Standing Committee on 7 July 2021.

FINAL THESIS REGULATIONS OF THE EEBE

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1. SCOPE OF APPLICATION

Bachelor's and master's degree curricula include a compulsory bachelor's or master's thesis, which in these regulations is referred to as the **final thesis**.

These regulations govern the specific academic procedures pertaining to the **final thesis**, under the general provisions of the Academic Regulations for Bachelor's and Master's Degrees at the UPC, and apply in their entirety to all official bachelor's and master's degrees taught at the EEBE.

2. GENERAL CHARACTERISTICS OF FINAL THESES

The aim of the **final thesis** is to provide a general validation of the training acquired at the EEBE and serves to justify the award of the corresponding qualification. The thesis is a piece of in-depth individual work in which students should demonstrate the competencies acquired over the course of their degree.

The **final thesis** is carried out under the supervision of at least one professor and may be co-supervised by another professor. As a general rule, it must be completed in the final semester of the degree.

The **final thesis** is assessed and marked by an examination committee (appointed as indicated in Section 6) on the basis of the thesis defence by the student. It may be carried out individually or in collaboration with another student or students who work on the thesis together, although each of the students must produce a comprehensive, independent and individual work. Each of the authors must write their own original text and deposit the thesis individually.

3. PROPOSALS FOR FINAL THESIS TITLES

The **final thesis** may address any topic related to the specific subject areas covered during the degree.

Students may choose to carry out the **final thesis** under any of the following options:

[a] At the EEBE

1. The School's teaching and research staff may make proposals for final theses, which must indicate the specific topic, the name of the supervisor and the conditions under which the work must be carried out.
2. Students may also make their own proposal of a topic for a **final thesis** to a UPC professor or researcher affiliated with the EEBE.¹ If the proposal is accepted, the thesis can be registered.
3. In the case of final theses for master's degrees, the supervisor must have a PhD.

¹ Affiliation of teaching and research staff: teaching and research staff are automatically affiliated with the academic units in which they teach, in accordance with how the teaching is organised at the department that is the attachment unit. The affiliation ends automatically after two years with no teaching activity at the affiliation unit. Source: Governing Council Decision no. 85/2013 to approve the [Attachment and Affiliation Regulations for Teaching and Research Staff at the UPC](#)

[b/d] At a company or institution

Students may complete the **final thesis** at a company through a university-company agreement. In this case, the **final thesis** will be co-supervised by a teaching and research staff member affiliated with the School and one or more co-supervisors at the company or institution. Theses carried out under specific agreements with institutions are governed by the relevant articles in the host institution's regulations. Where necessary, the EEBE's directors validate the proposed agreement and **final thesis**.

In this case, the student is assigned a supervisor at the UPC and an external supervisor at the host institution.

[c] At another university

Students may complete the **final thesis** as part of a university mobility programme. Theses of this type are regulated by the corresponding mobility agreements established with the host institutions. If the agreements make no specific provisions with regard to the **final thesis**, it will be governed by the standard regulations established by the host university.

As a general rule, theses of this type are defended at the host university.

4. SUPERVISION OF FINAL THESES

Supervision of the **final thesis** consists in overseeing and advising the student on the objectives, general approach and technical aspects of the thesis, while ensuring that it remains a piece of individual work.

The **final thesis** supervisor, who must be affiliated with the EEBE, must ensure that the student is aware of and abides by these regulations. An internal or external co-supervisor may also be appointed.

It is advisable for the academic supervision to be recorded in the digital tool used for the thesis deposit.

5. STUDY LOAD OF FINAL THESES

Individual work towards a **final thesis** has a study load of 25 hours per ECTS credit (ex ante accreditation report for EEBE degrees).²

6. FINAL THESES PROCEDURES

² <https://eebe.upc.edu/ca/lescola/qualitat/verificacio>

Procedures linked to the **final thesis** are governed by a specific calendar that is published by the School's administrative services at the beginning of each academic year. They include the following:

- **Final thesis** registration and corrections thereof
- **Final thesis** enrolment and extended enrolment
- **Final thesis** submission (deposit)
- Confidentiality application
- **Final thesis** validation
- **Final thesis** defence periods

The overall **final thesis** process is broken down as follows:

- Choice of topic
- Registration
- Enrolment
- Submission (deposit)
- Appointment of examination committee
- Defence
- Assessment

6.1. CHOICE OF TOPIC

Students may choose a **final thesis** from the list of proposals made by the teaching staff or make their own proposal to the EEBE professor they would like to act as supervisor.

