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## Thesis: general information

The thesis will have this general info.

- 1) be called "Cognome\_Nome.pdf" (instantiated in your name)
- 2) be in PDF/A format,
- 3) Be no larger than 40 MB.

It does not necessarily have to be written in LaTeX (recommended, as there is also the FIUP template on GitHub, listed below).

You will make that upload only after your supervisor, the professor who approved your graduation application, has approved its contents, because the system does not allow changes to what has already been uploaded.

After this upload, your supervisor will have to confirm his approval, again through Uniweb.

Remember that the title of the document (thesis) must be the same as that declared in the graduation application. This upload to Uniweb with authenticated access replaces the delivery and signature of the paper version of your paper.

Given the digitization of the procedure, it will not even be necessary to repeat registration and upload on the SIAGAS portal. The title page of the degree thesis must show the name of the Department of reference of the course of study and the name of the course of study itself at the top.

For us, this means:

"Tullio Levi-Civita" Department of Mathematics

Bachelor's Degree in Computer Science" (do not enter the title "Master's Degree")

#### Useful links:

- Guides on uploading the thesis to Uniweb (special section, but with this at least if the link changes click the corresponding link):
  - o <a href="https://www.unipd.it/manuali-uniweb">https://www.unipd.it/manuali-uniweb</a>
- Sample presentation (documents and videos):
  - o <a href="https://drive.google.com/drive/folders/1nv-4mDdOmSVr1funiYwdOzpK2R6bl1th">https://drive.google.com/drive/folders/1nv-4mDdOmSVr1funiYwdOzpK2R6bl1th</a>
- The template to create it available on GitHub: <a href="https://github.com/FIUP/Thesis-template">https://github.com/FIUP/Thesis-template</a>
- Template in Pandoc to create it: <a href="https://github.com/FIUP/pandoc-thesis-template">https://github.com/FIUP/pandoc-thesis-template</a>

# Thesis: What exactly to do

This is normally written after the end of the internship, but it is highly advisable to do it even earlier. Please note that the thesis is written on the basis of the internship, depending on whether it is carried out externally or internally.

Its basic specifications are:

- Minimum 45/50 pages
- Good length 75/80 pages
- There is no recommended length; do and write, in short
- Some get over 100, even around 120 (the crazy people are there; me too, but not to that point)

It is necessary to make it accessible, as it is a public document and to follow some general indications (both related to the thesis and to the LaTeX FIUP template):

- Line spacing of 1.5
- Headings and headings, a bit like sites
- Alt images
- Respect contrasts and have clearly identifying colors, not referring only to color
- Maintain clickable indexes
- Make tables accessible (using captions, possibly use different colors for individual rows, keep text aligned to the left for tables not in the center, use longtables [tables that continue on the next page], etc.)
- Every image and figure must be mentioned in the text
- Add section references and glossary bibliography, if needed
  - I mention in this sense that bibliography and glossary do not always work; on some old repositories on GitHub, using the beautiful Windows, you may have problems, and there are manual scripts to compile the thesis, clean the files or in any case generate glossary and bibliography itself; Search by what works best for you
  - Example of a repo with additional scripts to manually compile theses, bibliography, glossary, etc.: <a href="https://github.com/peloo/tesi.informatica.unipd">https://github.com/peloo/tesi.informatica.unipd</a>
- Make the periods clear, streamlined but rightly technical
- Beware of spelling mistakes (maybe if you write in LaTeX use extensions to see errors of various types or copy paste the chapter on Word and see everything)
- Cite references of images if not your own (otherwise create them custom as I did)
- Add the Service Tag for the Name
- The data for the PDF/A is generated by "tesi-config.tex"; If it doesn't generate it, you may need to delete the "XMPDATA" folder and reboot
- Ignore the warnings, almost all of them; however, there are various ways to solve them (perhaps, with chktex and commenting errors, e.g. \hbadness=10000 and % chktex-file (error code) can solve a warning disaster in the single chapter related to spaces or similar small things; I report them for completeness of viewing)

In general, follow the instructions of your professor for writing your thesis, because it changes from one to the other based on how much they could follow you.

A good piece of advice that the professors will tell you (but I also tell you) is to try to move forward during the internship, in order to have an index and possible chapters as content, perhaps approved by the professor, so that you already have something correct to work on. The graduation application date refers to the university and you have to pay a stamp duty to do so. The title is decided with the following professor; Normally, it is good to write back to them after 2/3 days if they do not see the email (just don't be too frequent, but not too loose either, given the amount of emails and other students who graduate before you).

From general info, it must be delivered **within a week before** graduation. This is why, net of the points indicated above, it is worth dedicating yourself first to the thesis, then to the presentation (with time remaining).

