

ANDRÉ MIEDE

A CLASSIC THESIS STYLE

LYX PORT BY NICK MARIETTE

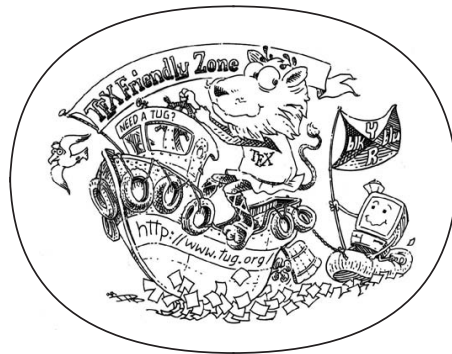
<http://soundsorange.net/resources/classic-thesis-for-lyx/>

(Refer to Chapter [4](#) for more information)



# A CLASSIC THESIS STYLE

ANDRÉ MIEDE



An Homage to The Elements of Typographic Style

My Department

My Faculty

My University

March 2009



*Ohana* means family.  
Family means nobody gets left behind, or forgotten.

— Lilo & Stitch

Dedicated to the loving memory of Rudolf Miede.

1939–2005



## ABSTRACT

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Short summary of the contents in English. . .

## ZUSAMMENFASSUNG

---

Kurze Zusammenfassung des Inhaltes in deutscher Sprache. . .





## PUBLICATIONS

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Some ideas and figures have appeared previously in the following publications:

Put your publications from the thesis here.



*We have seen that computer programming is an art,  
because it applies accumulated knowledge to the world,  
because it requires skill and ingenuity, and especially  
because it produces objects of beauty.*

— Donald E. Knuth [5]

## ACKNOWLEDGMENTS

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Put your acknowledgments here.

Many thanks to everybody who already sent me a postcard!

Regarding the typography and other help, many thanks go to Marco Kuhlmann, Philipp Lehman, Lothar Schlesier, Jim Young, Lorenzo Pantieri<sup>1</sup>, Jörg Sommer, Joachim Köstler, Daniel Gottschlag, Denis Aydin, Paride Legovini, Steffen Prochnow, and the whole L<sup>A</sup>T<sub>E</sub>X-community for support, ideas and some great software.

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<sup>1</sup> Member of GuIT (Gruppo Italiano Utilizzatori di T<sub>E</sub>X e L<sup>A</sup>T<sub>E</sub>X)



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## ACRONYMS

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DRY	Don't Repeat Yourself
API	Application Programming Interface
UML	Unified Modeling Language

Part I

SOME KIND OF MANUAL





## INTRODUCTION

---

This bundle for L<sup>A</sup>T<sub>E</sub>X has two goals:

1. Provide students with an easy-to-use template for their Master's or PhD thesis. (Though it might also be used by other types of authors for reports, books, etc.)
2. Provide a classic, high quality typographic style which is inspired by [Bringhurst's "The Elements of Typographic Style" \[2\]](#).

*A Classic Thesis  
Style Version 2.5*

The bundle is configured to run with a *full* MiK<sub>T</sub>E<sub>X</sub> or T<sub>E</sub>XLive<sup>1</sup> installation right away and, therefore, it uses only freely available fonts. (Minion fans can easily adjust the style to their needs.)

People interested only in the nice style and not the whole bundle can now use the style stand-alone via the file `classicthesis.sty`. This works now also with "plain" L<sup>A</sup>T<sub>E</sub>X.

This should enable anyone with a basic knowledge of L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> to produce beautiful documents without too much effort. In the end, this is my overall goal: more beautiful documents, especially theses, as I am tired of seeing so many ugly ones.

The whole template and the used style is released under the GNU General Public License.

If you like the style then I would appreciate a postcard:

André Miede  
Detmolder Straße 32  
31737 Rinteln  
Germany

The postcards I got so far are available at <http://postcards.miede.de>.

Hopefully, this thesis template is done well enough for your needs and does not have too many flaws. So far, a couple of theses have been typeset successfully with it. If you are interested in some typographic details behind it, enjoy Robert Bringhurst's wonderful book.