6.2. REGISTRATION

Once the supervisor and the student have reached an agreement, the student must register the thesis, indicating the thesis type (a/b/c/d - see Section 3 of these regulations), the supervisor, the co-supervisor (if applicable), the thesis title and a brief description of the planned work. Registration must be validated by the thesis supervisor.

In order to register the thesis, bachelor's degree students must have obtained at least 162 ECTS credits of the total study load for their degree; master's degree students must have obtained at least 30 ECTS credits. The **final thesis** must be registered before the enrolment period begins. Students who wish to change the title of the final thesis once it has been registered must seek the approval of their supervisor and submit a request within the period stated in the thesis calendar.

Once it has been validated, the **final thesis** supervisor may ask to make corrections to the registration (title and description) until the start of the deposit period.

6.3. ENROLMENT

Students may enrol for the **final thesis** in the final semester of their degree, provided that the total number of ECTS credits outstanding for its completion do not exceed 36. Students must register the **final thesis** before they can enrol.

Once they have enrolled, students are entitled to assessment and grading of the **final thesis** during the semester of enrolment.

If students do not defend the **final thesis** in the semester of enrolment, they may choose to request extended enrolment for the following semester. The thesis defence period for students who have requested extended enrolment is established in the Academic Regulations for Bachelor's and Master's Degrees at the UPC.

If students do not pass the **final thesis** after choosing extended enrolment, they must enrol again and pay the surcharge for repeated subjects.

6.4. DEPOSIT

Students must comply with the content requirements and other criteria for the **final thesis** established in these regulations.³ The thesis must be written **using the templates and formatting guidelines provided on the EEBE website.**

³ See Appendix 1.

To attain the foreign language competency, the student must write and defend the thesis in English.

The text and additional documents of the thesis must be deposited electronically as indicated by the School's administrative services, which will publish the corresponding instructions.

Final theses written and defended at an institution other than the UPC in the framework of a mobility programme (Type C) will be accepted in the original language; the abstract and the conclusions must be written in Catalan, Spanish and English. In all cases, the standard EEBE cover page must be used for the **final thesis**, although for the rest of the content the student may choose to use the School's templates or those of the other university.

The partial reproduction of any other work or publication in academic or research work must be duly referenced, indicating the source and the name of the author.

In accordance with the provisions of the first section of the plagiarism prevention procedure (Decision CG/2019/05/10), the **final thesis** deposit marks the completion of the work by the student and requires academic validation before its public defence.

In view of the result of the plagiarism prevention procedure, if it is deemed necessary the supervisor will provide an explanatory report on the degree of similarity identified in the work. If signs of plagiarism are found, the procedure described in the aforementioned decision must be initiated before the validation of the **final thesis** deposited, if applicable.

If the supervisor informs Academic Management of the decision not to validate the thesis, the supervisor will be understood to have withdrawn from the supervision and the assistant director of studies will validate the thesis ex officio. This must be registered in the **final thesis** deposit application.

6.5. CONFIDENTIALITY

A thesis may be deemed confidential because it is linked to a potential patent application or a later publication associated with the research field or because it is subject to specific confidentiality clauses established by the institution at which the work is carried out. In all these cases, it must be requested as indicated by the School's administrative services. If the request is made by the student, it will require the validation of the **final thesis** supervisor; the supervisor may also directly propose the confidentiality of the **final thesis**.

The application have to made at the time of the depòsit in order to can establish the necessary mechanisms to guarantee the non-publicity of confidential aspects.

