



ECOLE  
POLYTECHNIQUE  
DE BRUXELLES



**BRUFACE**  
BRUSSELS FACULTY  
OF ENGINEERING



# Master's Thesis Regulations and Guide

BRUFACE and ULB-EPB Masters

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## REGULATIONS

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The ULB Brussels School of Engineering (EPB-ULB) and the VUB Faculty of Engineering (VUB) agree on the following common rules to regulate the way in which the thesis in the Bruface and EPB-ULB Master's degree program is set up, presented, submitted and evaluated.

References to 'the Dean of the Faculty', 'Faculty Board', 'Faculty Secretariat' or 'Curriculum Council' indicate those of the university in which the student is registered for their Master.

The following regulations constitute a minimal framework shared by all Bruface and EPB-ULB Master's curricula. The Curriculum Council of each Master's program can specify additional rules (e.g. number of reviewers of the thesis, the length of the oral presentation and the format of the question/answer session).

### 1. Exchange programs

The following regulations and guide do not apply to outgoing ULB/VUB students who are participating in Erasmus+ exchange program (or another form of exchange or double degree) and who will complete and present their Master's thesis at the hosting university. In such cases, these ULB/VUB exchange students have to fulfil the regulations of their hosting university and there will be no oral defence at the home university.

For ULB/VUB exchange students (Erasmus+ or another exchange program) who will only complete part of their Master's thesis at the hosting university, the learning agreement must clearly mention at which university the thesis will be presented – i.e. the hosting or the home university. If the Master's thesis is presented at the home university, then the regulations outlined in this document apply.

### 2. Content

The Master's thesis is a piece of individual and personal work that demonstrates the student's ability to identify scientific or technological issues, to mobilize their knowledge, skills and competences and use a logical and coherent scientific methodology to explore a research question and present personal conclusions. It takes the form of an original manuscript written personally by the student. It is presented and discussed during an oral defence.

The Master's thesis may be carried out jointly by two students. In this case, the manuscript and the oral presentation must allow the jury to assess the individual contributions of each student.

### 3. Supervisor, co-supervisor, advisor

The **supervisor** must hold an academic position (ULB) or a professor position (VUB) in one of the faculties (EPB-ULB or VUB).

The **co-supervisor(s)** must hold a PhD degree or an academic position (ULB).

The supervisor(s) may designate an advisor in charge of the day-to-day follow-up of the thesis.

An **advisor** must hold an academic, a scientific or a technical position inside or outside ULB or VUB. If the advisor holds a technical position, they must hold at least a master's degree or equivalent.

The supervisor is the academic responsible for the thesis. They are in charge of the coordination of the supervision and will report to the jury on the attitude of the student, and the quantity and quality of their work during the year.

See *Guide and recommendations/Role of the Supervisor, co-supervisor(s) and advisor(s)* for a more detailed description of the roles.

### 4. Linking a thesis with the internship STAG-H5xx

A Master thesis can be carried out in collaboration with a company or an institution where the student also performed an internship on a similar topic, but these activities are regarded as different kinds of learning activities and will be evaluated separately. Even if there are many elements in common, the student will need to ensure that they clearly separate the internship and the thesis as two different projects, each with its own objectives, planning, deliverables etc.

The student must carefully plan their activities in order to ensure that they dedicate enough time both to the internship and the thesis.

### 5. Subject, title

Students must submit the title of their Master's thesis, as approved by the supervisor, and if relevant, with the name of co-supervisor(s) and the advisor(s) to the Faculty Secretariat via the online form available on the faculty website. They are strongly encouraged to do this by the Friday of the week following the proclamation of the June session of the first year of the Master's degree. The final deadline for submission is October 15<sup>th</sup>.

In the unlikely event of a student not finding a subject or supervisor, they must inform the Dean of the Faculty at the latest by October 15<sup>th</sup>. The Curriculum Council must then provide them with a subject and/or a supervisor.

Changes to the title are allowed throughout the year with the agreement of the supervisor.

These changes must be communicated to the Faculty Secretariat.

## **6. The jury**

At least one chairperson must be appointed for the jury of each different kind of Master.

### **6.1. The reviewers**

The jury chairperson selects independent reviewers, possibly – but not mandatorily – following the suggestion of the supervisor. For Bruface programmes two reviewers must be selected (preferably including at least one from the other university than the supervisor). For EPB-ULB masters there must be at least one reviewer. The reviewer(s) should be knowledgeable about the topic of the Master's thesis but should not have been closely involved in the supervision and training of the student during the thesis.

