

## Master's project - Guidelines

*for students, professors, and companies/universities hosting graduating students.*

### Purpose of the Master's project

The purpose of a Master's project is to develop deeper knowledge, understanding, and capabilities in the context of the program of study and to demonstrate the ability to conduct independent work in research or advanced development.

The Master's project is conducted on a topic related to the student's program of study; its description is developed by the student, the EPFL academic supervisor, and, if the project is conducted in industry, the job supervisor. For Cyber security students, the Master's project must be carried out in the field of cyber security.

The Master's project must involve more than just learning: it must include a clearly defined component that addresses a new problem for which there is currently no accepted solution, but for which the student will attempt to develop (and assess) a solution as part of the project. In the case of a project conducted within a company, this component must be applicable beyond the boundaries of the company – it must expand the knowledge base of the technical community. Whether or not a component meets the requirements of the section will be decided by the EPFL academic supervisor. A Master's thesis student must also demonstrate the ability to conduct independent work in research or advanced development.

The results of the Master's project are presented in the form of a written report (thesis) and an oral presentation during an oral examination; both the thesis and the examination are graded.

The Master's thesis is a description of the important parts of the Master's project: its initial goals, its major steps, and its final results, including a discussion of lessons learned, alternatives identified in hindsight, and possible future steps. In the case of a project conducted in industry, it is understood that only part of the work conducted in the company can be viewed as research and development, so the Master's thesis need not cover all the work done for the company. Instead, the thesis focuses on the parts of that work that demonstrate the work done in formulating the main problem, addressing it, developing solutions for it, and assessing these solutions.

The Master's project must be carried out after the acquisition of the master's credits, according to the conditions established in the Ordinance on the evaluation of the studies at EPFL. The project is usually carried out during the fourth master's semester. If the student completes a 6-month internship in industry (work experience outside of EPFL), the Master's project is postponed.

The topic of the Master's project can be proposed by:

- an EPFL lab (if the student has already done an internship in industry)
- the student
- a company
- another university (if the student has already done an internship in industry)<sup>1</sup>
- in your Startup<sup>2</sup>

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<sup>1</sup> **Master's project in a university abroad:** More information on this [page](#).

<sup>2</sup> **Master's project in your Startup:** The project must have both a strong academic perspective and clear entrepreneurial objectives. The student will receive academic support from an EPFL lab, and business advice from a professional coach from EPFL Innovation Park. They will also have the support of an alumni mentor during the semester. More information about deadlines, eligibility criteria and the application process is available on this [link](#).

The EPFL academic supervisor must approve the topic of the Master's project. The student is responsible for obtaining this approval and registering the project with the section and in IS-Academia.

According to EPFL rules, Master's projects carried out at EPFL cannot be remunerated.

## Supervision of the project

A faculty member accredited with the Computer Science and Communication Systems (IC) section is responsible for supervising the Master's project. Students must select a Master's project within the deadlines set by the section. During the Master's project, the EPFL academic supervisor is responsible for monitoring and evaluating the progress of the project. A faculty member accredited with another EPFL section can also supervise the project with the approval of the section.

If the project takes place in an external institution (company or other university), the external partner is responsible for monitoring the student's progress. This person is also the main contact for the EPFL faculty member, who remains the official academic supervisor.

Regardless of whether the Master's project is carried out at EPFL, in industry or at another university, the academic supervisor of the Master's project **must be internal** to EPFL.

## Registration

Formal registration for the Master's project in IS-Academia is the responsibility of the student, who must meet the deadlines indicated in the academic calendar. The choice of the project is made in consultation with the EPFL academic supervisor according to the above-mentioned conditions.

According to Section 4, Art. 12 of the [Ordinance on studies at EPFL](#), studies cannot be interrupted between the Master's cycle and the Master's project. This means that the student must start the Master's project immediately after the successful completion of the Master's cycle (or the conditional admission to the Master's project, if applicable). It is not advisable to take a semester off directly after the end of the Master's cycle, since this will count as a first attempt.

## Duration of the Master's project

The duration of the Master's project is as follows:

- Within EPFL: 4 months (17 weeks) + 1 week of vacation
- In a company or another university: 6 months (25 weeks) + 1 week of vacation

The student must respect the deadlines communicated by the section.

## Student status

Even though they remain enrolled as EPFL students, when students carry out their Master's project in a company or another university, they are subject to the rules of the host institution or company regarding working hours, holidays, confidentiality, salary, etc. The contractual relationship between the student and the host institution or company does not bind EPFL to the entity in question. Nonetheless, the student remains bound by the deadlines for enrolment and thesis submission set forth in EPFL's academic calendar.

## Remote work

One of the goals of the Master's project is to immerse students in the professional world or life in a lab. Therefore, remote work is neither recommended nor desired by EPFL and IC. Upon request, exceptions can be made for a limited amount of remote work (maximum 40%). Justification is required and the section reserves the right not to allow it if it does not seem to be compatible with the school's objectives.