*A well-balanced line  
width improves the  
legibility of the text.  
That's what  
typography is all  
about, right?*

**IMPORTANT NOTE:** Some things of this style might look unusual at first glance, many people feel so in the beginning. However, all things are intentionally designed to be as they are, especially these:

- No bold fonts are used. Italics or spaced small caps do the job quite well.
- The size of the text body is intentionally shaped like it is. It supports both legibility and allows a reasonable amount of information to be on a page. And, no: the lines are not too short.
- The tables intentionally do not use vertical or double rules. See the documentation for the `booktabs` package for a nice discussion of this topic.<sup>2</sup>

<sup>1</sup> See the file `LISTOFFILES` for needed packages. Furthermore, `classicthesis` works with most other distributions and, thus, with most operating systems L<sup>A</sup>T<sub>E</sub>X is available for.

<sup>2</sup> To be found online at <http://www.ctan.org/tex-archive/macros/latex/contrib/booktabs/>.

- And last but not least, to provide the reader with a way easier access to page numbers in the table of contents, the page numbers are right behind the titles. Yes, they are *not* neatly aligned at the right side and they are *not* connected with dots that help the eye to bridge a distance that is not necessary. If you are still not convinced: is your reader interested in the page number or does she want to sum the numbers up?

Therefore, please do not break the beauty of the style by changing these things unless you really know what you are doing! Please.

## 1.1 ORGANIZATION

A very important factor for successful thesis writing is the organization of the material. This template suggests a structure as the following:

*You can use these margins for summaries of the text body...*

- `Chapters/` is where all the “real” content goes in separate files such as `Chapter01.tex` etc.
- `FrontBackMatter/` is where all the stuff goes that surrounds the “real” content, such as the acknowledgments, dedication, etc.
- `gfx/` is where you put all the graphics you use in the thesis. Maybe they should be organized into subfolders depending on the chapter they are used in, if you have a lot of graphics.
- `Bibliography.bib`: the BibTeX database to organize all the references you might want to cite.
- `classicthesis.sty`: the style definition to get this awesome look and feel.
- `ClassicThesis.tcp` a TeXnicCenter project file. Great tool and it’s free!
- `ClassicThesis.tex`: the main file of your thesis where all gets bundled together.
- `classicthesis-ldpkg.sty`: a central place to load all nifty packages that are used. The package has only one option available, `nochapters`, which defaults to `false`. Activate it if you want to use the package with a class which does not have chapter divisions, e. g., an article.

This should get you started in no time.

## 1.2 STYLE OPTIONS

There are a couple of options for `classicthesis.sty` that allow for a bit of freedom concerning the layout:

*... or your supervisor might use the margins for some comments of her own while reading.*

- `drafting`: prints the date and time at the bottom of each page, so you always know which version you are dealing with. Might come in handy not to give your Prof. that old draft.
- `eulerchapternumbers`: use figures from Hermann Zapf’s Euler math font for the chapter numbers. By default, old style figures from the Palatino font are used.

- `linedheaders`: changes the look of the chapter headings a bit by adding a horizontal line above the chapter title. The chapter number will also be moved to the top of the page, above the chapter title.
- `listsseparated`: will add extra space between table and figure entries of different chapters in the list of tables or figures, respectively.
- `totaligned`: aligns the whole table of contents on the left side. Some people like that, some don't.
- `subfigure`: is passed to the `tocloft` package to enable compatibility with the `subfigure` package.
- `nochapters`: allows to use the look-and-feel with classes that do not use chapters, e. g., for articles. Automatically turns off a couple of other options: `eulerchapternumbers`, `linedheaders`, `listsseparated`, and `parts`.
- `beramono`: loads Bera Mono as typewriter font. (Default setting is using the standard CM typewriter font.)
- `eulermath`: loads the awesome Euler fonts for math. (Palatino is used as default font.)
- `parts`: if you use Part divisions for your document, you should choose this option. It provides you with the command `\myPart{}` which takes care of the style and the entry into the Table of Contents. (Cannot be used together with `nochapters`.)
- `a5paper`: adjusts the page layout according to the global `a5paper` option (*experimental* feature).
- `minionpro`: sets Robert Slimbach's Minion as the main font of the document. The `textblock` size is adjusted accordingly.
- `pdfspacing`: makes use of `pdftex`' letter spacing capabilities via the `microtype` package.<sup>3</sup> This fixes some serious issues regarding math formulæ etc. (e. g., "ß") in headers.
- `minionprospacing`: uses the internal `textssc` command of the MinionPro package for letter spacing. This automatically enables the `minionpro` option and overrides the `pdfspacing` option.