If the **final thesis** is deemed confidential, all of the information required by the examination committee must be provided for its defence. This will involve:

- The obligation of all of the examination committee members (including substitutes) not to divulge the confidential information. To this end, they must all sign the confidentiality agreement.⁴
- The disabling of the dissemination of the electronic files in the institutional repository (UPCommons) during the term of the confidentiality agreement.

⁴ See Appendix 4.2.

- The defence with access control, at the request of the **final thesis** supervisor and with the approval of the chair of the examination committee.

The confidentiality period must be no longer than five years from the date of submission of the **final thesis**. In some cases, depending on the nature of the work, the supervisor may apply to the School's directors for this period to be longer, giving reasons for the application and shall require explicit authorisation.

6.6. APPOINTMENT OF THE EXAMINATION COMMITTEE

The School's directors select the members of the examination committee that will assess the **final thesis** by lot from among eligible teaching and research staff. The committee is appointed from the enrolment process onwards. The appointment does not take into account whether the thesis is deposited in an ordinary or extended enrolment period, and it follows the criteria detailed below.

- The committee is formed by three members of the teaching and research staff.
- The chair of the examination committee must be a teaching and research staff member affiliated with the EEBE who is from the same department as the supervisor of the **final thesis** to be assessed.
- The secretary must be the **final thesis** supervisor. In case of the **final thesis** with co-supervisor only one of them may form part of the examination committee.
- The committee must include a member chosen from among the professors affiliated with the EEBE who is attached to a department different from that of the supervisor of the **final thesis** to be assessed.
- One substitute is appointed for the ordinary member.

In case of *Master's degree in interdisciplinary and innovative engineering*, depending on its nature, the chairperson and the secretary of the examining board may be from different departments.

The drawing of lots is designed in such a way that the examination committee should not have more than four final theses to assess in the same session. The committees must be validated by the assistant director of studies and by the person appointed as head of section at each of the departments involved.

In the case of final theses of a specific nature, the thesis supervisor may submit a reasoned request to the School's directors for the composition of the examination committee to be reviewed. This request will be incorporated in the process of validating the draw.

6.7. DEFENCE

For the constitution of the examination committee to be valid, at least three of its members must be present.⁵ If one of the members is absent, the committee is dissolved, and the **final thesis** defence must be rescheduled for a later session.

⁵ [Academic Regulations for Bachelor's and Master's Degrees at the UPC](#)

The thesis is defended in a public session lasting up to one hour, which includes the presentation (approximately 30 minutes), any demonstrations deemed appropriate and questions from the examination committee.

When a **final thesis** has been carried out collaboratively by more than one student, the students are assessed by the same examination committee and in the same session. This notwithstanding, each student must present their own work and answer the questions made by the examination committee regarding their presentation or the work itself.

Exceptionally, in cases of force majeure justified by the student, this defence may be made in a non-attendance manner with the prior authorisation of the school management.

6.8. ASSESSMENT

The **final thesis** is assessed on the basis of the text submitted and its presentation and defence. In those cases in which the nature of the work results in a physical device, model, prototype or computer application, the presentation must include an introduction and, if necessary, a demonstration of its operation that will also be taken into account in the assessment.

The following elements and percentages apply to **final thesis** assessment.⁶

- The work carried out (complexity, fulfilment of the objectives, methods, etc.): 60%
- The text of the thesis (organisation, style, absence of errors, etc.): 20%
- The presentation and defence (clarity of the presentation, answers to the questions, etc.): 20%

When the assessment session ends, the chair of the examination committee informs the student of the mark awarded.

The secretary of the examination committee is responsible for proceeding the **final thesis** assessment results and, if necessary, the examination committee's proposal for a Distinction⁷.

If a **final thesis** is awarded a mark of 9.0 or higher, the examination committee may propose that a Distinction be awarded, explaining the reasons for its decision. Students who carry out their **final thesis** as part of a university mobility programme (Type C) will be considered for a Distinction if they receive the equivalent mark from the host institution.