### **6.2. Composition of the jury**

The Curriculum Council is responsible for establishing the jury for each Master's thesis, following a proposal by the jury chairperson(s). Each jury is composed of a minimum of 4 voting members, including at least: the chairperson(s), the supervisor and the independent reviewer(s).

A voting member of the jury must hold an academic position (ULB) or a professor position (VUB) or a scientific position or a PhD degree. A staff member of an external partner (industry, research institution) can be associated to the jury, as a non-voting member.

## **7. Submission of the Master's thesis manuscript**

The Master's thesis manuscript must be submitted at the latest by noon:

- on the first day of the first examination period of the first session (January session), for students who are going to defend their thesis in the January session;
- on Friday of the week before the opening of the second period of the first examination session (June session), for students who are going to defend their thesis in the June session;
- on the first day of the second examination session (August-September session), for students who will defend their thesis in the second session.

An electronic version of the thesis manuscript must be submitted to the Faculty Secretariat, with a copy sent to the supervisor, co-supervisor(s), advisor(s) and jury chairperson(s). The student must ensure that the reviewer(s) also receive(s) a copy of the manuscript. Students must also submit an electronic copy of the consent form for disclosure for their thesis to be

included in the library.

No extensions of the deadline to submit the manuscript will be given.

For students who wish to present their Master's thesis in the January session in order to graduate in that session, a registration is mandatory before November 1<sup>st</sup>. A student can withdraw their application to take the Master thesis in the January session before December 1<sup>st</sup>. Once the registration is approved by the Faculty, on December 1<sup>st</sup>, the registration is final and it is only possible for the student to do their oral defence in the second session if they do not submit their manuscript during the January session (NB: no submission will be allowed during the June session).

## **8. Presentation of the Master's Thesis**

The Master's thesis must be presented orally, in English, in front of the Master's thesis jury during a public session. The presentations will take place during the last days of the examination sessions, following a schedule set by the Curriculum Councils.

The presentation should last no longer than 20 minutes and is followed by a question and answer session.

## **9. Assessment of the Master's thesis**

The voting members of the jury will grade the thesis in a private session. If they are absent, a voting member must send feedback on the thesis to the jury chairperson.

The supervisor and the independent reviewer(s) must fill in an assessment grid for the technical/scientific content and for the manuscript (the other jury members may also do this if they wish). The supervisor must also fill in an assessment grid on the student's effort and attitude. The jury fills in an assessment grid for the oral presentation and the global evaluation of the student's work. The corresponding grids are available at Annex 1.

The final mark is determined after a discussion among the members of the jury based on the evaluation grids. The marks given by each jury member are combined, but this result remains indicative and feeds into the final mark which is also informed by discussion between the jury members. If a consensus cannot be reached, the final mark will be obtained by a majority vote among the members of the jury. The evaluation grids without intermediate grades are sent to the students individually upon demand.

The final mark is expressed by an integer (for Bruface or EPB-ULB programs) or half integer (for EPB-ULB programs) between 0 and 20, using the following scale:

mark	Meaning
19-20	an outstanding piece of work in all components of the work
17-18	a superior piece of work in one or several components of the work
16	a piece of work which satisfies expected quality in all components
13-15	a piece of work which corresponds to average requirements, with few/limited criticisms
10-12	a piece of work which barely meets the requirements (many/significant criticisms)
8-9	a piece of work which does not meet the requirements on key elements
0-7	a piece of work which does not at all meet the requirements

## 10. Special features of Triaxes Master's thesis

The Triaxes Master's thesis is an interdisciplinary and interfaculty programme with the following special features.

- The Triaxes Master's thesis is carried out jointly by four students from the Solvay Business School (ULB), the Faculty of Law and Criminology (ULB), ENSAV La Cambre, and EPB-ULB or BRUFACE.
- The manuscript is common to all four students. Each student writes an individual disciplinary appendix in addition to the joint manuscript. For the EPB-ULB students, the appendix layout is described in section 12.
- Part of the oral assessment is organised collectively (by group) in front of an interdisciplinary jury. The other part of the assessment will take place individually in front of the disciplinary jury defined in Section 6 of this regulation. The student's final mark is 50% of the mark awarded by the interdisciplinary jury and 50% of the mark awarded by the disciplinary jury.

