

CoDaS

M.Sc. in Communications Engineering and Data Science

Guidelines for M.Sc. Theses

Purpose of this document

The purpose of this document is to give the students of CoDaS programme an overview of the thesis process completed in the joint supervision of two partner universities. The document provides instructions how to navigate with the joint supervision of the thesis, as well as summaries of the guidelines and schedules of each partner university. In case the instructions in this document are conflicting with the instructions given by the university directly, the student should follow the instructions given by the university.

At the end of the document, guidelines for the thesis defense involving Técnico Lisboa & Aalto and Técnico Lisboa and Grenoble INP-UGA are provided based on the previous experience in the programme. Other students should follow the instructions given by their Home and Host Universities.

How the M.Sc. Thesis is conducted in CoDaS

As CoDaS is an international joint programme, the master's thesis must be conducted in joint supervision of the two universities the student has studied in (Home and Host University). Both universities grant the credits of the thesis, i.e. thesis credits are not transferred between universities. Completing the thesis under the supervision of both universities is required by all CoDaS universities in order to grant the degree from the university in question.

If the student is required to study the final semester in a third country because their country of residence at the start of the programme has been in either Home University or Host University country, the student will still conduct the thesis under the supervision of both Home and Host University. In addition, the student will have a third supervisor from the country they are writing their thesis in. The third supervisor can be from the industry or university, depending on the organization the student is completing the thesis in.

The student needs to follow the instructions, rules and schedules of both Home and Host University. It is important that the student familiarizes themselves with the instructions given by both universities, not only in this document but also the information given by the university directly via university's own website, emails etc.

As a rule, the main responsibility of the thesis supervision is where the student is physically located, i.e. at the Host University, and the supervisor of the Host University will act as the main supervisor. If the student is physically located somewhere else, the responsibility of the main supervision can also be agreed otherwise. In day-to-day matters and questions, the student should be in contact with the

main supervisor (or person nominated by them). The supervisor of Home University is encouraged to participate in the process and provide feedback; however, the Home University supervisor's main role is to fulfil the formal role of thesis supervisor at the other university. The thesis will be evaluated by both supervisors.

How to get started

The student should first get to know the instruction provided by their Host and Home Universities to get an overview of the process and schedule. A summary of the process of each university and links to further instructions are provided in this document.

It is the student's responsibility to find the thesis supervisors for themselves from both universities. The student should contact the academic staff of the field they are interested in directly for example, by email. It is advised to first find the supervisor from the Host University and then from the Home University. Once the supervisors and preliminary thesis topic have been agreed, it is recommended to organize a kick-off meeting online with both supervisors to agree on the practicalities and the schedule.

Industrial collaboration

The thesis can be conducted as fully an academic research project. However, the students are encouraged to search thesis positions from the industry and select projects that increase their employability and career prospects after graduation. Academic research projects are recommended to those who consider doctoral studies after graduation.

The students can look for thesis positions at the Associate Partners of CoDaS Consortium (see [Co-dasHub](#)) or other companies or research organizations. The position can be paid or unpaid. Erasmus Mundus scholarship holders cannot benefit from another EU funded scholarship scheme: if the position is paid and the project is based on EU-funding, the student should contact the programme coordinator as early as possible.

If the student finds a thesis position from an external company/organization, the thesis will have three supervisors/advisors: Home and Host University supervisors and supervisor/advisor from the external organization. The student must still follow the instructions and schedules of the universities, and the final decision on the thesis topic is made by the universities. Note that the terminology may differ between universities (who is called a supervisor or advisor etc.).

Practicalities

The student will write one thesis. However, as the thesis must meet the requirements of both universities, sometimes the student must make two separate versions of the document to meet the technical requirements.

The student must also follow the schedule of both universities. Each university has their own schedules, please find a summary on the table below. By default, the student should submit the thesis for evaluation by the earliest of the two deadlines set by the two universities.

The student should contact the administrative staff of their Home and Host Universities in case of any unclarity of the thesis and graduation schedule.