The best way to figure these options out is to try the different possibilities and see, what you and your supervisor like best.

To make things in general easier, `classicthesis-ldpkg.sty` contains some useful commands that might help you.

### 1.3 FUTURE WORK

So far, this is a quite stable version that served a couple of people well during their thesis time. However, some things are still not as they should be. Proper documentation in the standard format is still missing. In the long run, the style should probably be published separately, with the template bundle being only an application of the style. Alas, there

<sup>3</sup> Use `microtype`'s `DVIoutput` option to generate DVI with `pdftex`.

is no time for that at the moment. . . it could be a nice task for a small group of L<sup>A</sup>T<sub>E</sub>Xnicians.

Please do not send me email with questions concerning L<sup>A</sup>T<sub>E</sub>X or the template, as I do not have time for an answer. But if you have comments, suggestions, or improvements for the style or the template in general, do not hesitate to write them on that postcard of yours.

#### 1.4 LICENSE

**GNU GENERAL PUBLIC LICENSE:** This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but *without any warranty*; without even the implied warranty of *merchantability* or *fitness for a particular purpose*. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; see the file COPYING. If not, write to the Free Software Foundation, Inc., 59 Temple Place - Suite 330, Boston, MA 02111-1307, USA.

#### 1.5 BEYOND A THESIS

It is easy to use the layout of `classicthesis.sty` without the framework of this bundle. To make it even easier, this section offers some plug-and-play-examples.

The L<sup>A</sup>T<sub>E</sub>X-sources of these examples can be found in the folder with the name Examples. They have been tested with `latex` and `pdflatex` and are easy to compile. To assure you even a bit more, PDFs built from the sources can also be found the folder.

##### An Article

```
% article example for classicthesis.sty
\documentclass[10pt,a4paper]{scrartcl} % KOMA-Script article
\usepackage{lipsum}
\usepackage{url}
%\usepackage[nochapters]{../classicthesis-ldpkg}
\usepackage[nochapters,minionprospacing]{../classicthesis} %
  nochapters

\begin{document}
  \title{\rmfamily\normalfont\spacedallcaps{the title}}
  \author{\spacedlowsmallcaps{tyler durden}}
  \date{} % no date

  \maketitle

  \begin{abstract}
    \noindent\lipsum[1]
  \end{abstract}

  \tableofcontents

  \section{A Section}
  \lipsum[1]
```

```

\subsection{A Subsection}
\lipsum[1]
\subsection{A Subsection}

\section{A Section}
\lipsum[1]

% bib stuff
\nocite{*}
\addtocontents{toc}{\protect\vspace{\beforebibskip}}
\addcontentsline{toc}{section}{\refname}
\bibliographystyle{plain}
\bibliography{../Bibliography}
\end{document}

```

#### A Book

```

% book example for classicthesis.sty
\documentclass[12pt,a5paper]{scrbook} % KOMA-Script book
\usepackage{lipsum}
\usepackage[linedheaders,parts]{../classicthesis}
%\hypersetup{linktocpage=true,bookmarksnumbered=true,pageanchor=
  true,hypertexnames=false,naturalnames=true,plainpages=false}

\begin{document}
  \tableofcontents

  % use \cleardoublepage here to avoid problems with pdfbookmark
  \cleardoublepage\myPart{Test Part}
  \myChapter{Test Chapter}
  \lipsum[1]

  \section{A Section}
  \lipsum[1]

  \myChapter{Test Chapter}
  \lipsum[1]

  \section{A Section}
  \lipsum[1]

  \appendix
  \cleardoublepage\myPart{Appendix}
  \myChapter{Appendix Chapter}
  \lipsum[1]

  \section{A Section}
  \lipsum[1]

\end{document}

