

A class for formatting a Phd Thesis*

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Abstract

This class has been and is used at the Computer Science Departments of the Universities of Udine and Pisa for formatting the PhD Theses. It has a modular structure that should ease the customization to other institutes.

Contents	4 Environments	5
1 Options of the Class	2 5 Miscellaneous	6
2 Extra page styles and chapter-titles styles	3 6 Shape-Definition Files	6
3 Commands provided	4 7 Customizing	7

The `PhdThesis.cls` class is very similar to the `book.cls` one. Indeed `PhdThesis.cls` mainly patches some features of `book.cls` to aid in writing a Ph.D. Thesis or a Master Thesis.

The default behavior of most of the provided features can be customized. See section 7 for explanations.

The development of this class has evolved during a long period of time, mainly driven by the different needs of plenty of people. I've been trying constantly to use define a user interface as omogeneous as possible. Nethertheless lots of discrepancies are still there. I would welcome any suggestion or criticism which can be useful to improve the class.

Remember that the syntax $\{\langle argument \rangle\}$ denotes a mandatory argument, while $[\langle argument \rangle]$ denotes an optional argument.

*This description refers to file `PhdThesis.cls`, version number 2.0q, last revised 2015/03/10.

1 Options of the Class

The class accepts some of the options of `book.cls` plus the following ones.

`final` (**default**) the same option as the one of `book.cls`.

`draft` the same option as the one of `book.cls`.

`a4paper` (**default**) for A4 paper format.

`onecolumn` (**default**) for onecolumn format.

`english` (**default**) uses British English language.

`american` uses American English language.

`italian` uses Italian language.

`spanish` uses Spanish language.

`french` uses French language.

`chapterempty` (**default**) the first page of the chapter is not numbered.
Moreover the `plain` pagestyle is renamed in `latexplain`.

`chapterplain` the first page of the chapter is numbered with the *plain* page-style.

`UdinePhdThesis` (**default**) performs the Philosophical Doctoral title page of the University of Udine.

`UdinePhdThesisCR` performs the Camera Ready Philosophical Doctoral title page of the University of Udine.

`UdineMstThesis` performs the Master Thesis title page of the University of Udine.

`UdineBachThesis` performs the Bachelor's Thesis title page of the University of Udine.

`PisaPhdThesis` performs the Philosophical Doctoral title page of the University of Pisa.

`PisaMasterThesis` performs the Master Thesis title page, of the University of Pisa.

`SienaPhdThesis` performs the Philosophical Doctoral Thesis title page of the University of Siena.

`ValenciaPhdThesis` performs the Philosophical Doctoral title page of the University of Valencia.

New feature 2010/09/05	<code>ValenciaMstThesis</code> performs the Master Thesis title page of the University of Valencia.
New feature 2008/08/05	<code>ValenciaBachThesis</code> performs the Bachelor's Thesis title page of the University of Valencia.
New feature 2004/02/17	<code>VeneziaPhdThesis</code> performs the Philosophical Doctoral title page of the University of Venice.

The package options can be set in the usual way while calling the class (with `\documentclass[<options>]{PhdThesis}`) or in a `PhdThesis.cfg` file, to customize the default behavior. A practical example of `PhdThesis.cfg` is the following:

```
% \typeout{*****}
% \typeout{* Marco Preferences *}
% \typeout{*****}
% \ExecuteOptions{PisaPhdThesis,fancychapter}
%
```

2 Extra page styles and chapter-titles styles

The command `\pagestyle{<page-style>}` can use the following extra page styles.

`small (default)` headings in small font.

`underlined` bold underlined headings.

`mini` headings without the word “CHAPTER” in front of the chapter number.

`center` centered headings.

`centersmallcaps` centered small caps headings.

`serif` bold sans serif underlined headings.

`smallcaps` small caps numbered headings.

`lowercase` This doesn't convert to uppercase the headings.

`lowercaseunderlined` This is underlined and doesn't convert to uppercase the headings.

New feature
1999/10/10
New feature
2000/01/25
New feature
2003/02/06
New feature
2003/02/06

`\chaptertitlestyle`
New feature
2003/02/06

There is a command `\chaptertitlestyle{<chapter-style>}` to use the following extra chapter styles.