- Do not try to copy from other theses from SIAGAS, as their score is not visible. Maybe use what is present to get an indicative idea.
- Create your own content-level structure based on the template, but adapt it according to your needs and good luck
- In general, it will be the tutors themselves who will remind you that UniPD has anti-plagiarism tools and precisely advises not to copy; Fate vobis.
- If you want to compress the thesis, you can do so by installing GhostScript and then running a command like:
  - gswin64c -sDEVICE=pdfwrite -dCompatibilityLevel=1.4 -dNOPAUSE -dQUIET -dBATCH
    -sOutputFile=tesi\_compressed.pdf tesi.pdf
- Note that the compressed thesis will not be considered PDF/A according to the Uniweb system, so there you will upload the full thesis, as long as it is as imaginable under 40 MB; mine was full of images and I reached 13 MB anyway on a total span of 90 and something pages, so you can easily stay within the weight limit.

### Insertion of the Thesis

Degree theses must be entered on Uniweb at least 8 days before the proclamation, to allow the supervisor official approval by the University deadline (7 days before the proclamation), as specified in the UNIWEB manual.

#### **Upload Guideline:**

https://www.unipd.it/sites/unipd.it/files/2022/Linee%20Guida%20Upload%20documento%20definitivo%20per%20la%20prova%20finale%2014042022.pdf

To produce a UniPD-compliant PDF/A file, the guide is structured:

https://www.unipd.it/sites/unipd.it/files/2020/lstruzioni-pdfa-accessibile.pdf

**Attention**; if you write the thesis in LaTeX, here you will upload the PDF file generated by the compilation, which should already be PDF/A compliant. You can do a quick check if the document is compliant here:

https://www.pdf-online.com/osa/validate.aspx

If it is not PDF/A, the site will tell you about it; however, take a look at the link marked above for the PDF of directions.

Written by Gabriel R.

In LaTeX don't worry, with the FIUP template you already generate the files containing the correct information with respect to the PDF/A (special folder generated as "xmpdata" however correctly editable in tesi-config.tex in the general info, which are abstracts, keywords, etc. that you enter on Uniweb at the time of upload).

#### In Word:

File > Export > Create PDF/XFS > On the window, click on the Options button and then select the checkbox:



From the same screen select "Create Bookmarks" using "Headings" if you have titles and have written everything in Word.

**Attention**: the thesis upload process is definitive; after the supervisor gives you the ok, upload. It tells you, perhaps, as it happened to me, to "proceed to submit the thesis", then complete the upload through Uniweb in the "Graduation Achievement" section.

I remember this represents the "Final Exam" part of 3 credits on the booklet.

It should also be noted that the thesis itself, together with the subsequent presentation for discussion, had to be uploaded to SIAGAS until 2020, which is <u>no longer necessary now</u>.

### Thesis presentation and discussion

This presentation is related to the discussion of the thesis done (therefore, with possible structure: introduction/internship company/description of the project what it brings most to the company/technologies used/objectives achieved and conclusions) and is created in PDF format (PDF/A format is not required) and must be uploaded <a href="here">here</a> to allow technicians to retrieve them – YOU DON'T KNOW if you can reupload a presentation, in case you bring an extra USB copy.

I list some general and increasingly specific indications:

- Listen to your speaker to get advice on the length of the slides and what to expect (do not exceed 1 slide per minute indicatively, we have 12 minutes (plus space up to another 3 minutes for questions) for the discussion and they tend to be done either the day before or on the day of the proclamation itself. I remind you from the graduation rules that this step is worth 3 points given by the exam pre-commission (you know who the exam commission is from the graduation flyer, 1st page)
  - Consider that the supervisor will be present in the examination commission himself;
    They themselves make you understand that they do not treat you better because you are their thesis students, but obviously they try, if they can, to make you understand things and meet you

- The teachers advise not to repeat it too many times so as to learn the thing by heart and assume that the interlocutor knows, understands and understands; Do the right tests, but time yourself within the allotted time
- For the discussion, you tend to come dressed elegantly/in a proclamation dress, because you go to discuss a thesis and not to the market; It is not mandatory however, do as you feel.

In fact, even the regulation site mentions, under the graduation dates section, the following footnote:

(\*) La discussione dell'elaborato di tesi avviene il giorno prima o lo stesso giorno della proclamazione

- From what I understand, in past years it was possible to upload the presentation to SIAGAS, which now does not seem to be possible; you must therefore carry it on your own
- On Mega there are templates to use for the presentation in two different places (there is the PowerPoint, but digging from the FIUP group I also put the Beamer to make slides in LaTeX):
  - FIUP Material > Internship and Thesis > Thesis Presentation > Template slide
    (PowerPoint and Beamer taken by prof. Burattin, cited in the references)
  - FIUP > Unipd material Useful stuff > Templates and presentations > Blank template DM
    UniPD presentations (PowerPoint only)
- In general, prepare your slides in PDF format.

#### More:

- Generally it is not necessary to get the slides approved (then it depends on the specific speaker)
- Some professors will tell you that they are also willing to do a discussion test.
- The exact date of the discussion tends to be communicated at least 10 days in advance, in my case 16 days in advance. However, typically it is the day before or the day before the proclamation (other cases say even the same day) same period of thesis delivery, shortly after
- I managed to retrieve some examples of presentations digging on GitHub and I put them here on Mega; Make good use of it in a smart way. From what I see, we are between 12/13 minimum up to a maximum of 20 slides. I literally see that it is a high-level analysis of the technologies present and the work done, presenting the company/topics as first slides, the technologies studied/used in coding, the internship project, the planning and any conclusions/thanks.

