FAQ MASTER THESIS

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2   FIRST STEP: GENERAL INFO

This was the longest message found within the group on the topic:

Basically, there are 3 ways to carry out the thesis: internal project, project with company internship, or internal project with start-up view. It is recommended to have at most 1 or 2 exams left before starting the project.

Most of the meeting was dedicated to illustrating the evaluation procedure for the Master's Thesis (https://informatica.math.unipd.it/en/master/graduation/) and the calculation of the final grade. The new regulation applies to those who graduate from July 2023 onwards, regardless of whether one has taken the courses in Italian or English.

Furthermore, in response to questions, the professor (Baldan) said that:

- It is possible to carry out the thesis project abroad/in Erasmus
- The duration of the project (six months) is only a suggestion, but the project can last longer
- The main topic of the project must be related to computer science (but it may not be the only area of the project, especially if carried out for a startup)
- The discussion of the thesis usually takes place 1/2 days before the proclamation date and the discussion date is communicated about 10-15 days in advance
- It is possible to cancel the graduation request once submitted (although every time you resubmit the request you have to repeat the tuition fee payment, around 30 euros)
- To graduate you need to follow these steps (https://www.unipd.it/en/graduation) without forgetting any of them
- The website https://informatica.math.unipd.it/en/master/ contains many useful information

Additionally, prof. Baldan said that today's invited lecturer for Advanced Topics in Computer Science cannot come in person and a live meeting will be projected in 1BC50.

The website (https://informatica.math.unipd.it/en/master/graduation/) specifies the following:

> **33 credits are devoted to the master thesis**, roughly split into 27 credits (675 hours, corresponding to about 5 months of work) for the thesis project and 6 credits (150 hours, corresponding to about one month of work) for the drafting of the thesis document. The master thesis project is carried out under the guidance of a teacher of the Master's programme.
>
> **A thesis project is a significant work**, in terms of breadth and depth, which allows you to become familiar with advanced themes in computer science. It typically leads to the **development of original research results or innovative software products**.
>
> There are various **ways of carrying out the thesis project**:

Internal Project	**Internal Project with Start-Up View**	**Project with company internship**
The student works under the guidance of an academic supervisor, who guides him in identifying the thesis topic, developing the project and drafting the thesis.	This is a variant of the internal project, in which the student or group of students, in addition to developing the technical aspects of the project carries out a preliminary study on evolving the project into a start-up, with the support of a partner incubator.	The student carries out the thesis project, entirely or for a relevant part, in a company or in a start-up. The supervisor is complemented by a company tutor, who guides and supervises the student's work in the company.

Quoting directly from the site (in case it goes down, sadly it happens):
To stimulate thesis projects with Startup-View and Internships, the course of study **organises Company-student meetings with the support of the partners**.

When to start and how to find a supervisor

The Master Thesis is the concluding activity of the study path. Since it is intended to lead to the realization of a relevant piece of work, it requires the student to work regularly and with limited distractions. For this reasons, the Master Project should be started after finishing the course exams or, at least, when the number of course exams still to be given is limited (say, 2/3 at most). Ideally, this should happen at the beginning of the second semester of the second year (but in case you are late with the exams, first concentrate on them).

When you feel ready to start, the first step consists in **finding a supervisor** (this applies also to the case in which you might be interested in realising your project in a company). There is no formalized procedure for this: simply contact the professors of the courses that you liked most and/or in the area where you'd like to realise your project and discuss the possible thesis themes.

Evaluation of the Master Thesis (from July 2023)

The **final degree grade** is calculated as the sum of the **master thesis grade** and the **weighted average of the exams** passed, normalized on a scale of 0 to 110 (i.e., average * 110/30).

The master thesis is evaluated according to the following **grading scheme**:

- 0-3: sufficient
- 4-5: good
- 6-7: very good
- 8-9: excellent (requires the opinion of an **independent reviewer**)

The supervisor proposes a grade, possibly asking for the opinion of an independent reviewer. The student presents the thesis in front a **graduation committee** (the discussion is in English). The final grade is decided by the **graduation committee** through a majority vote. The **distinction (laude)** is awarded to students who demonstrated very good or excellent quality in the curriculum, in the thesis, and in the final thesis defense; it requires **unanimity**.

The following **bonus points** are added to the thesis grade:

- **1 point** for completing **all** exams by **July** of the second year

- **1 point** for graduation by **December** of the second year

A document providing more details on the procedure is available at the following link.

Other links of reference:

- Upload thesis and other Uniweb procedures (Italian)
  - https://www.unipd.it/manuali-uniweb
- General information for the graduation procedure
  - https://www.unipd.it/en/graduation
- Website for uploading the master's thesis for the committee within 15 days before the official graduation date
  - http://servizi-informatica.math.unipd.it
- Website for uploading the master's thesis for the University within 8 days before the official graduation date: https://uniweb.unipd.it/
- Website for uploading the presentation slides within 12.00 PM of the day before the discussion
  - https://servizi-informatica.math.unipd.it/
- The presentation lasts 20 minutes plus questions from the committee.

3   FIRST STEP: PRACTICAL INFO

Now:

- The best way is to first talk to the professor you want to have the thesis with, that is a professor of the field/topics you are interested in
    - o the supervisor must be related to the topics of the thesis and usually coincides with the major path; no problem if you do something else anyway

3.1   MISCELLANEA OF RELATED QUESTIONS

These questions are to be found within the group or people which I personally helped over the years with, so I collect them here.

- I have no idea what to do – what can I do to start?
    - o Talk with professors, go out and look for a company or a startup. No one will guide you, you just have to first find a supervisor, then start looking for projects which may be interesting both for your supervisor and a possible company/startup, but first of all yourself.

