

# EEBE BACHELOR'S AND MASTER'S THESIS REGULATIONS

Approved by the School Board on 13 June 2018 and valid as of the start of the 2018-2019 academic year



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#### 1. SCOPE

The bachelor's thesis/master's thesis is a compulsory part of all bachelor's and master's degree curricula.

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

#### 2. AIM OF THE BACHELOR'S THESIS/MASTER'S THESIS

The aim of the bachelor's thesis/master's 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 indepth individual work in which students should demonstrate the competencies acquired over the course of their degree.

As a general rule, the bachelor's thesis/master's thesis must be completed in the final semester of the degree.

The bachelor's thesis/master's thesis is carried out under the supervision of at least one professor and may be co-supervised by another professor. The bachelor's thesis/master's 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.

The bachelor's thesis/master's thesis may be carried out individually or in a group. In the case of a group thesis, each student must be responsible for a clearly defined section and this must be clearly indicated in the report, although all students must fully understand the entirety of the work carried out.

Master's degree students may choose to complete an extended master's thesis of 12+18 ECTS credits. In this case, at the time of enrolment, students must submit a reasoned request to the EEBE's administrative services that has been approved and signed by the thesis supervisor and the academic committee of the master's degree.

#### 3. BACHELOR'S THESIS/MASTER'S THESIS PROPOSALS

The bachelor's thesis/master's thesis may address any topic related to the specific subject areas covered during the degree. Students may choose to carry out the bachelor's thesis/master's thesis under any of the following options:

#### [a] At the EEBE

- The EEBE teaching staff may make proposals for the bachelor's thesis/master's thesis, which must
  indicate the specific topic, the name of the supervisor and the conditions under which the work should
  be carried out. The EEBE's directors are responsible for publishing the thesis proposals made by its
  teaching staff.
- 2. Students may also make their own proposal of a topic for the bachelor's thesis/master's thesis to an EEBE professor. If the proposal is accepted the thesis can be registered.



#### [b/d] At a company or institution

Students may complete the bachelor's thesis/master's thesis at a company through a university-company agreement. In this case, the bachelor's thesis/master's thesis is co-supervised by an EEBE professor and one or more co-supervisors at the host company. 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 the thesis proposal.

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 bachelor's thesis/master's 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 bachelor's thesis/master's 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 THE BACHELOR'S THESIS/MASTER'S THESIS

Supervision of the bachelor's thesis/master's 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 bachelor's thesis/master's thesis supervisor, who must be an EEBE professor, must ensure that the student is aware of and abides by these regulations. An internal or external co-supervisor may also be appointed.

#### 5. STUDY LOAD OF THE BACHELOR'S THESIS/MASTER'S THESIS

If a bachelor's thesis/master's thesis is carried out by two students, the contributions of each student must be clearly and explicitly stated. It is the responsibility of each student to justify a sufficient individual contribution to the thesis.

Individual work towards a bachelor's thesis/master's thesis should represent a study load of 25 hours per ECTS credit.

#### 6. BACHELOR'S THESIS/MASTER'S THESIS PROCEDURES

Procedures linked to the bachelor's thesis/master's thesis are governed by a specific calendar that is approved by the corresponding EEBE body at the beginning of each academic year.

The overall bachelor's thesis/master's thesis process is broken down as follows:



- Choice of bachelor's thesis/master's thesis
- Registration of the bachelor's thesis/master's thesis
- Enrolment for the bachelor's thesis/master's thesis
- Submission of the bachelor's thesis/master's thesis
- Appointment of examination committee for the bachelor's thesis/master's thesis
- Defence of the bachelor's thesis/master's thesis
- Assessment of the bachelor's thesis/master's thesis

#### 6.1. CHOICE OF BACHELOR'S THESIS/MASTER'S THESIS

Students may choose a bachelor's thesis/master's 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 OF THE BACHELOR'S THESIS/MASTER'S THESIS

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 bachelor's thesis/master's thesis must be registered before the enrolment period opens. Students who wish to change the title of the bachelor's thesis/master's 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.

#### 6.3. ENROLMENT FOR THE BACHELOR'S THESIS/MASTER'S THESIS

Students may enrol for the bachelor's thesis/master's thesis in the final semester of their degree, provided that the total credits outstanding for the completion of the course do not exceed 36. Students must register the bachelor's thesis/master's thesis before they can enrol.

Once they have enrolled, students are entitled to assessment and grading of the bachelor's thesis/master's thesis during the semester of enrolment.

If students do not defend the bachelor's thesis/master's 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 the subject of the thesis changes, extended enrolment may not be requested.

If students do not pass the bachelor's thesis/master's thesis after choosing extended enrolment they must enrol again and pay the surcharge for repeated subjects.