University	Start of thesis process	Deadline for thesis submission	Deadline to finish the degree	Official graduation date	Notes
Aalto	Start searching for the topic around November Start writing in early January	31 July	31 July	31 July	Student may also continue the thesis to autumn semester if needed due to partner university's semester schedule. In that case, the student must apply for tuition fee waiver for the autumn semester. The student must also register as attending for autumn semester and therefore needs to pay the student union and health care fees (~68€). If student registers attending for autumn semester, the deadline for thesis submission and graduation is 31 December.
Grenoble INP	Early February	Depending on the date of the defense (two weeks before the defense)	30 September	28 /29 or 30 September	
IST	November	31 October	31 October	31 October	https://tecnico.ulisboa.pt/files/2022/03/masters-dissertation-topics-deadlines-and-procedures-2021.pdf https://tecnico.ulisboa.pt/files/2024/08/masters-dissertation-conclusion-deadlines-and-procedure-2024-2.pdf
TU-BS	No specific date - §6 (2) Students may not	§6 (5) The processing time	There is no specific deadline!	Graduation Date is the date on which the last	

	register for the Master's thesis until they have successfully completed modules totaling *at least 75 credit points* for the Master's degree programme in Computer Science.	from the assignment of the topic to the submission of the Master's thesis is six months. The topic can only be returned once and only within two months of its assignment. Upon reasoned request to the Board of Examiners in Computer Science, the processing time can be extended by up to two months.		achievement in the degree programme was successfully completed.	
UPC	Late January-early February. Thesis topic must be assigned 48h before enrolment. Regular enrolment is during the first week of February (5th-6th, typically), although it can also be done later.	At least one week before defense. The student can defend at any time (provided her/his advisor approves the thesis submitted), before the defense deadlines: 1st call: 15th September. 2nd call: 31st October	Same as the thesis defense deadlines: 1st call: 15th September. 2nd call: 31st October Students who go to the second call usually cannot receive the honor distinction (limited to 5% of the thesis) and will have to pay a 90 euros fee (not covered by Mundus or CoDaS grants)	As soon as the student completes all the courses and the master thesis. Deadline: 31st October	

Completion

The student should complete the master's programme in two academic years, including the thesis.

CoDaS programme fees and scholarships are valid only for the normative duration of studies (two academic years). After the normative duration of studies, the student may become subject to local fees of Home and Host Universities. Therefore, it is very important to follow the thesis and graduation schedule of both universities.

The thesis must be submitted separately to both universities according to the universities' instructions. The thesis must be submitted at the same time to both degree-awarding universities and with the same content. The student may take a day or two after the earlier deadline to edit the layout for the other university.

The student must also hold a defense/presentation of their thesis according to the universities' requirements. It is recommended to organize the event in a way that the supervisor from other university participates online, or that the event is held fully online.

The thesis is evaluated by both supervisors. As each university grants the credits and grades the thesis, the grade may differ between universities.

After the thesis and courses are finished, the student applies for graduation from both Home and Host University according to their instructions.

Contacts for further information

Contacts for the CoDaS programme and this document:

Professor Stephan Sigg, programme director, Aalto, Stephan.sigg@aalto.fi

Planning Officer Ella Lankinen, administrative coordinator, Aalto, codas@aalto.fi

Key academic contacts at each partner university for further information about CoDaS and the thesis procedures:

Aalto: Professor Stephan Sigg, Stephan.sigg@aalto.fi

Grenoble INP-UGA: Martin.Heusse@imag.fr

Técnico Lisboa: Prof. Luis M. Correia, luis.m.correia@tecnico.ulisboa.pt

TU Braunschweig: Prof. Lars Wolf, L.Wolf@tu-braunschweig.de / Marvin Plagge international-fk1@tu-braunschweig.de

UPC: Prof. Carles Gómez, Academic Coordinator of CoDaS at UPC, eetac.mastertelecom@upc.edu /

Dr David Rincón, Head of Master Studies, eetac.masters@upc.edu



Aalto University

Summary of thesis requirements

Approval of the master's thesis topic and supervisors

- The student chooses a subject they are interested in and contacts the professor or university lecturer of the field and agrees on the topic with them. The supervisor may also assign an additional advisor to help with the day-to-day guidance.
- The student can search and apply thesis positions within the industry independently. Even if the thesis is done for the industry, the student must have academic supervisor for it. The thesis can also be done just for the university without industry collaboration.
- The topic, supervisor and advisors must be approved by the programme director with continuous online application.
- Requirements for starting the thesis: BSc degree completed, MSc study plan approved, topic agreed with a supervisor, supervisor must be a professor or university lecturer working at Aalto.