- Can Professors from other departments supervise master thesis?
    - o Hi, when I started my thesis (march 2023) this was not possible, I was told from professor Baldan that only professors teaching strictly inside computer science (which should be those here (https://en.didattica.unipd.it/off/2023/LM/SC/SC2598), but relative to the year you started) can be supervisors.
      Nothing stops you from having another external supervisor if you're working with another department, but you may need to find an internal professor willing to follow you as well as main supervisor, unless these rules changed.
      I suggest you to ask directly to the head of studies, so according to this page (https://informatica.math.unipd.it/en/master/admission.html) professors Palazzi and Da San Martino

- Does anyone know how many days before the graduation ceremony we must upload the final version of the thesis?
    - o 2 weeks

- When will I receive the timetable for graduation and stuff?
    - o Within 2 weeks, it depends

- As far as you know, has a professor ever refused to approve a thesis on Uniweb?
    - o So far it very rarely happened, almost never

- Does anyone know how long the thesis presentation is? And is there usually a few questions at the end?
    - o The graduation date and discussion date are different. Later we will receive an email including the pdf with timings and everything.

- Is anyone familiar with who to contact for a faculty supervisor to an internship through the career office? I see some other programs have dedicated faculty members for this.
    - Email to stage@unipd.it
    - And ask for the rector of your degree

- Hi guys! Is an internship is mandatory for CS masters students?
    - Hi, no it's not, check out this page (https://informatica.math.unipd.it/en/master/graduation/), as you can read there are three ways to carry out the thesis

- Hi all, what do you think is the best way to find an opportunity for a master thesis as project with company internship ?
    - Probably the best way is to first talk to the professor you want to have the thesis with, that is a professor of the field/topics you are interested in.

- Does anyone know if for an internship (not including thesis) we have to talk with a professor to be the supervisor or should we fill this section with something else?
    - At the time of this writing, Prof. Vardanega is the one in charge of internships.
    - If the internship is not finalized for the thesis I don't see a reason to contact any professor. If you're willing to register some of the other training activities credits with that, then you may want to speak with Da San Martino or Bresolin
    - No internship is mandatory in Computer Science but you can do it as part of your thesis and/or to gain credits for "Other training activities". In both cases you should talk with a professor.

- Can we take the thesis if we haven't finished all our courses?
    - You can start working on it under your prof's supervision. However, once you finished all your courses, you can submit your thesis.

- Hello, does anyone know if the supervisor i choose for the thesis must be related to my major path in the study plan?
    - It must be related to the topics of the thesis, which usually coincide with what you did in your major path
    - Yes usually you'll do a thesis on your major but it's no problem if you want to do something else. Many interesting topics for thesis are not even in majors. For sure the professor should be related to the topic of the thesis, major or not.

- Hey guys, is there a master thesis template and guidelines on how to write it?
    - Hi, you can look on the FIUP's GitHub for the LaTeX template and other resources (also present inside of this file). Regarding guidelines you should talk with your supervisor to understand his preferences and suggestions and agree on a higher level structure. Then you may have a look at older theses from students who had your same supervisor to take further inspiration

4 SECOND STEP: THESIS

Generally:

- There is no strict/mandatory requirement for the thesis, do as you like about number of pages, font, size, sections. This depends on your supervisor usually
- It is written upon a 6 months work at least; depends on you if it is full-time or not; you decide yourself, so you can work autonomously under a supervisor guidance, in a company full-time or whatever you want
- YOU DO NOT NEED to print your thesis
- It has to be uploaded on https://servizi-informatica.math.unipd.it/

4.1 TEMPLATES FOR THESIS

This is not intended to be a comprehensive list, but it may be useful:

LaTeX:

- https://github.com/FIUP/Thesis-template
- https://github.com/giovannifil-64/unipd-thesis-template
- https://github.com/lusergit/thesis-template

Typst:

- https://github.com/eliapasquali/typst-thesis-template
- https://github.com/BIRSAx2/unipd-thesis-typst

Some thesis examples:

- https://github.com/lusergit/master-thesis
- https://github.com/DrBurraco/Cybersecurity-MsC-Unipd
- https://github.com/Kekkodf/Master-Thesis
- https://github.com/Gheeroppa/UnipdMasterThesis
- https://github.com/FilippoFantinato/model-checking-and-synthesis-of-best-effort-strategies-for-safety-and-co-safety-ltl

Everything (for both slides and written templates – shameless plug, but I created this repo on purpose):

- https://github.com/gabrielrovesti/UniPD-Swiss-Knife-Notes-Slides

5   THIRD STEP: THESIS DISCUSSION AND PRESENTATION

The graduation date and discussion date are different. Later you will receive an email including the pdf with timings and everything.

- The presentation lasts 20 minutes plus questions from the committee.
- Website for uploading the presentation slides within 12.00 PM of the day before the discussion
  - https://servizi-informatica.math.unipd.it/
- It is in PDF format; no idea if one can reupload said presentation a million times, be sure when you upload it and bring a copy in case in a USB file
- You discuss it usually a day before the actual graduation

5.1   TEMPLATES FOR PRESENTATION

If you look inside of GitHub, you will find with ease everything you need:

PowerPoint:

- https://github.com/cipz/unipd_slide_tempate

Typst:

- https://github.com/SkiFire13/typst-slides-unipd
- https://github.com/lusergit/presentation-slides
- https://github.com/augustozanellato/polylux-unipd

Beamer:

- https://github.com/codatomrc/PadovaThesis
- https://www.math.unipd.it/~burattin/other/tema-latex-beamer-padova/
- https://github.com/lusergit/presentation-slides