## Work authorization

Master's projects in a company do not require a work authorisation, as they are carried out under the supervision of an EPFL academic supervisor.

## Principle of confidentiality

Confidentiality is an exception in academia, which by its nature must publish its results. Since the Master's project is an academic assignment, it should not produce confidential results.

The student must take care not to disclose any confidential information of the company to the EPFL academic supervisor without clearly marking it as such. This applies to information designated in writing by the company as confidential, but also to information observed within the company (unless it is in the public domain).

The results of a Master's project are not confidential and can be freely used by EPFL, the company and the student if no patent has been filed (or if delivery of the patent has been reused) and the results are not software.

Students must take special care not to sign an employment contract with the company that prohibits them from sharing the results of the Master's project with their EPFL academic supervisor, failing which the work cannot be validated.

Most faculty members in IC will not sign a non-disclosure agreement (NDA) with a company for a Master's project. If an NDA is required, the EPFL academic supervisor can use the *EPFL Master's project agreement* (optional and the supervisor has the right to refuse signing this document).

The *EPFL Master's project agreement* specifies the exact scope of confidentiality, which cannot comprehensively cover the entire project. It also clearly outlines the claim to intellectual property rights and limits the period within which the company can patent the project results.

Unlike the *EPFL Internship Agreement*, this document is not accessible to students, staff, and companies, as only professors are authorized to use it and thus take responsibility for EPFL's engagement in a research context<sup>3</sup>.

It is not possible to sign any other documents in place of the *EPFL Master's project agreement* for Master's project such as:

- NDAs.
- company documents that contain a broader notion of confidentiality than the one described in the EPFL Master's Project Agreement or where the notion of IP is the sole responsibility of the company.
- any other form of internship agreement / "convention de stage".

The text of the *EPFL Master's project agreement* cannot be modified.

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<sup>3</sup> [Agreements for Master's projects outside EPFL](#) (industry or academic mobility) – access restricted to EPFL faculty.

**→ Confidentiality of the thesis report**

The thesis report should not contain confidential information and should be uploaded as is on IS-Academia.

However, if the student ticks the "confidential" box, the EPFL academic supervisor will be notified by an automated email. If the EPFL academic supervisor has not signed a research contract or the *EPFL Master's project agreement*, the student must remove the confidential parts of the report before uploading.

**→ Intellectual property**

The results of the Master's project can be freely used by EPFL, the company and the student, unless a contract has been signed (*EPFL Master's project agreement* or research contract).

**Evaluation during the project**

In order to assess the student's abilities and the direction in which the project is going, it is important that the EPFL academic supervisor be involved in the progress of the project. The EPFL academic supervisor may ask the student to give an interim presentation. If a presentation is not requested, it is the student's responsibility to request it.

The EPFL academic supervisor, in consultation with the company, may re-orient the work to ensure that the project meets the requirements of the Master's project, which demonstrates the student's ability as an engineer.

The Master's project includes a written report (thesis). The student must plan the time necessary to write this report and should not use work time to do so.

**Master's thesis**

The student is expected to write the master's thesis in English or French, in accordance with the following guidelines and in conformity with the ethics rules concerning plagiarism. This includes:

- The title
- The student's contact information (surname, first name, address)
- The name of the EPFL lab, or the university or company in which the Master's project work was done
- The name of the responsible EPFL academic supervisor
- The results of the thesis (analysis, conception, and implementation)

The thesis must represent the work done by the student to be able to evaluate the student's work. The report will be archived in the section and, in general, in the laboratory of the EPFL academic supervisor.

The thesis must be submitted electronically (PDF) to the EPFL academic supervisor and their administrative assistant (and to the company/other university supervisor, if applicable) by 12:00 noon, Swiss local time, on the date indicated, with a copy to the section. In addition, the work should be uploaded to IS-Academia if the project is not confidential. Failure to submit the Master's project by the deadline indicated constitutes a failure.

Any change in the title of the Master's project must be communicated to the section and can be updated in IS-Academia till the report submission day. The title is mentioned on the student's Diploma Supplement.

EPFL has strict anti-plagiarism policies<sup>4</sup>. When uploaded in IS-Academia, the electronic version of the document will be scanned for plagiarism. Any work found to contain significant plagiarism will be rejected.

## Defense and jury

The EPFL academic supervisor, together with the student, sets the date for the oral exam and selects the examination expert from amongst EPFL staff members or persons external to EPFL. The EPFL academic supervisor **may not** choose a staff member from their unit or a PhD student. The oral exam takes place within a maximum of four weeks from the date the report is submitted. This date of the oral exam and the jury composition must be inserted by the EPFL academic supervisor in IS-Academia at least one month before the oral exam.

