usiinfthesis Dissertation Style Documentation*

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1 Overview

The usiinfthesis LaTeX class for USI-INF dissertations is based on the standard book class, and provides additional commands, environments and default text required for theses submitted at USI-INF. Some parts of the document structure are mandatory, and where possible, the class file generates those parts automatically. In place where this is not possible, the sample file and this documentation provide a guide how to get things right.

In the interest of having a somewhat consistent look-and-feel to all theses produced at USI-INF, the class file and the commands provided take care of formatting and document structure as much as possible. You are not supposed to change any of these commands or environments.

2 Document Structure

The minimal structure of a dissertation document is shown below:

```
\documentclass[]{usiinfthesis}

\title{My Dissertation - A very long title which runs \\ over two lines}
\author{Philo S. Doctor}
\advisor{The Student's Advisor}
\day{21}
\month{September}
\year{2009}
\place{Lugano}
\programDirector{The PhD program Director \emph{pro tempore}}

\committee{%
  \committeeMember{Alonzo Church}{University of California, Los Angeles, USA}
```

*usiinf and USI-INF stand for *Università della Svizzera Italiana (University of Lugano) - Faculty of Informatics.*

```
  \committeeMember{Alan M. Turing}{Princeton University, USA}
  %there can as many members as you like
}

\begin{document}
\maketitle

\frontmatter

\begin{abstract}
This is a very abstract abstract.
\end{abstract}

\begin{acknowledgements}

\end{acknowledgements}

\tableofcontents

\mainmatter

\chapter{Introduction}

\backmatter

\bibliographystyle{alpha}
\bibliography{biblio}

\end{document}
```

The commands in the preamble should be self-explanatory and are required to complete the title page and the list of your program committee members and such like. A good part of the document structure is encoded in the `\frontmatter`, `\mainmatter`, and `\backmatter` commands. These commands *must not* be omitted in your document.

2.1 The Frontmatter

The frontmatter of your document contains everything up to and including the table of contents, and possible lists of figures and tables. For USI-INF dissertations the format and content of most parts of the frontmatter is rather rigidly prescribed. The dissertation class provides commands for all these elements, and most of the commands are processed internally by the `\frontmatter` command, so you don't have to worry about those. Abstract and Acknowledgements appear in the final document in the order you place them in the source. So take care to write the abstract before the acknowledgements. Table 1 lists all

Content part	created by	mandatory
Titlepage	`\maketitle`	yes
Submission page	`\frontmatter`	yes
Declaration of own work	`\frontmatter`	yes
Dedication	`\dedication`	no
Epigraph	`\openepigraph`	no
Abstract	`\begin{abstract} \end{abstract}`	yes
Acknowledgements	`\begin{acknowledgements}` `\end{acknowledgements}`	?
Table of Contents	`\tableofcontents`	yes
List of Figures	`\listoffigures`	no
List of Tables	`\listoftables`	no
any other list	?	no

Table 1: Parts of the frontmatter

elements that may appear in the frontmatter, which commands create them, and whether or not they must be present in your thesis.

Extra sections you might want or need in your thesis are a second abstract in a language different from English (e.g., the language required by your double-doctorate program), or additional lists of special elements in the text. If you want for example a list of algorithms, you need to use an extra package to produce it. You can include it as the last part of the frontmatter. For the extra abstract, you can reuse the `abstract` environment with an extra parameter giving the heading of the section (see reference documentation and example).

By default the lists of figures and tables will be included in the table of contents if they are present in your document. Most (default) styles do *not* do that automatically, so if you add a list and it should appear in the contents, you will have to play with `\addcontentsline` to get what you want.

2.2 The Main Matter

The mainmatter of you thesis is the actual content you are supposed to write. The main matter *must* begin with the command `\mainmatter` before the first of your own chapters.

All structuring commands (from `\chapter` down to `\subsection`) can take an optional parameter with a shorter version of the section title. This shorter title will be used in the page header and the table of contents.