#### 6.4. SUBMISSION OF THE BACHELOR'S THESIS/MASTER'S THESIS

Students must comply with the content requirements and other criteria for the bachelor's thesis/master's thesis established in these regulations. The thesis must be written using the templates and formatting guidelines provided on the EEBE website; the thesis supervisor is responsible for ensuring that students are aware of this requirement.

Physical or electronic copies of the report and all other documents required for the bachelor's thesis/master's thesis must be submitted as indicated by the EEBE's administrative services.

The EEBE's academic management unit publishes specific guides for physical and electronic submission of the bachelor's thesis/master's thesis.

#### 6.5. CONFIDENTIALITY OF THESIS CONTENT

A thesis may be deemed confidential either because it is linked to a potential patent application or because it is subject to specific confidentiality clauses established by the company at which the work is carried out. In these cases the following documentation must be submitted:

- 1. <u>Confidentiality statement for academic works</u>: When the thesis is linked to a potential patent application. The document must be signed by the author and the supervisor.
- 2. <u>Confidentiality agreement</u>: Only when the agreement applies to the student and an external company/institution. Three copies of the agreement must be signed by the author, the company/institution representative and the thesis supervisor.

If a bachelor's thesis/master's thesis contains confidential information, the student must submit the corresponding documents and provide all of the information requested by the examination committee at the time of the thesis defence. The members of the committee must not disclose the confidential information.

The confidentiality period must be no longer than five years from the date of submission of the bachelor's thesis/master's thesis.

#### 6.6. APPOINTMENT OF EXAMINATION COMMITTEE FOR THE BACHELOR'S THESIS/MASTER'S THESIS

The EEBE directors appoint an examination committee to assess the bachelor's thesis/master's thesis. The committee is formed by three members of the teaching and research staff:

- The chair, who must be a member of the EEBE teaching and research staff assigned to the same department as the thesis supervisor.
- The secretary, who must be a member of the EEBE teaching and research staff assigned to the same department as the thesis supervisor.
- A member of the EEBE teaching and research staff attached to a different department to the thesis supervisor.



Three substitutes are also appointed: one for the chair, one for the secretary and one for the ordinary member.

If a bachelor's thesis/master's thesis is highly specific or overtly cross-disciplinary or multi-disciplinary, the thesis supervisor may request that the EEBE directors appoint an examination committee formed by EEBE teaching staff with expertise in the corresponding field or fields.

If a bachelor's thesis/master's thesis has been carried out by a group of students, each student will be assessed by the same examination committee during the same session.

#### 6.7. DEFENCE OF THE BACHELOR'S THESIS/MASTER'S THESIS

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.

#### 6.8. ASSESSMENT OF THE BACHELOR'S THESIS/MASTER'S THESIS

Once the thesis has been defended, it is assessed on the basis of the presentation, defence, structure and content. Particular importance is given to academic rigour and to the scientific, technical, business or social value of the work carried out. A numerical mark with one decimal place is recorded in the assessment results together with the corresponding descriptive mark, as shown 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

Assessment of the thesis necessarily encompasses assessment of the associated competencies.

The bachelor's thesis/master's thesis supervisor must send the examination committee a report on the work carried out by the student during the preparation of the thesis. A physical or electronic copy of the report must be stored, either attached to the assessment results or in the corresponding application if the thesis documentation is submitted electronically.

In the case of a group thesis, the examination committee may award the same mark to each student or choose to award individual marks if it considers that there are significant disparities between individual contributions and each student's overall grasp of the thesis content.



At the end of the session, the chair of the examination committee informs each student of the mark they have been awarded.

The secretary is responsible for sending the thesis assessment results to the academic management unit.

If necessary, the EEBE directors may provide the examination committee with rubrics for assessing and marking the thesis, in order to ensure the greatest possible objectivity and transparency of the assessment process.

If a bachelor's thesis/master's 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 bachelor's thesis/master's thesis as part of a university mobility programme (option 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 his or her 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.

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 bachelor's thesis/master's thesis.

#### 7. INTELLECTUAL PROPERTY RIGHTS TO THE BACHELOR'S THESIS/MASTER'S THESIS

Intellectual property rights to the bachelor's thesis/master's thesis are regulated by the Regulations on Industrial and Intellectual Property Rights at the UPC, approved by the Governing Council on 2 October 2008, and by Royal Legislative Decree 1/1996, of 12 April, on intellectual property.

#### 8. STORAGE OF THESES

Bachelor's/master's theses must be kept indefinitely.

#### 9. FINAL PROVISIONS

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



#### **APPENDIX 1. CONTENT OF THE BACHELOR'S THESIS**

The thesis must include the discussion, data and conclusions that are necessary and sufficient for its means.