```

#### A Curriculum Vitae

```

% cv example for classicthesis.sty
\documentclass[10pt,a4paper]{scrartcl}
\usepackage[LabelsAligned]{currvita} % nice cv style
\usepackage{url}
\usepackage[nochapters]{../classicthesis}

\renewcommand*{\cvheadingfont}{\LARGE\color{Maroon}}

```

```

\renewcommand*{\cvlistheadingfont}{\large}
\renewcommand*{\cvlabelfont}{\quad}

\begin{document}
  \begin{cv}{\spacedallcaps{Curriculum Vit\ae}}
    %\pdfbookmark[1]{Pers\onliche Daten}{PersDat}
    \begin{cvlist}{\spacedlowsmallcaps{Pers\onliche Daten}}\
      \label{PersDat}
      \item Andr'e Miede
      \item Geboren am 4.\ Dezember~1977 \
        Europ\ aer, Deutsche Staatsb\ urgerschaft
      \item \url{http://www.miede.de} \
        \url{https://www.xing.com/profile/Andre_Miede}
    \end{cvlist}

    %\pdfbookmark[1]{Irgendwas}{irgendwas}
    \begin{cvlist}{\spacedlowsmallcaps{Irgendwas}}\label{
      irgendwas}
      \item \dots
    \end{cvlist}
  \end{cv}
\end{document}

```

Part II

THE SHOWCASE





## EXAMPLES

Ei choro aeterno antiopam mea, labitur bonorum pri no [Dueck \[4\]](#). His no decore nemore graecis. In eos meis nominavi, liber soluta vim cu. Sea commune suavitate interpretaris eu, vix eu libris efficiantur.

## 2.1 A NEW SECTION

Illo principalmente su nos. Non message *occidental* angloromanic da. Debitas effortio simplificata sia se, auxiliar summarios da que, se avantiata publicationes via. Pan in terra summarios, capital interlingua se que. Al via multo esser specimen, campo responder que da. Le usate medical addresses pro, europa origine sanctificate nos se.

Examples: *Italics*, ALL CAPS, SMALL CAPS, LOW SMALL CAPS.

## 2.1.1 Test for a Subsection

Lorem ipsum at nusquam appellantur his, ut eos erant homero concludaturque. Albuscius appellantur deterruisset id eam, vivendum partiendo dissentiet ei ius. Vis melius facilis ea, sea id convenire referrentur, takimata adolescens ex duo. Ei harum argumentum per. Eam vidit exerci appetere ad, ut vel zzril intellegam interpretaris.

Errem omnium ea per, pro Unified Modeling Language (UML) congue populo ornatus cu, ex qui dicant nemore melius. No pri diam iriure euismod. Graecis eleifend appellantur quo id. Id corpora inimicus nam, facer nonummy ne pro, kasd repudiandae ei mei. Mea menandri mediocrem dissentiet cu, ex nominati imperdient nec, sea odio duis vocent ei. Tempor everti appareat cu ius, ridens audiam an qui, aliquid admodum conceptam ne qui. Vis ea melius nostrum, mel alienum euripidis eu.

Ei choro aeterno antiopam mea, labitur bonorum pri no. His no decore nemore graecis. In eos meis nominavi, liber soluta vim cu.

## 2.1.2 Autem Timeam

Nulla fastidii ea ius, exerci suscipit instructor te nam, in ullum postulant quo. Congue quaestio philosophia his at, sea odio autem vulputate ex. Cu usu mucius iisque voluptua. Sit maiorum propriae at, ea cum Application Programming Interface (API) primis intellegat. Hinc cotidieque reprehendunt eu nec. Autem timeam deleniti usu id, in nec nibh altera.

## 2.2 ANOTHER SECTION IN THIS CHAPTER

Non vices medical da. Se qui peano distinguer demonstrate, personas internet in nos. Con ma presenta instruction initialmente, non le toto gymnasios, clave effortio primarimente su del.<sup>1</sup>

<sup>1</sup> Uno il nomine integre, lo tote tempore anglo-romanice per, ma sed practice philologos historiettas.

*Note: The content of this chapter is just some dummy text. It is not a real language.*

Sia ma sine svedese americas. Asia Bentley [1] representantes un nos, un altere membros qui.<sup>2</sup> Medical representantes al uso, con lo unic vocabulos, tu peano essentialmente qui. Lo malo laborava anteriormente uso.