Thesis template

- Aalto's thesis template must be used.
- The thesis is a public document and it cannot contain any confidential information.

Seminar presentation

- At the end of the thesis work.
- The thesis supervisor must be present (onsite or online) and the presentation must be completed at the latest by the deadline for submitting theses and graduation application. No other specific requirements.

Evaluation and approval of the master's thesis

- The target time for completing the thesis is six months. Time used for completing the thesis affects the thesis evaluation.
- The grade of the thesis is approved by Degree programme committee, based on the supervisor's statement.

Read carefully more detailed instructions here:: <https://www.aalto.fi/en/programmes/joint-international-masters-programme-in-communications-and-data-science/thesis>



Note:

The target time to submit the thesis and graduation request is 31 July. However, the student may continue working on the thesis to autumn semester if needed due to partner university's semester schedule. In that case, the student must apply for tuition fee waiver for the autumn semester. The student must also register as attending for autumn semester and therefore needs to pay the student union and health care fees (~68€).

If student registers attending for autumn semester, the deadline for thesis submission and graduation is 31 December. **If the student does not submit the thesis and graduation request at the latest by 31 December, the student may become liable to pay Aalto tuition fee (7500€/semester for non-EU/EEA students).**

Grenoble INP-UGA

Approval of the master's thesis topic and supervisors

- The students choose a subject area they are interested in. They contact academics in local research groups and negotiate a project with a professor or researcher.
- The subject and supervisors of the thesis have to be approved by the programme directors.
- If the internship is outside Grenoble or in a company, the student has to ask a professor to be his/her tutor.

Evaluation and approval of the master's thesis

- Students have to write a 40 +/- 10 pages report. There is no compulsory template.
- The defense is public unless the internship host entity explicitly requests otherwise. The defense takes place within the UGA premises or remotely subject to approval by the president of the jury.
- The defense jury is composed of one of the programme directors, the thesis supervisor, the tutor (if internship in a company or outside Grenoble) and an external expert named by the supervisor.
- The defense lasts one hour: 25 minutes of presentation, 20 minutes of questions, 15 minutes of deliberations, 5 minutes to install next student.
- The masters research projects are assessed with the following criteria:
 - The supervisor's judgement (20%)
 - The external reviewer's judgement(20%):
 - Defense itself (60%)
- Please find more information here: <https://mosig.imag.fr/MainEn/Projects>

Note:

If the student does not graduate according to the schedule, they will need to be registered as a degree student, and will have to pay local tuition fees (250 euros approx).

Students have the right to repeat their year once. There can be exceptions for students with a medical certificate.

Tecnico Lisboa

Delivery

The student must deliver

- Dissertation - The graphic presentation of the dissertation to be submitted for final assessment must follow the model available in the Dissertation Preparation Guide. The dissertation to be submitted for final assessment must not exceed 80 A4 pages. Additional documentation that is considered relevant may be attached to the dissertation in the form of an independent annex, up to a maximum of 100 A4 pages in total.
- Extended Abstract - Extended summary in the form of a scientific/technical article of up to 10 A4 pages, following the IEEE paper style.

Evaluation

The Jury is made up of 3 to 5 members, as follows:

- The President of the Jury, who is a member of the MEEC Scientific Committee, appointed by the MEEC Coordinator;
- Representative of the advisory team (who cannot preside over the Jury);
- 1 to 3 national and/or foreign members who may be professors, Ph.D. researchers, specialists holding a Ph.D. degree, or up to 2 specialists of recognised merit in the area of the thesis. One of the members will assume the role of examiner.

The public examination may not, under any circumstances, exceed the duration of 90 minutes, and it is recommended that, as current practice, they last 60 minutes. The President of the Jury is responsible for managing the duration of the public examination in accordance with the following rules:

- the first 20 minutes should be taken up by a presentation summarising the work by the candidate;
- the remaining 40 to 70 minutes should be taken up by the discussion of the scientific/technical content of the work, divided equally between the interventions of the Members of the Jury and the candidate. Portuguese and/or English may be used during the public examination.