## 11. Plagiarism

All plagiarism will be severely dealt with. If part of the Master's thesis shows evidence of plagiarism, appropriate sanctions will be taken based on the university regulations where the student is enrolled (See section *Guide and recommendations/Tips to avoid plagiarism*).

## 12. Layout of the Master's thesis manuscript and structure of the document

Each Master's thesis manuscript must meet the following regulatory requirements:

- The manuscript must be written in English.
- The front page of the manuscript must include the following information:
  - Top: the logos (the ULB logo for EPB-ULB Master's or the ULB, VUB and Bruface logos for Bruface Master's)
  - Middle: the full title and the student's name (first name and surname)
  - Bottom left: Academic year 20XX-20XX
  - Bottom right:
    - Master's thesis submitted in order to be awarded the Master's Degree in (full degree title).
    - Supervisor: Prof. (first name and surname)
    - Co-supervisor(s): (Prof. or Dr.) (first name and surname)
    - Advisor(s): (Prof. or Dr. or Ir.) (first name and surname)
- The manuscript must contain:
  - A one-page abstract that includes the following information: the student's name, the full title of the Master's degree, the academic year, the title of the Master's thesis, a list of maximum 6 keywords and the abstract. The latter must briefly layout the objectives, methodology, main results and conclusions of the work.
  - A table of contents
  - The text of the thesis itself
  - References in the text and bibliography (see *Guide and recommendations/Bibliography*)

It is recommended that the manuscript does not exceed 60 pages (90 pages if there is a single manuscript in the case of a joint master thesis between two students), without appendices. Appendices can be added to help explain the content.

## 13. Legal aspects

The legal aspects related to the Master's thesis are fixed by the rules of ULB and VUB.

### 13.1. Confidentiality

#### 13.1.1. Manuscript

The supervisor may request that the text submitted to the secretariat and archived at the



ULB and VUB be made available to the jury on a restricted basis and that the text is not made public. The jury members must be able to read the manuscript in its entirety.

### **13.1.2. Oral defence**

In line with the regulations, a Master's thesis defence is public. If there are aspects which should remain confidential, a non-disclosure agreement (NDA) must be signed by all participants in the oral defence (the student, the jury, the audience). The NDA template provided by the university must be used (see *Guide and recommendations/List of resources*). The supervisor takes the lead on the whole NDA procedure (in agreement with the Chair of the jury). If an NDA has to be signed, the supervisor must inform the chair of the jury at least one week before the oral defence.

## **13.2. Master's thesis in collaboration with a company**

An agreement document must be established when the Master's thesis takes place in collaboration with a company. A template is provided (see *Guide and recommendations/list of resources*).

## **13.3. Intellectual property and data ownership**

Where there are specific aspects relating to intellectual property (IP) and data ownership, a document must be established with the supervisor and in collaboration with the technology transfer officer (TTO) of the university of the supervisor.

## **14. Exemptions**

In exceptional circumstances, a student can request exemption from these rules, by writing to the Dean of the Faculty. The request must be thoroughly substantiated.

The exemptions must be approved by the Bruface Steering and Programming Committee (BSPC) or the Faculty Board.

## GUIDE AND RECOMMENDATIONS

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### 1. Timeline

This section provides a timeline for the Master's thesis for the BRUFACE and EPB-ULB Master's degree course. It is to be used by students, academic members and secretariats of both the EPB (École polytechnique de Bruxelles) and the VUB Faculty of Engineering (Ingenieurswetenschappen) faculties.

WHEN ?	WHAT ?
Mid-February	Subjects are shared with Architectural engineering and Civil engineering students (via EPB, VUB and BRUFACE websites). Students are expected to make contact with the supervisor before applying for a specific topic.
Begin April	Subjects are shared with the students of the other programs (via EPB and VUB websites for all MA + BRUFACE website for the BRUFACE MA). Students are expected to make contact with the supervisor before applying for a specific topic.
Monday, first week of June	Opening of the online registration form.
Recommended: friday of the week following the proclamation of the June session	Submission via the registration form of the title of the Master's thesis, of the name of the supervisor, and if relevant of the co-supervisor(s) and advisor(s).
October 15 <sup>th</sup>	Closing of the online registration form. After this deadline, students who are not registered have to request the authorization of the Dean (EPB-ULB or VUB) to register to their Master's thesis.
November 1 <sup>st</sup>	Deadline to register for the January session.
November 15 <sup>th</sup>	Check at the EPB / VUB secretariats that: - the students who are in a position to defend their Master's thesis are enrolled;