Once proposals have been received, a decision is taken on the definitive award of Distinctions, without exceeding 5% of the total number of students enrolled and taking into account the following criteria:

1. Proposals not accompanied by an explanation are rejected.
2. Distinctions are awarded to the theses with the highest numerical marks.
3. If two or more theses have the same numerical mark, the Distinction is awarded to the student with the highest average mark in their academic record.
4. If two or more students have the same average mark, the Distinction is awarded to the student with the highest academic performance ratio.

⁶ See Appendix 2.

⁷ See Appendix 5.

If the Distinctions awarded to students with ordinary enrolment reach 5% of the total number of enrolled students, no Distinction may be awarded to students who chose extended enrolment for the **final thesis**.

If a **final thesis** is awarded a mark of Absent (NP) or Fail, its registration is withdrawn. A new registration by the student in the e-Secretaria and its subsequent validation by the supervisor will be required before the enrolment of the **final thesis** can take place.

7. INTELLECTUAL PROPERTY RIGHTS TO FINAL THESES

Intellectual property rights to final theses are governed by the Regulations on Industrial and Intellectual Property Rights at the UPC, which were approved by the UPC's Governing Council on 20 November 2018 (CG/2018/08/05).

8. PUBLICATION AND CONSERVATION OF DOCUMENTS

Final theses that have been assessed must be kept indefinitely. To this end, they are archived in open access in the UPC's institutional repository to facilitate access, reproduction, consultation and loan for research and conservation purposes. If the publication is affected by confidentiality restrictions, it won't be published how long these conditions will be in place.

9. FINAL PROVISIONS

ONE. The EEBE directors will resolve any situation that is not explicitly referred to in these regulations.

TWO. The Bachelor's and Master's Thesis Regulations approved by the School Board on 26 July 2020 are hereby revoked.

APPENDIX 1. CONTENT OF FINAL THESES

The **final thesis** is an academic exercise that serves to confirm that the student has acquired the competencies established in the degree's ex ante accreditation report and to demonstrate the capacity to apply the content taught on the degree in an integrated manner.

The rules on the structure and content of the **final thesis** must be considered guidelines, and their aim is to give students the necessary instructions for carrying out the work. It is the thesis supervisor who can best advise the student on the structure and content, given the particular characteristics of the work, and its time limits, given the number of credits.

Two types of **final thesis** are foreseen, depending on its content:

1. Engineering project
2. Academic work

In both cases, the standard EEBE cover page must be used.

APPENDIX 1.1. STRUCTURE AND CONTENT OF AN ENGINEERING PROJECT

A **final thesis** in the form of an engineering project must have the following structure.

- The **text** of the **final thesis**, which may include, in general terms:
 - 200-word abstract in Catalan, Spanish and English (compulsory).
 - Presentation of the object and scope of the work: approach to the problem or initial data of the project, alternatives considered and justification of the solutions chosen in each case.
 - Basic specifications and a description and presentation of the work carried out and the results.
 - Supporting calculations, planning, safety study, if necessary.
 - Environmental impact analysis, if necessary.
 - Summary of the applicable regulations, if necessary.
 - Conclusions.
 - References and supporting documents.
- **Plans**: the plans must contain all the information needed to execute the building or manufacturing stage of the project, if necessary.
- **Conditions and/or user guide**, if necessary.
- **Budget and/or financial analysis**, given the project's results.
- **Appendices**, if necessary.

APPENDIX 1.2. STRUCTURE AND CONTENT OF AN ACADEMIC WORK

A **final thesis** in the form of an academic work must have the following sections:

- 200-word **abstract** in Catalan, Spanish and English (compulsory).
- **Introduction and aims:** approach to the problem, alternatives considered and aims to be met.
- **State of the art:** a study of the current state of the problem in question, including techniques, processes, methods, alternatives, etc.
- **Method:** a description of the equipment and materials used to carry out the work, the method followed and a full description of the experiments carried out.
- **Results:** a description and analysis of the results obtained with the method proposed.
- **Conclusions:** given the results obtained, the conclusions, limitations and future work.
- **Sustainability analysis**, if necessary.
- **Appendices**, if necessary.
- **Bibliography:** references to works cited.

