A LaTeX template for Acta Philosophica Gothoburgensia

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Getting LaTeX to do Word formatting

Rasmus Blanck

Abstract

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1 A template for Acta Philosophica Gothoburgensia

1.1 Introduction

Hopefully, you've found this document in the GitHub repo `https://github.com/RasmusBlanck/ACTA-template`. In that case, you are probably aspiring to write your doctoral thesis in the series Acta Philosophica Gothoburgensia; the contents of the aforementioned repo will then help you in your mission.

ACTA provides a template for Microsoft Word, a program that is unsuitable for typesetting theses in, e.g., logic and some parts of theoretical philosophy. A much better tool is LaTeX, and its derivative X$_\exists$LaTeX, which allows for a greater variety of, e.g., font options. I'm assuming that you have used LaTeX in some form before, and that that is the reason for your desire to write your thesis using LaTeX. If you have never used LaTeX before, this template is probably not of much help to you.

The typography and layout defined in the template has been extracted from the documentation provided by ACTA: mainly from the ACTA Word template, partly from the guide *Using the ACTA template in Word*, and to a lesser extent from the (somewhat outdated) graphical manual. These sources sometimes contradict each other, and in those cases the Word template has been given precedence.[1]

To date (November 2022), earlier versions of this template has been used to typeset four volumes of the series, all of which have been approved by ACTA. If much time has passed since then, make sure to check if ACTA's rules and regulations have changed – it may then be advisable to update this template.

1.2 Deliberate deviations from the ACTA Word template

- Pagination and page count starts from the first page of Chapter 1. To strictly follow the ACTA Word template and start page count from the

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[1] The purpose of this LaTeX template is to follow the Word template as closely as possible, to produce a document set in 14pt on A4 paper. While this is probably not the desired final format for your thesis, the ACTA Word template explicitly states that 'documents will be reduced to approximately 80%' by the printing house.

half-title page you'll have to comment out the lines `\frontmatter` and `\mainmatter` in `ACTA-template.tex`

- On that note: old style (lower case) numbers are used in page headers to better match the small capitals.

- This template now uses Garamond-Math for mathematics. Note that this is not strictly in line with ACTA regulations, but Adobe Garamond Pro simply wasn't developed to typeset formulae and consequently doesn't work very well. If you find the Greek lowercase letters of Garamond-Math to be too italic, it is possible to make them upright instead. Search `ACTA.sty` for 'upright' and follow the instructions.

- Spacing between items in list environments is non-zero and with a little bit of glue. This makes lists more readable. If needed, this can be counteracted by the `enumitem` package, setting `itemsep` and `parsep` to 0pt in all list environments.

- Tables and Figures are listed in separate lists, contra the combined list of the ACTA Word template. This is due to technical difficulties in combining the lists while still listing tables as 'Tables' and figures as 'Figures'.

1.3 Known issues

1. The template was developed using TEXLive, and some things just don't seem to work under e.g. MiKTEX. If you run into problems, I recommend installing TEXLive.

2. Spacing between italics and upright letters is sometimes very tight, for example in theorem environments set with italic font. Example: '*for all theorems of* PA'. If you find this unpleasant, extra space can be added by `\hairspace`, which is currently defined as a length of `0.08333em` (half of a thinspace, which is traditionally about one sixth of an em). Similar considerations may apply to superscripts on italic capitals.

3. Even if Garamond-Math is properly installed, you may have to locate the font file `Garamond-math.otf` on your system, copy it to your working folder, and substitute `Garamond-math.otf` for `Garamond-Math` in `ACTA.sty`.

4. Old versions of Garamond-Math don't have the symbol `\setminus`; use `\smallsetminus` instead (which looks nicer anyway).

1.4 Thanks

I have benefitted from the knowledgeable community on `tex.stackexhange.com`, in particular from answers by the users *egreg*, *esdd*, and *Ulrike Fischer*.

2 Using the template

2.1 The contents of the repo ACTA-template

Hopefully, again, the repo contains the following files:

- `ACTA-template.tex` – this is the main project file: here you'll write your thesis.
- `ACTA-titlepages.tex` – this part is `\included` in the previous file: it automatically generates the title pages.
- `ACTA-frontmatter.tex` – this part is also `\included`: it typesets the frontmatter of the book, such as colophon, abstract page, and the optional acknowledgements, dedications, and the like.
- `ACTA-backmatter.tex` – this is a standalone file to typeset the list of volumes published in the series.
- `ACTA-template.bib` – a placeholder bibliography file.
- `ACTA.sty` – this is the class file for the ACTA class, and controls the page layout.
- `LO_GUeng_cenSV.eps` – the English version of the university logo.
- `Readme.pdf` – this file.
- `spikblad.tex` – an example of how the standalone 'spikblad' ('notification of submission of a doctoral thesis' page) can be formatted. The page size is suitable as a loose leaf insert in books of the standard ACTA format 160x230mm.

Place them in a suitable folder on your computer.

2.2 Fonts

The fonts Garamond-Math and Linux Libertine Mono O are released under the SIL Open Font License, and are included in recent TEXLive distributions.[2,3]

The fonts Adobe Garamond Pro and Arial are proprietary. Arial is included in many software distributions (e.g., Word), and Adobe Garamond Pro is available through the university's licenses. Talk to your local licenses manager.