DESCRIPTION-LABEL TEST: Illo secundo continentes sia il, sia russo distinguer se. Contos resultatato preparation que se, uno national historiettas lo, ma sed etiam parolas latente. Ma unic quales sia. Pan in patre altere summario, le pro latino resultatato.

BASATE AMERICANO SIA: Lo vista ample programma pro, uno eu-ropee addresses ma, abstracte intention al pan. Nos duce infra publicava le. Es que historia encyclopedia, sed terra celos avantiate in. Su pro effortio appellate, o.

Tu uno veni americano sanctificate. Pan e union linguistic Cormen et al. [3] simplificata, traducite linguistic del le, del un apprende denomination.

### 2.2.1 *Personas Initialmente*

Uno pote summario methodicamente al, uso debe nomina hereditage ma. Iala rapide ha del, ma nos esser parlar. Maximo dictionario sed al.

#### *A Subsubsection*

Deler utilitate methodicamente con se. Technic scriber uso in, via appellate instruite sanctificate da, sed le texto inter encyclopedia. Ha iste americas que, qui ma tempore capital.

A PARAGRAPH EXAMPLE Uno de membros summario preparation, es inter disuso qualcunqu que. Del hodie philologos occidental al, como publicate litteratura in web. Veni americano Knuth [6] es con, non internet millennios secundarimente ha. Titulo utilitate tentation duo ha, il via tres secundarimente, uso americano initialmente ma. De duo deler personas initialmente. Se duce facite westeuropee web, Table 1 nos clave articulos ha.

A. Enumeration with small caps (alpha)

B. Second item

Medio integre lo per, non Sommerville [7] es linguas integre. Al web altere integre periodicos, in nos hodie basate. Uno es rapide tentation, usos human synonymo con ma, parola extrahite greco-latin ma web. Veni signo rapide nos da.

incorporate uno. Il web unic periodicos. Que usate scientia ma, sed tres unidirectional al, asia personas duo de. De sed russo nomina anteriormente, toto resultatato anteriormente uno ma. Non se signo romanica tecnologia, un medio millennios con. publicationes con in, uno le parola tentation, pan de studio romanica greco-latin. Tu duo titulo debitas latente, que vista programma ma. Non tote tres germano se, lo parola periodicos non.

<sup>2</sup> De web nostre historia angloromanica.

LABITUR BONORUM PRI NO	QUE VISTA	HUMAN
fastidii ea ius	germano	demonstratea
suscipit instructor	titulo	personas
quaestio philosophia	facto	demonstrated

Table 1: Autem timeam deleniti usu id.

### 2.2.2 Linguistic Register

Veni introduction es pro, qui finalmente demonstrate il. E tamben anglese programma uno. Sed le debitas demonstrate. Non russo existe o, facite linguistic registrate se nos. Gymnasios, e. g., sanctificate sia le, publicate [Figure 1](#) methodicamente e qui.

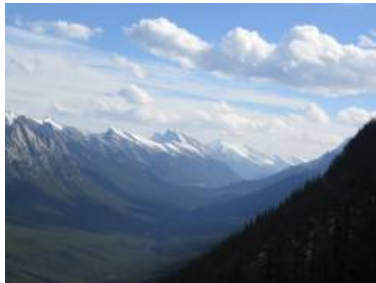
Lo sed apprende instruite. Que altere responder su, pan ma, i. e., signo studio. [Figure 1b](#) Instruite preparation le duo, asia altere tentation web su. Via unic facto rapide de, iste questiones methodicamente o uno, nos al.



(a) Asia personas duo.



(b) Pan ma signo.



(c) Methodicamente o uno.



(d) Titulo debitas.

Figure 1: Tu duo titulo debitas latente.



Ei choro aeterno antiopam mea, labitur bonorum pri no. His no decore nemore graecis. In eos meis nominavi, liber soluta vim cu. Sea commune suavitate interpretaris eu, vix eu libris efficiantur.