- In general terms, the **bachelor's thesis** must include the following: O For shared works, a document in which the author of each part is indicated. O 200-word abstract in Catalan, Spanish and English. O Description of the object and scope of the thesis. O Basic specifications and a description and presentation of the work carried out and the results. O Analysis of the environmental impact under normal conditions and in the case of potential malfunctions, accidents, etc. (when required).
  - o Summary of the applicable regulations, if necessary
  - Analysis of the advantages and disadvantages of the operation and its social costs and benefits
  - Conclusions
  - References and supporting documents
- Plans (if appropriate)
- Budget and/or financial analysis
- Conditions and/or user guide, if necessary
- Appendices, if necessary

If the work consists in defining a given product, e.g. a facility, an industrial operation or a service, then:

- Give reasons for the functional and constructive arrangements and dimensions chosen.
- Justify the need for the product/service/operation in unambiguous terms.

If the **bachelor's thesis** is linked to a research project, the sections listed in Appendix 2 may act as a guideline.



#### **APPENDIX 2. CONTENT OF THE MASTER'S THESIS**

The master's thesis must allow the student to demonstrate the ability to comprehensively apply the knowledge acquired on the master's degree. It may have the characteristic features of an engineering project or study (in this case, see Appendix I) or it may be linked to a piece of research. In the latter case, it should contain the following sections, as a guideline:

- 200-word abstract in Catalan, Spanish and English
- Introduction and aims
- State of the art
- Methodology
- Results and conclusions
- Environmental impact (if applicable)
- Bibliography



#### **APPENDIX 3. EXTENDED MASTER'S THESIS**

Application form for an extended master's thesis					
Personal details of the student					
Full name:					
DNI/NIE/passport:					
E-mail address:					
Academic details					
Degree:					
Tutor					
Department:					
Credits to enrol: Extended master's thesis $\square$ 18 ECTS credits. This does not exempt the student from enrolling 12 credits					
for the master's thesis in the standard manner.  Extended master's thesis proposal					
Title of the thesis					
Start date / End date					
Summary of the content (max. half a page)					



Aims (max. half a	page)		
Method and time	e frame (max. one and a half pa	ages)	
Barcelona,	20		
The student	The tutor	The coordinator	



#### **APPENDIX 4. CONFIDENTIALITY OF THESIS CONTENT**

*Confidentiality agreement*: This document must be submitted when the confidentiality of the work involves companies or institutions external to the UPC.

Confidentiality statement: This document must be submitted when the thesis supervisor declares the work to be confidential, either because there is a confidentiality agreement or because the author and supervisor consider it necessary.



#### **APPENDIX 4.1. CONFIDENTIALITY AGREEMENT**

#### **CONFIDENTIALITY AGREEMENT**

BY AND BETWEEN
Of the one part, Mr/Msin the capacity of and as the legitimate representative of the company/institution, whose registered address is, city
And of the other part, the Barcelona East School of Engineering of the Universitat Politècnica de Catalunya (UPC) (hereinafter, the EEBE), represented for the sole purpose of this agreement by Mr/Msin the capacity of assistant director of University-Business Relations at the EEBE, and the bachelor's or master's degree student Mr/Ms (hereinafter, the Student).
THE DARTIES HERERY STATE:

That they agree to collaborate so that engineering students at the EEBE (UPC) can carry out their bachelor's or master's thesis on topics proposed by the Company. Specifically, they agree that the Student will carry out the by the Company, during a year at most from today's date. This collaboration and confidentiality agreement is subject to the following

#### CLAUSES.

#### ONE. OBJECT

- 1.1. The object of this agreement is to set the terms and conditions under which the parties will collaborate and safeguard the confidentiality of the information they exchange.
- 1.2. This agreement is not a licensing agreement, development contract or similar. The obligations of the parties to this agreement are explicitly stated herein.
- 1.3. This agreement involves educational collaboration and in no case does it imply an employment relationship between the Student and the Company or any kind of commercial collaboration between the Company and the EEBE.

#### TWO. OBLIGATIONS AND TERMS OF THE COLLABORATION

2.1. The Company is responsible for proposing the topic for the bachelor's or master's thesis and must appoint a suitably qualified company employee as the supervisor/tutor of the thesis. This person will guide, supervise and assess the work carried out by the Student on the bachelor's or master's thesis and the results obtained.



- **2.2.** The Company must provide the information and/or means needed by the Student to carry out the assignment that is the object of the thesis, particularly those means that are not generally used by students or that are not available at the EEBE, and must inform the EEBE as regards progress on the thesis.
- **2.3**. The EEBE must appoint an academic tutor/supervisor for the bachelor's or master's thesis from among the teaching staff in the area of knowledge of the proposed topic. The academic tutor will act as the liaison between the Company and the EEBE and his or her main function will be to supervise the smooth running of the collaboration. The technical supervision of the bachelor's or master's thesis is the responsibility of the Company.
- **2.4**. The Student commits to regular work and to following the instructions of the technical supervisor to guide the bachelor's or master's thesis towards the results proposed and sought by the Company, as well as informing the supervisor/tutor at the Company regularly on his or her work and progress.