	<ul style="list-style-type: none"> <li>- all the enrolled students meet the requirements to undertake a Master's thesis;</li> <li>- all requests are approved by the supervisor;</li> <li>- the co-supervisor(s) and advisor(s) comply with the regulations.</li> </ul>
December 1 <sup>st</sup>	Deadline by which a student can withdraw their application to take the Master thesis in the January session. After December 1 <sup>st</sup> , the registration is final and it is only possible for the student to do their oral defence in the second session if they do not submit their manuscripts during the January session (NB: no submission will be allowed during the June session).
Mid-December	Lists of registered students are finalized and shared with the Jury chairpersons.
First day of the January session*	Submission of the files (electronic copy) to the EPB / VUB secretariats. They are made available to the academic staff in Alfresco (ULB) and the Faculty Sharepoint (VUB).
Friday of the week before the opening of the second period of the first examination session (June session)	Submission of the files (electronic copy) to the EPB / VUB secretariats. They are made available to the academic staff in Alfresco (ULB) and the Faculty Sharepoint (VUB).
First day of the second session*	Submission of the files (electronic copy) to the EPB / VUB secretariats. They are made available to the academic staff in Alfresco (ULB) and the Faculty Sharepoint (VUB).

\*Deadline for students: before noon

## 2. Role of the Supervisor, co-supervisor(s) and advisor(s)

The role of the supervisor, the co-supervisor(s) or the advisor(s), is:

- To help the student to define the objectives and the methodology of the thesis.
- To give the student the logistical means to succeed in the thesis: access to libraries, laboratories, equipment, etc.
- To accompany the student in their research project.

The supervisor, the co-supervisor(s) or the advisor(s) should meet the student regularly during the thesis. These meetings should be set up by the student. A supervisor should not have to remind a student of the deadlines and the student is primarily responsible for the progress of their work. The student should bring content and questions to the meetings. It is recommended that the student takes notes at all meetings and sends them to the supervisor for validation in the week following the meeting.

If a student is experiencing difficulties with the supervision of their thesis, they should contact the chairperson of their jury, and if the latter is their supervisor, the Dean.

### 3. Bibliography

As with all written work, the bibliography is important: sources must be correctly cited and the bibliography must be correctly formatted. A 'good practice' guide can be found on the Virtual University (Master's Theses – Ecole Polytechnique de Bruxelles: <https://uv.ulb.ac.be/enrol/index.php?id=82422>).

### 4. Tips to avoid plagiarism

The definition of plagiarism and tips to avoid it are provided on the library websites:

<https://bib.ulb.be/fr/support/boite-a-outils/plagiarism>

### 5. Good practice

- When you begin to plan your thesis, discuss with your supervisor whether you will defend it in the first or second session.
- Make sure you keep documents to show the development of your work, e.g. reports, results, procedures, ideas, first texts. For example, it is very useful to keep a logbook, a research notebook, or a portfolio, either in paper or electronic format.
- Protect your computer documents: save your work in two different places and make regular backups. In particular, for source code, the use of a versioning mechanism (e.g. git) and a remote repository (e.g. gitlab, bitbucket, github) is strongly recommended.
- Make sure that your writing is clear and easy to read. Formal and grammatical errors annoy the reader, so make sure you use the spelling and grammar check and if possible, have the manuscript proofread by someone else.
- Make sure you synthesize. The value of a thesis is not measured by the number of pages, but rather by the quality of the work.
- Keep an up-to-date schedule and remember that writing always takes longer than

expected.

- Use the evaluation grids to understand what is expected (see Annex 1).
- Tips and support at VUB can be consulted here: <https://www.vub.be/en/studying-vub/practical-info-for-students/student-administration/bachelors-thesis-and-masters-thesis>

## 6. List of resources

The following documents and information are available for the students in the Virtual university (ULB) and Canvas (VUB). They are available to the members of the academic staff in Alfresco (ULB) and the Faculty Sharepoint (VUB).

- Practical information (deadlines, list of the chairpersons of the juries, ...)
- Template of non-disclosure agreement (NDA)
- Authorisation to consult the manuscript (mandatory upon submission)
- Tips to present a bibliography
- Template of the title page for BRUFACE and EPB-ULB Master's thesis
- Model of agreement for Master's thesis taking place in collaboration with a company
- Model of agreement for the transfer of intellectual property rights
- Regulation on ownership, protection and valorization of the intellectual property of ULB
- Latex template of a EPB-ULB and of a Bruface Master thesis, including tips for writing