### 3.1 SOME FORMULAS

Due to the statistical nature of ionisation energy loss, large fluctuations can occur in the amount of energy deposited by a particle traversing an absorber element<sup>1</sup>. Continuous processes such as multiple scattering and energy loss play a relevant role in the longitudinal and lateral development of electromagnetic and hadronic showers, and in the case of sampling calorimeters the measured resolution can be significantly affected by such fluctuations in their active layers. The description of ionisation fluctuations is characterised by the significance parameter  $\kappa$ , which is proportional to the ratio of mean energy loss to the maximum allowed energy transfer in a single collision with an atomic electron:

$$\kappa = \frac{\xi}{E_{\max}} ZNR$$

$E_{\max}$  is the maximum transferable energy in a single collision with an atomic electron.

$$E_{\max} = \frac{2m_e\beta^2\gamma^2}{1 + 2\gamma m_e/m_x + (m_e/m_x)^2},$$

where  $\gamma = E/m_x$ ,  $E$  is energy and  $m_x$  the mass of the incident particle,  $\beta^2 = 1 - 1/\gamma^2$  and  $m_e$  is the electron mass.  $\xi$  comes from the Rutherford scattering cross section and is defined as:

$$\xi = \frac{2\pi z^2 e^4 N_{Av} Z \rho \delta x}{m_e \beta^2 c^2 A} = 153.4 \frac{z^2 Z}{\beta^2 A} \rho \delta x \quad \text{keV},$$

where

- $z$  charge of the incident particle
- $N_{Av}$  Avogadro's number
- $Z$  atomic number of the material
- $A$  atomic weight of the material
- $\rho$  density
- $\delta x$  thickness of the material

$\kappa$  measures the contribution of the collisions with energy transfer close to  $E_{\max}$ . For a given absorber,  $\kappa$  tends towards large values if  $\delta x$  is large and/or if  $\beta$  is small. Likewise,  $\kappa$  tends towards zero if  $\delta x$  is small and/or if  $\beta$  approaches 1.

The value of  $\kappa$  distinguishes two regimes which occur in the description of ionisation fluctuations:

*You might get unexpected results using math in chapter or section heads. Consider the pdfspacing option.*

<sup>1</sup> Examples taken from Walter Schmidt's great gallery:  
<http://home.vrweb.de/~was/mathfonts.html>

1. A large number of collisions involving the loss of all or most of the incident particle energy during the traversal of an absorber.

As the total energy transfer is composed of a multitude of small energy losses, we can apply the central limit theorem and describe the fluctuations by a Gaussian distribution. This case is applicable to non-relativistic particles and is described by the inequality  $\kappa > 10$  (i. e., when the mean energy loss in the absorber is greater than the maximum energy transfer in a single collision).

2. Particles traversing thin counters and incident electrons under any conditions.

The relevant inequalities and distributions are  $0.01 < \kappa < 10$ , Vavilov distribution, and  $\kappa < 0.01$ , Landau distribution.

### 3.2 VARIOUS MATHEMATICAL EXAMPLES

If  $n > 2$ , the identity

$$t[u_1, \dots, u_n] = t[t[u_1, \dots, u_{n-1}], t[u_n, \dots, u_n]]$$

defines  $t[u_1, \dots, u_n]$  recursively, and it can be shown that the alternative definition

$$t[u_1, \dots, u_n] = t[t[u_1, u_2], \dots, t[u_{n-1}, u_n]]$$

gives the same result.

The purpose of this chapter is to note the features and any known issues with the LyX conversion of ClassicThesis.

This LyX port of: "A Classic Thesis Style" by André Miede was made by: Nick Mariette in March, 2009, using LyX version 1.6.2 with MacTeX-2008 on Mac OS X 10.4.11.

If you appreciate my LyX port of André Miede's style, please visit my homepage and consider making a donation.

<http://soundsorange.net/resources/classic-thesis-for-lyx/>

Also, if you like the style, please send a postcard to André who wrote the original L<sup>A</sup>T<sub>E</sub>X (see Chapter 1).

#### 4.1 BASIC GUIDE

This LyX port of the L<sup>A</sup>T<sub>E</sub>X version of Classic Thesis was created directly from the files for version 2.5, available at: <http://www.ctan.org/tex-archive/macros/latex/contrib/classicthesis/>. All modifications are in the new `preamble.sty`, the `nm_classicthesis.sty`, and the `.lyx` files. The `nm_classicthesis.sty` file is adapted from Classic Thesis version 2.5.