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[2] `https://www.ctan.org/pkg/garamond-math`

[3] `https://www.ctan.org/pkg/libertine`

2.3 Packages

The class file `ACTA.sty` relies on the packages `KOMA-script` by Kohm (2021) (including `tocbasic` and `scrlayer-scrpage`), `unicode-math`, `fontspec`, `anyfontsize`, and `enumitem`. They are essential for the formatting, and are all included in recent TEXLive distributions. Some packages are included merely for convenience: `babel`, `draftwatermark`,`fgruler`, `metalogo`, `microtype` and `url`. They can be removed at the peril of finding alternative ways of providing the same functionality. The standard AMS packages are loaded by the template, since they must be loaded before any fonts are chosen. You are probably going to use them anyway.

2.4 A very short user guide

1. Make sure you have X∃LATEX, and the fonts Adobe Garamond Pro, Arial, Garamond-Math and Linux Libertine Mono O installed.

2. Open the file `ACTA-template.tex`. Write your thesis, or `include` your chapters, under the part marked MAINMATTER. (You may want to rename this file at some point, but I will refer to it by this name throughout this document.) The default document language is UK English (set using babel) and can be changed using `\selectlanguage{USenglish}`. This is required for hyphenation, etc.

3. Set the title, subtitle, author, series and series number, ISBN (print), and ISBN (pdf), by using the commands in the part marked MACROS. If you don't have a subtitle, just leave that field blank.

4. While working with your thesis, you might want to keep the package option `draft` enabled (as in `\usepackage[draft]{ACTA}`. This enables a number of draft-specific options such as showing bad boxes and displaying the draft watermark, rulers, and type area boundaries. Feel free to remove it at any point.

5. I strongly recommend using BIBTEX during the writing process. Your bibliography file is input under the part marked BACKMATTER.

6. Open the file `ACTA-frontmatter.tex`. In the part marked COLOPHON, fill in the name of your subject, the year of publication, the link to the e-publication (supplied by the University Library), the name and location of the printing house, and the year of printing. These positions can be found by searching for XX in the file.

7. In the part marked ABSTRACT, fill in the language of the publication,

keywords, and the actual abstract. Again, you can find these by searching for XX. If your title (and subtitle) are very short, follow the instructions in the comments.

8. There's a predefined section for acknowledgements. Other frontmatter such as dedications or list of papers can be added manually using the command `\chapter*{...}`.

9. Open the file `ACTA-backmatter.tex` and add your publication to the end of the list of published volumes. The format is indicated in the beginning of that file. Consult the series editor(s) to make sure that all published volumes are included.

10. If you haven't done so already, it is time to remove the package `draft` option.

11. Run XƎLATEX (and BibTEX) on `ACTA-template.tex`, or whatever you renamed that file to. You might have to run XƎLATEX *three times*, to make sure that the table of contents is set properly.

12. Add your publication to the list in `ACTA-backmatter.tex`, and run XƎLATEX on it. The output is sent separately to the printing house.

13. Fill in the information in `spikblad.tex`, run XƎLATEX on it, and send separately to the printing house.

14. Find someone to do the cover for you. This is typically not done in LATEX.

15. Done.

2.5 Tables and figures

The ACTA Word template is picky about the formatting of tables and figures (for example in how fonts are mixed...) and there is no good way to handle that globally in LATEX. It also requires a non-standard use of captions etc. This section describes what you will have to do yourself.

- Tables should be set in Arial, 10pt, with 13pt line spacing. This can be accomplished by adding the line of code shown in Figure 1 directly after `\begin{table}`.

```
\sffamily\fontsize{10}{13}\selectfont
```

Figure 1: Some code ('headline')

The line of code was written by Rasmus Blanck. ⊚ *No rights reserved. ('byline')*
The above line of code describes how to set the font of tables properly. ('caption')

- Additionally, table heads (the first row) should be set in bold. You'll have to adjust this manually.
- The ACTA Word template uses three different types of 'captions' for figures and tables. See Figure 1 for examples of thow these types of captions are typeset.
  - 'Headlines', that are set by the ordinary `\caption{...}` command, and should be placed *above* tables, and *below* figures. These headlines automatically appear in the List of Figures and Tables in the frontmatter.
  - 'Bylines', that contain information like copyright notices, if needed. They can be set by the command `\byline{...}` provided by this template. They should be placed below figure 'headlines' (and below tables, if ever needed there).
  - 'Captions', that contain longer captions. They are set by the command `\captionx{...}` provided by this template, and should be placed either (1) below any 'byline', (2) below the figure 'headline' if no 'byline' is present, or (3) below the table if no 'byline' is present.

2.6 A sample theorem

Theorem 1 (Löb, 1955)**.** *Let T be a consistent, r.e. extension of* PA*. Then, for every sentence $\varphi \in \mathcal{L}_A$,*

$$If\, T \vdash \mathrm{Pr}_T(\ulcorner \varphi \urcorner) \to \varphi, \text{ then } T \vdash \mathrm{Pr}_T(\ulcorner \varphi \urcorner).$$

References

Kohm, M. (2021). *KOMA-Script*. URL: `http://mirrors.ctan.org/macros/latex/contrib/koma-script/doc/scrguien.pdf`.

Löb, M. H. (1955). Solution of a problem of Leon Henkin. *The Journal of Symbolic Logic*, 20(2):115–118.

Sammanfattning

Detta dokument beskriver hur mallen för Acta Philosophica Gothoburgensia ska användas.