Grading

Grading is done according to the following components:

- 50% - A) Scientific/technical quality of the dissertation/project:
 - Structure of the dissertation/report;
 - Quality of the bibliographic review;

- Clarity of the objectives and their achievement;
- Originality of the problem/project addressed, of the methodologies used and of the solutions proposed;
- Revealed ability to apply knowledge to solve unfamiliar problems;
- Scientific/technical rigor;
- Critical analysis of the proposed solutions and the results obtained;
- Clarity and quality of writing and graphics;
- Relevant and comprehensive references.
- 20% - B) Quality of the article/extended summary
 - Structure of the article/summary;
 - Scientific/technical rigor;
 - Clarity and quality of writing.
- 10% - C) Quality of public presentation:
 - Quality of presentation;
 - Clarity of presentation, including the ability to communicate to non-specialists
 - Scientific/technical rigor;
 - Ability to summarize.
- 20% - D) Public discussion
 - Confidence;
 - Ability to argue

Note:

The student who has not obtained approval for the thesis according to the schedule must, for the purpose of completing the programme, make a new enrollment in the dissertation curricular unit.

TU Braunschweig

Formal requirements

Approval of the master's thesis topic and supervisors

- Students may not register for the Master's thesis until they have successfully completed modules totaling at least 75 credit points for the Master's degree programme in Computer Science.
- The processing time from the assignment of the topic to the submission of the Master's thesis is six months. The topic can only be returned once and only within two months of its assignment. Upon reasoned request to the Examination Board in Computer Science, the processing time can be extended by up to two months.
- The topic of the thesis can be assigned by the members of the group of university lecturers of the Department of Computer Science and the full-time private lecturers of the Department. With the approval of the Examination Board, the topic may also be assigned by retired professors of the Department of Computer Science and other persons authorized to conduct examinations according to § 5 (1) General Examinations Regulations.
- At the student's request, the Examination Board for Computer Science can decide that the second supervisor of a Master's thesis can also come from outside TU Braunschweig. A request must be submitted to the Computer Science Examination Board at least one week before the written registration of the Master's thesis.
- Using TU Braunschweig's thesis template is not compulsory by default. Please discuss with your supervisor.

Evaluation and approval of the master's thesis

Before the thesis is evaluated, the student gives a presentation lasting approximately 30 minutes, in which he or she presents the thesis. The presentation can count for up to 3 out of 30 credit points of the evaluation of the thesis, if the achievement of the qualification objectives for the selected chosen topic is meaningfully complemented by the presentation. The examiner will announce at the time the topic is given whether and to what extent the presentation will be included in the grade.

Note:

For students already enrolled, the semester fee/contribution must be paid by 1 August for the winter semester and by 1 February for the summer semester. If the student has completed all required examinations, including the MA thesis, by one month after the start of lectures, the TU Braunschweig semester fees/contribution can be refunded in full upon ex matriculation.



UPC-BarcelonaTech

Master Thesis procedures are described here: <https://eetac.upc.edu/en/academic-procedures/bachelor-and-masters-thesis>. What follows is a summary:

Offer, enrollment, deadlines

- The student finds the advisor(s) and agrees on the topic (there is also a list of proposals at https://mitra.upc.es/SIA/PFC_PUBLICA.LLISTAT_OFERTS?w_codi_programa=1600)
- In case the MT is offered by a company, the advisor is from the company, and a UPC professor plays the role of supervisor.
- Once the topic is assigned, the student enrolls the MT. This can be done at any time during the semester, but it is recommended to do it during the regular enrollment period (early February).
- The MT can be defended any time during the semester. The deadlines are: 15th September (1st call), 31st October (2nd call). If the student misses the 1st call deadline, a fee of 90 euros is charged (this would not affect students with Erasmus Mundus or CoDaS scholarships), and typically they cannot obtain a Honors distinction (as they are limited to the best 5% and all are typically assigned to 1st call students). If the student misses the 2nd call, the MT is evaluated as failed.