2.3 Appendices

If you want to have an appendix, use the command `\appendix` to switch the formatting to "appendix mode" and then use the normal `\chapter` command for each appendix you have.

2.4 The Backmatter

The backmatter contains your references, possibly a glossary and an index, and must be started with the command `\backmatter`.

The references and index (if present) will be included in the table of contents automatically. An index should start on a recto, that is a page with an odd page number. The easiest way to achieve this is to precede the `\theindex` command with a `\cleardoublepage`.

The usiinfthesis class does not provide any command or environment to produce a glossary or any other possible section that you might want to put in the back of your thesis. As usual, chapter opened with `\chapter` will also appear in the table of contents. while chapters opened with `\chapter*` will be ignored for the table of contents. In both cases, backmatter chapters are *not* numbered.

3 Command reference

This command reference lists only commands provided by the USI-INF dissertation class. Commands inherited from the `book` class or any of the loaded packages are not documented here, unless we made significant changes to them.

3.1 Preamble Commands and Environments

`\advisor` The research advisor, or main advisor responsible for the student submitting the thesis. This command is mandatory and takes one argument.

`\author` The author of this thesis, i.e., you. This command is mandatory and takes one argument.

`\coadvisor` The co-advisor of the student. This command is optional and should only be used if you have an official co-advisor. This command takes one argument.

`committee` This environment constructs the list of all your committee members. You should only use the command `\committeeMember` inside this environment. This environment is mandatory and appears on the submission page.

`\committeeMember` Creates an entry for one committee member in the list of your committee. This commands takes the name of the member as the first argument, and her/his affiliation as the second.

`\day|month|year` These commands form the date when the dissertation was accepted. These are mandatory and appear on the title page and the submission page.

`\dedication` Inserts an extra page with a dedication into the frontmatter. This command is optional and takes the full text of your dedication as argument.

`\openepigraph` Inserts an opening epigraph into the frontmatter. This command is a variant of the normal `\epigraph` command. It takes the epigraphs text as the first, and the source as the second parameter. This command is optional.

`\place` This should be *Lugano*, unless you finish your thesis some place else. This is

mandatory and appears in your declaration of own work.

`\programDirector` The director of the USI-INF PhD program. This is mandatory and appears on the submission page.

3.2 Text Body Commands and Environments

`abstract` Inserts the abstract into the frontmatter. Use this environment to produce an abstract that conforms to the thesis requirements. If you need a second abstract in another language, use the syntax `\begin{abstract}[Sommario]`.

`acknowledgements` Inserts the acknowledgements into the frontmatter. Use this environment to produce an acknowledgements section that conforms to the thesis requirements.

`\appendix` This command switches formatting and pagination from the main text body to the form required for appendices. This command is optional and should only be used if you have appendices. In that case, it must appear *after* the last chapter of the main text, and *before* the first appendix.

`\backmatter` This command switches formatting and pagination to the form used for the backmatter. This command *must* appear after the last chapter/appendix and before the (optional) glossary and references.

`\frontmatter` Creates most of the frontmatter pages and initialises formatting and pagination settings. This command *must* appear after `\maketitle` and before any other commands or text.

`\mainmatter` This command must appear after all frontmatter parts and before the first chapter of the main text body.

3.3 Class Options

`print` The default layout produced by the class is targeted to "electronic" publishing and uses margins consistent with the normal LaTeX `oneside` option. This option switches the layout and various other things to something that is more suitable for two-sided printing and binding. Standard LaTeX options `oneside` or `twoside` are disabled.

`nohyper` By default, the class loads the `hyperref` package with the proper options . Since the `hyperref` package redefines many LaTeX commands, it may conflict with other packages you use. This option let you disable the loading of the package.

4 Restrictions and Requirements

Commands and document elements listed here may not be changed or used in producing your thesis.