Near the discussion (within the previous 2/3 weeks, on graduation on July 21st, I received the email on the afternoon of July 5th), you will receive an email of this type, containing instructions on where to upload the presentation and what to do:

Cari studenti e care studentesse,

in allegato trovare le commissioni per il vostro esame di laurea. Vi fornisco le ultime indicazioni.

Il file della vostra presentazione di laurea deve essere consegnato tramite il form a questo indirizzo <a href="https://servizi-informatica.math.unipd.it/slides/slides/create">https://servizi-informatica.math.unipd.it/slides/slides/create</a> entro le 17 del 19 Luglio. E' comunque consigliato portare una copia della propria presentazione in chiavetta il giorno della discussione.

Nel consegnare la presentazione dovrete selezionare la commissione in cui siete inseriti.

Vi ricordo inoltre che non ci sono limiti alla partecipazione di parenti ed amici alle discussioni, però viene chiesto di non disturbare le altre attività didattiche in corso in dipartimento e di non ritardare le attività delle commissioni.

Vi auguro che queste ultime fasi del vostro lavoro siano per voi fruttuose, ma anche occasione di divertimento.

Buona giornata e buona preparazione,

#### TO UPLOAD YOUR PRESENTATION:

- Insert the presentation at the following link so that the technicians can find it (and keep a copy as written, if necessary, on a flash drive)
  - o <a href="https://servizi-informatica.math.unipd.it/slides/slides/create">https://servizi-informatica.math.unipd.it/slides/slides/create</a>
- The presentation on SIAGAS does NOT have to be delivered (this happened until 2020)

Question: Once uploaded, is the presentation final?

Answer: YOU DON'T KNOW, if in doubt, load it in a final state (in theory before the deadline, it should be possible to overwrite it as many times as you want).

#### Interesting question from the group:

- Hello everyone, what do you want to know, at the discussion are questions asked about what is presented in the slides, then said orally, or about everything that has been written in the thesis?
  - Hello! Most likely, the only person who reads your thesis in its entirety is your supervisor.
  - Therefore, specific questions about the whole paper tend not to be asked. The meaning of the slides is to present what you have done at the internship/the content of the thesis by summarizing it in its essential and important parts, with the aim that the other members of the commission can also understand your work.
  - Consequently, the questions you are asked are about what you have presented or in general about some aspects of your project/internship, or of simple interest
  - If they want to be assholes or attest to your value in the field, they can ask questions that underlie links between what you have done and their specific area of expertise. If you think about it first, you prepare the topics and make a good impression.

# Work permits for discussion/proclamation

I copy even equal question and answer for your reference:

- If I have to take leave from work for graduation, do I have to fill in the certificate of participation for the exam both for the discussion and for the proclamation? Or do I need to do something different?
- From what I know you can take study leave only for the discussion, considered as an exam for which you fill out the usual form. However, you should ask your company for confirmation

# How the discussion takes place

For the same day, they say nothing and everyone arrives for the said time (e.g. 2.30 pm); The alphabetical order is actually followed, there are no roll calls or anything, so you can actually arrive even if not immediately.

Considering that it takes at least 15/20 minutes each (it depends on the commission, but some tend to ask curiosity questions given the time), arrive when you can, even not immediately. Last on the list out of 8, I waited about 2 hours from 2.30pm to talk.

Concretely, you have a classroom where you need to get and no appeals or anything else are made; the person (name and surname) is called to enter, then you have the commission in front of you and possibly some spectators at the back (they can be classmates, relatives, friends, whoever you want). Then they give you the remote control for the slides and you talk, with the PDF slides to exhibit.

If you manage it well, it shouldn't be who knows what, obviously considering tension and all that. Rest assured, at this point, because you already have your degree in hand, so you literally talk anyway and you tend to know the commission from the graduation flyer, on the first sheet of the PDF. So you already have an idea of who you will have.

### **Proclamation**

On the day of the proclamation, I recommend to:

- Arriving quite early (they called me that I was late with the proclamation that started at 9.30 and at 9.18 I had to go up, turn in room 1A150 not in the middle of the Towers, called "swimming pool")
- It lasts 5 minutes or so, then clear the classroom/area; literally, the commission gives you the grade, the envelope with the degree certificate and a t-shirt with the words "Computer Science"

### I insert information on possible parking:

- Area around Archimede Tower
- Via Enrico degli Scrovegni area
- Via Piccinato area (with parking)/Berlinguer near the Fair and the Archimede Tower
- Via Mantegna area
- Via Bassi area
- Interparking Padova near Via Mameli Station

### Common question (for some reason, albeit obvious):

- Does someone wear the laurel wreath on you?

#### The proclamation ceremony consists of:

- go and feel called in order as per the graduation flyer that is communicated to you
- Everyone is called, graduation grade, red envelope with certificate, T-shirt and end

So: the wreath (that's what it's called)/laurel wreath you buy it *yourself*, no one puts it on for you and then you have it put on when/by whoever you want. In terms of clothes, consider that the color of the degree in Computer Science is emerald green; Consider it, when choosing the possible ribbon of the crown.