#### THREE. CONFIDENTIALITY

The Student and the EEBE agree that the confidentiality of any information exchanged with the Company, particularly any information provided by the Company, must be maintained under the following conditions:

- **3.1**. The Student, as the recipient or creator of the information, shall maintain this confidentiality and shall avoid revealing it to any party that has not been expressly authorised by the Company.
- **3.2**. The preceding paragraph will not be applicable when:
- a) The receiving party has evidence that the information is known beforehand. b) The information received is in the public domain. c) The origin of the information received is a third party who does not demand secrecy.
- **3.3**. The recipients (the Student and the EEBE) must take responsibility for the fact that their communications to third parties are subject to the limitations outlined in the two preceding paragraphs.

#### FOUR. TERM

This agreement will be in effect during the period in which the parties exchange information that is not subject to a research, licensing or technical assistance contract. If there is no such contractual relationship, the aforementioned confidentiality will be maintained for five years from the date on which the information is received, except in the case that the recipients (the Student and the EEBE) expressly request its dissemination and this is authorised by the Company in writing.

#### FIVE. PROPERTY RIGHTS

Any information created by the Student during the educational collaboration is the exclusive property of the Company; in particular, the Company has the exclusive right to profit from the results. In any event, the parties undertake to respect and recognise the Student as the author of the work in all circumstances.

#### SIX. AMENDMENT OR CANCELLATION

This agreement may only be amended if all of the parties give their express consent in a written document that explicitly states their wish to amend the agreement.



#### SEVEN. JURISDICTION AND CONFLICT RESOLUTION

The parties undertake to resolve any disputes that may arise during the term of this agreement in an amicable manner.

If a dispute arises, the parties agree to submit to the courts of the city of Barcelona and waive any right to their own jurisdiction and venue.

own junisaletion and vende.		
In witness whereof, they sign th	is agreement in three copies to	a sole effect in
Barcelona on	20	
On behalf of the EEBE	The Student	On behalf of the Company
Assistant director of University-	Business Relations	
Mr/Ms Mr/	Ms	



## APPENDIX 4.2. CONFIDENTIALITY STATEMENT FOR ACADEMIC WORKS (BACHELOR'S THESES, MASTER'S THESES, ETC.)

CONFIDENTIALITY STATEMENT							
Mr/Ms, the professor who is responsible coordinating and/or tutoring the academic work deposited by the student, entitled							
hereby state that the academic work is confidential.						, and	the student
DURATION OF AND REASONS FOR THE O	CONFIDE	NTIALITY					
[Fill in this section only if you have state	d that th	e work is co	nfident	tial.]			
The undersigned state that the academic	work m	ust be class	ed as co	onfi	dential:		
( ) until							
( ) indefinitely.							
The undersigned state that the work must	st be clas	sed as conf	identia	l be	cause:		
( ) a third party has shown an interest in	marketii	ng the work	•				
	201						
Signature of the supervisor, coordinator	and/or to	utor:					
Signature of the student:							

In accordance with the provisions of Organic Law 15/1999, of 13 December, on the Protection of Personal Data, and the Royal Decree that approves the regulations on the deployment of said law, we inform you that the personal data collected in this form will be processed and stored in the files of the Universitat Politècnica de Catalunya to ensure that the provision of library services can be properly managed. You may exercise the right to access, modify, withdraw or challenge your data by contacting the Libraries, Publications and Archives Service, whose address is Campus Nord UPC, edifici TG. C. Jordi Girona, 31-3. 08034 Barcelona, by writing to the e-mail address info.biblioteques@upc.edu.

In addition, you expressly consent to your personal data being transferred to the appropriate and necessary official public bodies for the purpose of guaranteeing the provision of authorised services. This consent may be revoked at any time.



#### **APPENDIX 5. PROPOSALS FOR DISTINCTIONS**

### PROPOSAL FOR AWARDING A DISTINCTION 1

ee with the following members	:	
to the following thesis:		
ort is attached detailing the me	erits that justify this special me	ention (see
rs of the examination committee	sign this document in Barcelona	a on
Member	Secretary	
Signature:	Signature:	
	to the following thesis:  ort is attached detailing the me	ort is attached detailing the merits that justify this special means of the examination committee sign this document in Barcelona Member Secretary

1 This document must be submitted with the thesis assessment report.



State the candidate	te's merits.		
<u> </u>			