Package	Options
amsmath	
book (class)	a4paper, 12pt, onecolumn, final, openright, titlepage
beramono	scaled
booktabs	
epigraph	
fancyhdr	
fontenc	T1
geometry	a4paper
graphicx	
hyperref	unicode, plainpages=false, pdfpagelabels, breaklinks
hypcap	all
mathdesign	charter
natbib	square
sectsty	
textcomp	
url	

Table 2: Required packages and selected options

5 Required Packages

The usiinfthesis class makes extensive use of a wide range of "standard"[1] LaTeX packages. Table 2 lists all packages (and options) that are loaded by the class, and thus do not need to be loaded in your thesis document.

The packages `beramono` and `mathdesign` select, respectively, the monospaced and the math fonts. The class file also uses the *Optima* font package for the sans serif fonts[2]. `fontenc` and `textcomp` are required to make these fonts work properly.

6 Complete Document

The listing below shows the complete structure of your thesis with all optional content enabled. It is important that you do *not* change the order of the commands, parts, and sections in your own thesis.

[1] Standard packages are the ones available in a modern LaTeX distribution, like TeXLive (`http://www.tug.org/texlive`) and MacTeX (`http://www.tug.org/mactex`).

[2] The *Optima* (aka *URW Classico*) font is not bundled with TeXlive-based distributions. However, they provide a script, `getnonfreefonts`, for installing extra fonts. To install *Optima*, just type `getnonfreefonts classico` on the command line; the script requires `wget` to be installed.

```
\documentclass[]{usiinfthesis}

\title{The Title of my Dissertation} %compulsory
\subtitle{Subtitle: Reinventing the World} %optional
\author{Philo S. Doctor} %compulsory
\advisor{The Student's Advisor} %compulsory
\coadvisor{Co-Advisor} %optional
\day{Yesterday} %defaults to \today
\month{September} %compuslory
\year{2009} %compulsory, put only the year
\place{Lugano} %compulsory
\programDirector{The PhD program Director \emph{pro tempore}} %compulsory

\committee{%
  \committeeMember{Alonzo Church}{University of California, Los Angeles, USA}
  \committeeMember{Alan M. Turing}{Princeton University, USA}
  %there can as many members as you like
} %the committee is compulsory

\dedication{To my beloved} %optional
\openepigraph{Someone said \dots}{Someone} %optional

\makeindex %optional, also use \theindex at the end

\begin{document}
\maketitle %generates the titlepage, this is FIXED
\frontmatter %generates the frontmatter, this is FIXED

\begin{abstract}
This is a very abstract abstract.
\end{abstract}

\begin{abstract}[Zusammenfassung]
%creates a new abstract section with "Zusammenfassung" as heading
\end{abstract}

\begin{acknowledgements}
\end{acknowledgements}

\tableofcontents
\listoffigures %optional
\listoftables %optional
%add any other lists here

\mainmatter
```

```
\chapter{Introduction}

\chapter{A chapter title which will run over two lines --- it's for
  testing purpose}

\section{The first section}

\section{The second, math section}

\section[third]{A very very long section, titled ``The third section'', with
  a rather  short text alternative (third)}

\appendix %optional, use only if you have an appendix

\chapter{Some retarded material}
\section{It's over\dots}

\backmatter

\chapter{Glossary} %optional

%\bibliographystyle{alpha} %any style compatible with the natbib package
\bibliographystyle{dcu}
%\bibliographystyle{plainnat}

\bibliography{biblio}

\cleardoublepage %the index starts on a recto!
\theindex %optional, use only if you have an index, must use
          %\makeindex in the preamble

\end{document}
```

7 Version History

2008/07/25 v. 1.0.3
Added support for MSc theses.

2008/07/24 v. 1.0.2
Fixed documentation bug.

2008/03/18 v. 1.0.1
Fixed titleplage bug.
Fixed ToC, LoF, LoT, Bibliography and Index header formatting issues.

2008/03/17 v. 1.0 initial release