

Thesis Aids – An informal manual

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Dear Ph.D. student,

So you are nearing the end of your time and you want to write your thesis? Excellent! With a clear head you will be able to finish without a problem. I have summarized a few things that could facilitate the process. Of course, it should be emphasized that you can make your thesis however you like and in whatever manner you like. Well, as long as they follow the wishes of your supervisor and ETH. Therefore: the below tips merely serve to provide aid.

0. General comments

- Think always carefully before doing anything.
- Device a clear plan and systematics that will enable to be the most efficient.
- If you are not sure about something: consult others.
- Look carefully at previous theses (I recommend mine ☺)
- During going through your thesis, a lot of small things will occur that require attention at a later stage: install a sheet of paper on the wall and write them all down.
- Be consistent and systematic in formatting, sample coding, terminology, and units. N. B. this is not an easy task!
- God does not aid in the process.

1. Contents and structure

- Consult your supervisor about what topics/papers/chapters are to be included in the thesis. It is about making the best possible story, *i.e.* **not** about including all your published papers. Do not underestimate this step. This will influence also your general introduction and summary and outlook.
- Make sure the structure of the individual chapters are agreed upon with your supervisor! For example, it is not fun having to move all your experimental methods from the back to the front.

2. Obtaining the final pdf

- Many different approaches can be used. I used the following approach: make as a single word document: the initial pages, individual chapters, and the appendices. Then turn each of them into a pdf and paste them together as such. The final pdf was about 30 Mb in size.

3. Chapter lay out

- Use your first chapter to experiment and optimize the chapter lay out. Then stick with it for the remaining ones. Make sure to have also thought carefully of the tables and figures.
- To get a good lay out: realize carefully the size of the final book. You can use the ‘booklet’ printing option to get a better idea of this.

- Check carefully which resolution of figures you need. *e.g.* if you insert jpg's you want to have high quality. In general, should you want to have the highest quality (see thesis of Johan Groen for example) you probably should use either Latex or insert Excel graphs.
- Page Margins: I found the vertical page economy poor in the standard Word document. Since I used only headers and no footers I adjusted my margins to: 1* (top), 0.4 (bottom), 0.75 (sides).
- Font: I liked the font many Swiss students used in Latex: CMU Serif (*i.e.* the font used in this document). This can be downloaded and installed in Word.
- No abstract is required prior to the individual chapters. I started typing directly under the title to save space. The 'Chapter x' and 'Title' were in 26, followed by an empty line of size 18. These were done (for no particular reason) at spacing: 0** (before), 10 (after), line spacing (Multiple), At: 1.15.
- Main text size was 12 and section headings were of same size and bold. Main text spacing was: 0 (before), 0 (after), 1.5 lines. This was justified. I used a 0.25 inch indentation for the different paragraphs.
- Figure Captions were at size 11, spacing: 0 (bef.), 0 (aft.), single spacing.
- Table Captions were at size 11, spacing 0 (bef.), 9 (aft.), single spacing.
- Inserting Figures: I simply put them in line with the text and justified. This facilitates keeping the page endings justified. Put the figure in the center can be done by adjusting the cropping of the figure on the left side (experiment with this a bit).
- Inserting table: once a table has been inserted use the option (select first the entire table): 'Autofit', then 'fit to window'. This set the width of the table to your text width. The Table headings were done in size 11, with spacing: 4 (bef.), 4 (aft.), single. The table contents was in size 11, with spacing: 2 (bef.), 2 (aft.), exact, 12.
- You may have noticed that last sentences of pages sometimes jump around in Word. This can be due to the 'Widow/Orphan control' (see 'line and page brakes' after clicking on 'Paragraph'). Experiment a bit if you think you need it. I found it a bit annoying.
- References: size 11, indentation: hanging at 0.3 inches. Spacing: 0 (bef.), 0 (aft.), single. I used the following style: D. Verboekend, J. Pérez-Ramírez, *Chem. Eur. J.*, **2011**, *17*, 1137. (no '*et al.*'s were ever used).
- Each Chapter should start on the right side (*i.e.* an uneven page number). If not the case: add an additional page at the end of a chapter to accomplish this.
- I used odd page and even page headers at 0.5 inches. I put the page number at the outside of the page and either 'Chapter x' or the '(shortened) chapter title' towards the inside. Between the page number and text I put 5 spaces. Be careful not to put any additional enters in your header; this will affect your page filling.
- Large figures and tables that require a 90° turn: These are difficult to do because you cannot simply turn the page without ruining your headers. I solved this by simply by turning the figure (+caption in text box) or the table (after putting it first in a textbox).
- In my thesis the figure and table references are in color. I did this since it looks nice. However, I did not realize that in printing many pages will accordingly be considered 'color', hereby doubling the printing costs! Take this into consideration.

*Sizes in inches, **font spacing in points ('pt')

4. Filling your chapters

- Extract the text from online versions of your articles, *i.e.* those including proofing changes, and use the option 'merge formatting'. This will enable you to keep all the sub- and superscripts in place. Again make sure to test a few times what the best option is. This will save you time.
- Use 'find and replace' to do laborious tasks like changing the long '-' for the short ones.
- In order to make your chapters nicely interconnected, replace sentences like 'as describes previously' with 'as described in Chapter x'.
- When you feel something you wrote in the paper is not too relevant or even not in line with later results; don't be shy and remove this. Of course, you need to be sure here. Also, realize that each sentence in a published article has already gone through the critical review process. New sentences can be, depending on your quality, not as good.

5. Binding versions for supervisors and (co-)examiners

- Your supervisor will ask for some version of your thesis in time. Probably even in booklet size. This can be easily done by printing the pages yourself and then going to the printer to have the bound for about 5 CHF each copy. If you want to bind a booklet (A5), note that the printshop can also cut the pages for you (for free).
- After the cutting you will need to arrange the pages properly. This is a bit laborious.
- N.B. the guys at the printshop will tell you that you can also do the binding yourself at the shop at the bus stop. However, this is a pain in the ass as it is not too easy. In addition, not a lot cheaper as you have to pay for the binding materials, anyways. So just tell them that you are very clumsy and would like ensure the quality by having them do it for you.
- The thesis deposition copies I printed (double-sided) in A4 format in color.

6. Cover and printing

Excellent, you survived the defense, parties, and have revised your thesis. Congratulations. Now it is time to print.

- First of, you need to think of a cover. In my opinion the ETH style book does not look very nice with a cover. I recommend just the title and a nice color. I choose orange to represent my wonderful country! The size and template of the cover can be obtained in the print shop.
- Once the cover and thesis are done, hand in the files to the print shop and they will print the master copy of the pages, and of the cover. After you have received them back, you will be able to get the price per copy.
- check the master copy carefully for printer quality and remaining mistakes.
- If the print is okay, agree with your supervisor on the amount of copies to be printed (hence total cost!) and proceed.
- Pick up your copies, pay, and pray you will not find any stupid mistakes.

Well that is about all I can contribute. I hope and expect you guys will do just fine.

All the best,

Danny