Evaluation: report and public defense

The outcome of the MT includes:

- A written report
 - It should include a description of the problem, the state of the art, the methodology, the results, and the conclusions and future work. It must be written in English.
 - The report must not exceed 50 pages (from Introduction to Conclusions), but there is no limit for annexes. It is compulsory to use UPC template. The template can be found here: <https://eetac.upc.edu/ca/els-estudis/TFE/maqueta-del-tfe>
 - If confidentiality is required, the report can be embargoed for a certain time period or indefinitely, and the evaluation committee members sign a non-disclosure agreement.
 - The written report must be approved by the advisor, and must be uploaded at least one week before the defense date, so the evaluation committee has time to read it.
- A public defense



- Students who spend the 1st year at UPC as home university and do the thesis in a host university **do not have to defend** it at UPC. The grade obtained in the host institution will be transcribed at UPC. These students will only have to submit the thesis report following the UPC template.
- Students who do the thesis at UPC as host institution will follow the instructions presented here:
 - The evaluation committee is composed by 3 UPC professors: a President (chosen by the advisor), a Secretary (the MT advisor), and a Vocal (chosen randomly among the professors of the departments involved in the master).
 - The date and time is agreed by the members of the evaluation committee and the student.
 - The defense includes a presentation (in English) by the student (max 30 minutes) and questions from the evaluation committee (typically between 30 – 60 minutes). After the questions, the student and the public is asked to leave the room and wait outside.
 - The evaluation committee agrees on the evaluation, and it is communicated to the student. In case of extraordinary quality, a Honors distinction can be proposed, but it will be decided by the School by end of the 1st or 2nd call, as this distinction is limited to the best 5% students.

Note:

If the student does not complete the degree according to the schedule, the student becomes liable to local tuition fees and must enroll again any pending course.

Courses must be enrolled mid-July (for the Autumn semester courses that start on September and finish in January) and early February (for the Spring semester courses that start in February and finish in June).

The master thesis can be enrolled anytime, but the deadlines are:

- MT enrolled in February or later: 1st call: 15th September, 2nd call: 31st October
- MT enrolled in July or later: 1st call: 15th February next year, 2nd call: 15th July next year



Aalto & Técnico Lisboa

Thesis Defense

The Jury is made up of 4 to 5 members, as follows:

- The President of the Jury from Técnico Lisboa, i.e., a Prof. who is a member of the MEEC Scientific Committee, appointed by the MEEC Coordinator;
- A Prof. from Técnico Lisboa representative of the supervisor team;
- Aalto thesis supervisor;
- A Prof. from Técnico Lisboa as opponent;
- If appropriate, a specialist of recognised merit in the area of the thesis, i.e., a co-supervisor from the company where the thesis was developed.

The public examination may not exceed the duration of 90 minutes, and it is recommended that, as current practice, it should last 60 minutes. The President of the Jury is responsible for managing the duration of the public examination in accordance with the following rules:

- the first 20 minutes should be taken up by a presentation summarising the work by the candidate;
- the remaining 40 to 70 minutes should be taken up by the discussion of the scientific/technical content of the work, divided equally between the interventions of the Members of the Jury and the candidate. English will be used during the public examination.

The public examination may be conducted in a hybrid mode (i.e., some of the committee members and/or the student attending in-person and the remaining committee members and/or the student attending remotely), or fully in a remote one (i.e., will all committee members and the student attending remotely).

The location for the in-person component of the examination should be at Técnico Lisboa, but it is not mandatory.

Grenoble INP-UGA & Técnico Lisboa

Thesis Defense

The Jury is made up of 4 to 5 members, as follows:

- A Co-President of the Jury from Técnico Lisboa, i.e., a Prof. who is a member of the MEEC Scientific Committee, appointed by the MEEC Coordinator;
- A Co-President of the Jury from Grenoble INP-UGA, i.e., a Prof. who is one of the programme directors;
- A representative of the supervisor team in the host institution;
- One or two representatives of either Técnico Lisboa or UGA, so that at least two members of the jury are from each university.

The public examination may not exceed the duration of 90 minutes, and it is recommended that, as current practice, it should last 60 minutes. The Co-President of the Jury from the university where the work was developed is responsible for managing the duration of the public examination in accordance with the following rules:

- the first 25 minutes should be taken up by a presentation summarising the work by the candidate;
- the remaining 35 to 65 minutes should be taken up by the discussion of the scientific/technical content of the work, divided equally between the interventions of the Members of the Jury and the candidate. English will be used during the public examination.

The defense is public, unless the internship host entity explicitly requests otherwise.

The public examination may be conducted in a hybrid mode (i.e., some of the committee members and/or the student attending in-person and the remaining committee members and/or the student attending remotely), or fully in a remote one (i.e., will all committee members and the student attending remotely).

The location for the in-person component of the examination may be at Técnico Lisboa or at Grenoble INP-UGA, but it is not mandatory.