`plain (default)` The style for the chapter's title is the L^AT_EX default.

New description 2003/05/01	serif (was fancy) Uses a different style for the chapter's title with a Serif font. Should be used in combination with <code>\pagestyle{serif}</code> .
New description 2003/05/01	serifbig (was fancybig) Uses a different style for the chapter's title with a Serif font. Should be used in combination with <code>\pagestyle{serif}</code> .
	big Uses a different style for the chapter's title with a number in big font.
<code>\partstyle</code> New feature 2003/02/06	There is a command <code>\partstyle{<part-style>}</code> to use the following extra <code>\part</code> styles. plain (default) The style for <code>\part</code> is the L ^A T _E X default.
New feature 2003/05/05	big Uses a different style for <code>\part</code> with a roman font. Should be used in combination with <code>\chaptertitlestyle{big}</code> .
New description 2003/05/05	serifbig (was serif) Uses a different style for <code>\part</code> with a Serif font. Should be used in combination with <code>\pagestyle{serif}</code> and <code>\chaptertitlestyle{serifbig}</code> .

3 Commands provided

<code>\preface</code> <code>\introduction</code> <code>\conclusions</code>	The class defines the chapter-like commands <code>\preface[<custom-name>]</code> , <code>\introduction[<custom-name>]</code> and <code>\conclusions[<custom-name>]</code> , which should be used for preface, introduction and conclusions respectively. They behave just like <code>\chapter*</code> but (sub)sections can be used inside them. atically depending on the current active language as the default one). The commands preface and introduction should be used in frontmatter mode while the command conclusions should be used in backmatter mode.
New description 1999/10/31	
New feature 2008/01/14	If needed a customized name can be specified instead of the default one (be careful as this won't change automatically depending on the current active language as the default one). Moreover numbering of introduction and conclusions will nevertheless begin with I and C, as in the custom case only * sectioning should be used.
<code>\supervisor</code> <code>\cosupervisor</code> <code>\tutor</code>	The commands <code>\supervisor{<names-list>}</code> , <code>\cosupervisor{<names-list>}</code> , <code>\tutor{<names-list>}</code> , <code>\referee{<names-list>}</code> are used to insert in the first page the supervisor(s), co-supervisor(s), tutor(s) and the referee(s) name(s). The names list consists of a sequence of names separated by <code>\and</code> . Note that the <code>\and</code> command within these commands and <code>\author</code> now changes the corresponding label from singular to plural.
New feature 2010/10/30	
<code>\referee</code>	
New feature 2007/09/20	
<code>\chair</code>	The command <code>\chair{<names-list>}</code> is used to insert in the first page the chair(s) name(s). The names list consists of a sequence of names separated by <code>\and</code> .

	<code>\phdnumber</code>	The command <code>\phdnumber{<text>}</code> is used to insert in the first page the number of the thesis volume.
New feature 2003/02/06	<code>\rights</code>	The command <code>\rights{<text>}</code> is used to insert in the second page a copyright notice.
New feature 2003/02/06	<code>\email</code>	The command <code>\email{<text>}</code> is used to insert in the second page the author's e-mail.
New feature 2004/02/17	<code>\homepage</code>	The command <code>\homepage{<text>}</code> is used to insert in the second page the author's home page URL.
New feature 2003/05/01	<code>\telephone</code>	The command <code>\telephone{<text>}</code> is used to insert in the second page the author's telephone.
New feature 1998/02/28	<code>\titleabstract</code>	The command <code>\titleabstract{<text>}</code> is used to insert in the first page the abstract of the thesis when the command <code>\maketitlepage</code> is invoked.
New feature 1998/02/28	<code>\printindex</code>	The command <code>\printindex</code> is used to source the index file generated by <code>MakeIndex</code> .
New feature 1998/02/28	<code>\maketitlepage</code>	The command <code>\maketitlepage</code> performs a title page with the abstract, different from that of <code>\maketitle</code> , according to the commands described before. It uses the <code>phdnumber</code> , <code>title</code> , <code>author</code> and <code>titleabstract</code> fields only.
New feature 1999/10/31	<code>\chapterappendix</code>	The command <code>\chapterappendix</code> is similar to <code>\appendix</code> but is meant for chapters and thus affects sections only.