APPENDIX 2. ASSESSMENT OF FINAL THESES

APPENDIX 2.1. ITEMS TO BE CONSIDERED IN THE ASSESSMENT OF A FINAL THESIS

Items and indicators for the assessment of a final thesis

Item assessed	Indicator	Description
WORK CARRIED OUT (60%)	Complexity and scope	The complexity and scope of the project are in line with (or exceed) what is expected of a final thesis for the degree (considering in particular the level of bachelor's or master's degree and the number of credits for the thesis).
	Originality and innovation	The work corresponds with a proposal that has a significant degree of originality and/or innovation.
	Method and tools	The method and tools used are appropriate for solving the problem or project proposed.
	Development	Appropriate decisions were taken on the design and/or implementation and as a result the work was properly carried out.
	Results	The results obtained correspond with (or go beyond) the initial aims.
TEXT (20%)	Organisation and content of the document	The document is clearly structured and contains all of the compulsory sections and items (abstract, table of contents, aims, conclusions and bibliography), which are free of errors.
	Writing style and language	The writing is clear, concise and precise. The syntax is correct and there are no spelling mistakes.
	Scientific and technical language	The register is appropriate for a technical or academic work. The vocabulary and nomenclature are those of the scientific or technical field to which the work belongs.
	Figures and diagrams	The figures and tables help the ideas to be understood and the results to be presented and/or summarised. The graphs, tables and particularly diagrams and plans are appropriate.

	Format	The format of the text is in line with the official specifications and template.
PRESENTATION AND DEFENCE (20%)	Supporting materials	The supporting materials (slides, videos, etc.) used in the presentation help the work to be understood. They are aesthetically pleasing and there are no obvious errors (inappropriate font size, small or unclear figures, absence of numbering, etc.).
	Organisation and content	The content of the presentation summarises the work carried out. The structure and content of the presentation aid comprehension of the work.
	Communication skills	The student speaks clearly. The student holds the audience's attention.
	Use of time	The student uses the time available for the presentation correctly (does not finish early or exceed the stipulated duration).
	Answers to questions	The student is receptive to the comments and questions of the members of the examination committee. The student's answers to the questions are correct. The answers demonstrate the student's knowledge of the topic and show confidence.

APPENDIX 2.2. BREAKDOWN OF THE FINAL MARK: OFFICIAL EXAMINATION RESULTS

	Chair	Secretary	Member	Assessment
Work carried out (60%)				
Thesis (20%)				
Presentation and defence (20%)				

Final mark

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In case of no unanimity

In case of unanimity

- If all the members of the examination committee award the same mark, only the last column should be filled in.
 - The final mark is calculated using the marks in the last column in accordance with the weighting of each item.
- If the members of the examination committee award different marks, it will reflect the mark proposed by each member of the examination committee and the last column will be their average.
- The "Final mark" section of the official examination results gives the numerical mark **to one decimal place**. The descriptive mark is taken from the equivalences in the table below.

Distinction	from 9.0 to 10 [proposed by the examination committee]
Excellent	from 9.0 to 10
Good	from 7.0 to 8.9
Pass	from 5.0 to 6.9
Fail	from 0.0 to 4.9
Absent	NP

APPENDIX 3. FINAL THESES ON DOUBLE DEGREES

Students taking **double bachelor's degrees** must register, enrol and deposit the **final thesis** independently for each degree. The **final thesis** may be:

- two separate texts and two different defences before two different examination committees must take place.
- a single one text, which must be deposited in the two existing **final thesis** repositories (one per degree) and to be defended in a same defence act. In this case:the content and study load is equivalent to the sum of the two final theses for the two degree programmes,
 - it must allow the competences of the two degrees to be acquired
 - the **final thesis** must clearly reflect the parts of the work corresponding to each bachelor's degree

It is highly recommended that:

- The student chooses to do a single **final thesis**
- In case of a single **final thesis**, Student should have a co-supervisor in order to facilitate the coverage of the knowledge of both degrees.

For independent **final theses**, the offer will be specific to each degree. For the single **final theses** there will be a specific topics.