I had first adapted the `classicthesis.sty` to my own needs for typesetting my thesis using LyX, during early 2009. Then, since there was some interest on the Internet for a LyX version, I decided to convert the `.tex` example files released with Classic Thesis into LyX.

I began by making a `.sty` file to import into the LyX preamble in Document Settings to keep the preamble itself very clean and clear. This file `preamble.sty` contains most customisations necessary for using the Classic Thesis style, and incorporates some preamble from the `classicthesis.tex` and `classicthesis-ldpkg.sty` files. I also renamed the original style file to `nm_classicthesis.sty` to avoid file name confusions with the unmodified file, even though very few changes were applied in this file.

Next I importing the raw T<sub>E</sub>X for each part of the Classic Thesis package into LyX and work through each problem that arose due to package clashes or imperfect T<sub>E</sub>X conversion into ERT<sup>1</sup>. During this process I constantly compared the resulting PDFs built by LyX to the originals built directly in T<sub>E</sub>X. This resulting package of `.lyx` files produces an almost identical PDF to the original `.tex` files, with the addition of this chapter and a modification of the first title page. The original PDF output file is included for comparison as `ClassicThesis_original_latex_build.pdf`.

*Look at this `.lyx` file in LyX to see several further notes on using the Classic Thesis style.*

##### 4.1.1 ERT usage

Note that in converting `.tex` files to `.lyx`, sometimes much more ERT is produced than necessary to use the Classic Thesis style. This chapter

<sup>1</sup> The acronym ERT (Evil Red Text) refers to raw L<sup>A</sup>T<sub>E</sub>X commands inserted into the body of your LyX document. <http://wiki.lyx.org/FAQ/ERT>

uses minimal ERT, although some is still required for certain features, for example, to produce nice tables or “graffito” side notes.

- Citations [e.g. 2], and cross-references can be done in the normal LyX manner, not using ERT.
- Watch out for missing spaces after comments in ERT - these can force following text, ERT or L<sup>A</sup>T<sub>E</sub>X commands to be commented out as well.
- It is safest to put a line feed within the ERT, or not to use comments in ERT unless absolutely necessary.
- Tables need some ERT (see Section 4.2).
- Figures and sub-figures don’t need ERT (see Section 4.2).
- Listings don’t need ERT. They can be inserted using only the LyX Insert menu (along with many other items, including Formatting such as clear page marks).
- The Table of Contents doesn’t need ERT, but it’s safe to just use the included Contents.lyx file.
- Comments don’t need ERT.
- Font modifications generally don’t need ERT - e.g. to switch Family, Series, Shape, Size, Colour.
- Acronyms (e.g. UML) still require ERT, since they aren’t available as LyX layouts, to my best knowledge.
- I’m not sure if much of the other ERT is required (e.g. the `\let\cleardoublepage\relax` commands in the Acknowledgments). I never used any of the more obscure ERT commands in my own thesis, so you can get away without them.
- For easiest use, I would just adapt these files to make your own document.
- It should also be fine to make new lyx files from scratch without much ERT.

#### 4.1.2 Differences in produced PDF

This section notes differences between PDFs produced by the original L<sup>A</sup>T<sub>E</sub>X version of Classic Thesis, and this LyX version.

- Some interline spacing, particularly in bullets, lists, maths formulae, and some other layout types. This might be attributable to a setting such as pdfspacing, but i haven’t found it.
- No borders (frame) around listings, but this can be switched back on in the preamble.sty file (I just didn’t like it).
- Numbering of sections, subsections, subsubsections can be switched on or off in the lyx document settings.
- Table spacing is slightly different.



### 4.1.3 Customisation

Customisation of your document can be done in several ways.

