How-To Write a Thesis with Prof. Patrignani

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Here are a few common guidelines for writing a thesis (Section 1) and for the followup presentation (Section 2). Please follow them closely.

1 Writing Guidelines (it goes without saying, write in LaTeX)

All sections/chapters should contain a piece of text like the one below, which guides the reader into knowing what to expect, with the references to the related section/chapters subsections.

This section contains guidelines on the structure (Section 1.1), on writing style (Section 1.2), on useful LaTeXpackages (Section 1.3), and finally it contains some useful sources (Section 1.4).

1.1 Structure

Introduction Structure your introduction alongside these paragraphs:

Context This gives the reader useful information to understand the problem.

Problem This tells the reader the problem your solution addresses. This paragraph typically starts with 'However', 'But', or something like that.

Solution This tells the reader what you did. Make sure to spell out a list of contributions. If you want to see some examples, please look at my research papers.

Validation This tells the reader why what you did is correct. Perhaps you ran some experiments, or you proved some theorems, these facts go here.

Outline The final paragraph (or better, a subsection), tells the reader the organisation of the thesis, namely what sections are there and what they contain.

Typically, you first write the Solution, and the Validation, because those paragraphs describe what you have done, and ideally you write after having done them. Then, you work backwards and spell out the Problem and the Context.

Background The second section should be a background section, describing useful notions for the reader.

Core Then come the 1 or 2 core sections of your thesis, where you present your work in details, possible evaluations etc.

Related Work The related work section goes at the end, right before the conclusions.

1.2 Writing Style

- do not use abbreviations: no 'it's', no 'we'll', no 'aren't', but 'it is', 'we will', 'are not'.
- no ' 's ' for inanimate objects (no 'the experiment's setup').
- do not cite some work. You do not say 'as [3] presents', but rather 'as Author et al. [3] present'.
- capitalise all titles and section headers.
- give names to definitions, lemmas, examples, etc.

1.3 LaTeXPackages and Commands

Here is a list of LaTeXpackages that may come in handy:

- `xspace`
- `cleveref`
- `[colorinlistoftodos] todonotes`
- `[T1] fontenc` plus `[scaled=.83] beramono` for code listings

The following file contains useful macros for typesetting formal languages:

- https://squera.github.io/misc/cmds.tex

  You want to take a look at the `typerule` command.

1.4 Sources

Here is a good source on writing (papers, but theses are just longer papers):

- https://www.youtube.com/watch?v=WP-FkUaOcOM

2 Presenting Guidelines (present using your favourite tool)

- A good intuition is to have 1 slide per minute, so if your presentation is 10 minutes, prepare around 10 slides.
- The first slide must contain at least your name, my name (with 'advisor'), the university logo.
- All slides should contain the slide number followed by the total of slides, so the title slide of a 10-slides presentation has the annotation '1/10' somewhere in the bottom.
- No 'wall-of-text' slides. The slides are not your script, but something for the audience to follow.
- You need to emphasise what your contribution is.

  Make sure to have a slide with bullet points where you spell out what is it precisely that you did. Ideally, this should come after some slides that present some form of problem, so you can then say that your contribution serves as a solution to said problem.
- Conclude with thanks and with a questions slide.
- 1 week before the presentation, schedule a dry-run with me. Also, make sure you practice before doing the dry-run with me.

If I gave you some advice that you think should be found here, please write me an email and I will update this document!