The defense of the Master's thesis consists of an oral presentation followed by an oral examination. The jury is composed of the EPFL academic supervisor and an examination expert, nominated by the EPFL academic supervisor and approved by the Registrar's office. The examination expert appointed is authorized to intervene during the oral examination. The jury evaluates the student's written report and presentation.

Only the EPFL academic supervisor may invite other persons to the oral examination. These persons have no right to intervene or ask questions. The EPFL academic supervisor should discuss this with the student beforehand to see if the student agrees, because the oral defense of the Master's project is not public.

The jury will consider the following elements:

1. The realization of the project, i.e., how the student defined her or his topic, how she or he analyzed the different steps, how she or he evaluated her or his work at regular intervals (including regular communication with her or his supervisor), and how she or he handled unforeseen events (change of topic, deadlines, etc.).
2. The content of the academic part of the Master's thesis, i.e., the analytical, formal and bibliographical approach to the topic.
3. The quality of the written report (presentation of the report, clarity, precision, references, language).
4. The quality of the oral defense (quality of the slides, synthesis, elocution, relevance of the possible demonstrations).

## Conditions for passing

The Master's project is considered passed when the student has submitted the work within the specified deadlines and has received a grade of at least 4.0 (maximum 6.0; 0.25-point increments from 1.0).

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<sup>4</sup> More information: [EPFL Library citation and copyright guidelines](#).

**Extension**

If the quality of the written work is considered inadequate, the EPFL academic advisor can request the student revise it within two weeks following the oral examination, with the agreement of the Section. Modification may be made to the format, but not the content (data), of the thesis. If aspects of the data presented are considered inadequate, the text must be written to accommodate the comments of the jury panel.

**Withdrawal and failure**

A Master's project cannot be abandoned once it has begun, except for exceptional reasons and with the agreement of the EPFL academic advisor and the company or the university contact person. In all cases, the section must be informed immediately.

Withdrawal from a project is considered as a failure of the Master's thesis. In case of failure, a significantly different topic must be chosen for the second attempt. A second failure is eliminatory.

The second attempt will be granted only if the deadline for successful completion of the Master's project allows it. The Master's project must be successfully completed within two semesters of successful completion of the Master's cycle (or the conditional admission to the Master's project, if applicable).

## Annex 1 - Procedure

### Supervision

The selection of the EPFL academic supervisor to supervise a Master's project is determined by the topic of the project.

### Role of the EPFL academic supervisor

- Validates the topic of the Master's project by signing either the **\*Master's project registration form\*** completed by the student together with the company or the **\*Master's project at EPFL form\***.
- Ensures the smooth progression of the Master's project, whether it is carried out in an EPFL lab, in a company, or at another university.
- Organizes the follow-up and/or an interim presentation of the project.
- Evaluates the report (thesis) of the Master's project.
- Organizes the oral defense of the Master's project by inviting an external expert. In general, the contact person of the company is the external expert.
- Gives a grade for the Master's project.

### Role of the student

- If the Master's project is to be carried out at EPFL, the student gets the approval of the EPFL academic supervisor who will supervise the project and obtains the signatures of the **\*Master's project at EPFL form\***.
- If the Master's project is to be carried out in a company or at another university, the student completes the **\*Google form\*** and submits it to the section for pre-validation.
- Once the section has given its pre-approval, the student must find an EPFL academic supervisor who will supervise the project. The EPFL academic supervisor will be selected depending on the topic of the project.
- The student fills in the **\*Master's project registration form\*** and has it signed by the EPFL academic supervisor and by the supervisor of the company/other university.
- The student returns the form to the internship office: [internships.ic@epfl.ch](mailto:internships.ic@epfl.ch)
- The student registers for the project on IS-Academia.
- If the Master's project is carried out in a company or at another university, the student must confirm their arrival at the company or university and the starting date of their Master's project by sending an email to the Computer Science and Communication Systems section.
- The student must submit monthly progress reports to the EPFL academic supervisor.
- Within the submission deadline confirmed by the Registrar's office (SAC) and the section, the student must:
  - send the electronic copy of the Master's thesis report to the EPFL academic supervisor and their administrative assistant (and, if applicable, to the company/other university supervisor), with a copy to the Computer Science or Communication Systems section.
    - o [antonella.veltro@epfl.ch](mailto:antonella.veltro@epfl.ch) (IN)
    - o [carole.dauphin@epfl.ch](mailto:carole.dauphin@epfl.ch) (SC/DS)
    - o [jasmine.locatelli@epfl.ch](mailto:jasmine.locatelli@epfl.ch) (CYBER)
  - upload the electronic copy of the Master's thesis report in IS-Academia (except for the students whose project is confidential).
- The student must prepare an oral defense of their Master's project.

(\*) All **\*forms\*** are available on this [page](#) (see section Forms to be completed for registration).