4 Environments

	<code>abstract</code>	The class defines the environments <code>abstract</code> , <code>acknowledgments</code> , <code>approval</code> , <code>dedication</code> and <code>summary</code> which are intended to produce an abstract, acknowledgments, approval, summary and dedication pages respectively. They should be used just after the <code>\maketitle</code> command and just before the <code>\frontmatter</code> one and can be used with the following syntax
	<code>acknowledgments</code>	
	<code>approval</code>	
	<code>dedication</code>	
	<code>summary</code>	
New feature 1998/02/28		

```

\begin{front-env-name}[<custom-name>]
<text>
\end{front-env-name}

```

New feature 2008/01/14		where (if needed) a customized name can be specified instead of the default one (be careful as this won't change automatically depending on the current active language as the default one).
New feature 1998/10/13 New feature 2008/01/14	<code>chapterabstract</code>	Finally, we have the environment <code>chapterabstract</code> which should be used at the beginning of a chapter to produce its abstract. For this too a customized name can be specified.

5 Miscellaneous

The class supplies all the caption names used for any of the supported languages listed in the options. The way of supplying names is fully compatible with the `babel` package and takes advantage of its features. It is highly recommended to load this package. If not, in case of multiple language options the only caption definitions to be available will be the ones of the last language specified. Note that if you use a non-supported language all the names which are not provided by `babel` will be expressed in the last supported language used (english by default).

The `\tableofcontents`, `\listoffigures` and `\listoftables` commands are patched to be compatible with the headings options.

The `thebibliography` environment is patched to automatically add its entry in the table of contents. As a side effect it exits `mainmatter` mode.

The `theindex` environment is patched to perform proper `\cleardoublepage` and to automatically add it in the table of contents. As a side effect it exits `mainmatter` mode.

The `\chapter` and `\appendix` commands are patched to friendly work with `\introduction` and `\conclusions`. Moreover the `\appendix` performs a `\mainmatter` to display chapter numbers in the headings.

6 Shape-Definition Files

For each institution different page formats and title pages styles are needed. All this settings are provided by suitable `\Shape-Definition\`.`sdf` files.

First, according to the desired shape to be produced, several L^AT_EX/T_EX parameters concerning page dimensions (text width, text height, margins, base line, ...) have to be set up. For example, all `.sdf` files modify the `\textheight` and `\textwidth` parameters accordingly to the `10pt`, `11pt` or `12pt` options. For some of them `12pt` is recommended, since the final version should be printed as two pages up one A4 paper (hence reduced by 70%), for others not. If you want to know what is recommended simply look at the tex output since warnings are issued for non-recommended setups.

Then the `\maketitle` command is patched in order to perform the title page according to the desired shape and using the commands described before (`supervisor`, ...).

Note that the `\and` command within `\author`, `\supervisor` and `\referee` now changes the corresponding label from singular to plural.

Proper captions appearing in the title page (the “Author’s address” caption, the “Author’s e-mail” caption, etc.) are introduced according to the supported languages.

7 Customizing

The default behavior of most of the provided features can be customized.

The text in the top of the front page (giving info about the institution) can be customized with the commands `\Institution{<text>}`, `\Division{<text>}` and `\StudyCourse{<text>}`, which are respectively first, second and third line.

All the default names used by macros and environments can be overridden by defining a macro `\<feature>name` with the desired text in the preamble of the document. For example if you want the name ‘Coordinator’ instead of ‘Chair’ in the title page, use the command `\newcommand{\chairname}{Coordinator}` in the preamble of the document.

For what concerns the page format of a selected *Shape-Definition* is possible to store all the personal definitions in the file *Shape-Definition.cfg*.

For example, when using the *UdinePhdThesis Shape-Definition*, one can create a file *UdinePhdThesis.cfg* as follows:

```
% \typeout{*****}
% \typeout{* PhdThesis Preferences Marco *}
% \typeout{*****}
% \AtBeginDocument{
% \setlength\baselineskip{1.2\baselineskip}
% \pagestyle{centersmallcaps}
% }
%
```

to store some personal customisations.

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