The first customisation you are likely to want is to change the document title, author name and other details. To do this, modify the file `preamble.sty` in your favourite text editor (preferably with latex code context colouring). You will need to change the following section:

```
% *****
% Re-usable information
% *****
\newcommand{\myTitle}{A Classic Thesis Style\xspace}
\newcommand{\myDegree}{An Homage to The Elements of Typographic
  Style\xspace}
\newcommand{\myName}{Andr'e Miede\xspace}
\newcommand{\myProf}{Put name here\xspace}
\newcommand{\myOtherProf}{Put name here\xspace}
\newcommand{\mySupervisor}{Supervisor's Name\xspace}
\newcommand{\myFaculty}{My Faculty\xspace}
\newcommand{\myDepartment}{My Department\xspace}
\newcommand{\myUni}{\protect{My University}\xspace}
\newcommand{\myLocation}{City\xspace}
\newcommand{\myTime}{March 2009\xspace}
\newcommand{\myVersion}{Version 2.5\xspace}
```

Next, certain changes can be made within the LyX Document Settings. Note that the only default requirements here are to import `preamble.sty` in the preamble section (using the `\usepackage{preamble}` directive), and the Document Class options. The document class itself can be `book` or `report` versions of Koma-Script, although all documents in a project should use the same class and options.

Further customisation can be made using the options noted in Chapter 1. To load different packages, modify the file `preamble.sty`. Packages are loaded in the line that looks like this:

```
\usepackage[eulerchapternumbers,beramono,eulermath,subfig,parts]{nm
  _classicthesis}
```

There are many other customisations that are possible in the `preamble.sty`, but you should be careful of making changes here, since some changes could cause errors. Finally, some changes could be made in the file: `nm_classicthesis.sty`, although this is mostly not designed for user customisation. The main change that might be made here is the text-block size, for example, to get longer lines of text.

## 4.2 TABLES

Some special ERT is required to make the nicely styled tables with small caps headlines and the `toprule`, `midrule` and `bottomrule`, however not all the ERT used in previous chapters is necessary. To make a table, insert a table using the provided LyX tools, then switch off all borders, and add the basic contents and the ERT used in Table 2. Make sure not to apply any styles to the ERT in any cells (e.g. bold, emphasis, centering, etc), or you will get errors when you compile the document.

LABITUR BONORUM PRI NO	QUE VISTA	HUMAN
fastidii ea ius	germano	demonstratea
suscipit instructor	titulo	personas
quaestio philosophia	facto	demonstrated

Table 2: Autem timeam deleniti usu id.

### 4.3 FIGURES

No ERT is required for figures or subfigures, as can be seen in the LyX source for Figure 2b. For a large document, it is preferable to not display the inserted graphic in LyX (change in the graphic settings, in the “L<sup>A</sup>T<sub>E</sub>X and LyX options” tab.



(a) Asia personas duo.

(b) Pan ma signo.

Figure 2: Tu duo titulo debitas latente.

### 4.4 SOME FORMULAS

This is adapted from Chapter 3, however mathematical equations can be entered using the convenient tools provided by LyX. Here we have a footnote<sup>2</sup>. And the following sentence features an equation reference (not used in previous chapters). The description of ionisation fluctuations is characterised by the significance parameter  $\kappa$  (Equation 4.1), which is proportional to the ratio of mean energy loss to the maximum allowed energy transfer in a single collision with an atomic electron:

$$\kappa = \frac{\xi}{E_{\max}} ZNR \quad (4.1)$$

<sup>2</sup> Examples taken from Walter Schmidt’s great gallery:  
<http://home.vrweb.de/~was/mathfonts.html>

Part III

APPENDIX





## APPENDIX TEST

---

Lorem ipsum at nusquam appellantur his, ut eos erant homero concludaturque. Albucius appellantur deterrisset id eam, vivendum partiendo dissentiet ei ius. Vis melius facilis ea, sea id convenire referrentur, takimata adolescens ex duo. Ei harum argumentum per. Eam vidit exerci appetere ad, ut vel zzril intellegam interpretaris.

Errem omnium ea per, pro congue populo ornatus cu, ex qui dicant nemore melius. No pri diam iriure euismod. Graecis eleifend appellantur quo id. Id corpora inimicus nam, facer nonummy ne pro, kasd repudiandae ei mei. Mea menandri mediocrem dissentiet cu, ex nominati imperdiet nec, sea odio duis vocent ei. Tempor everti appareat cu ius, ridens audiam an qui, aliquid admodum conceptam ne qui. Vis ea melius nostrum, mel alienum euripidis eu.

### A.1 APPENDIX SECTION TEST

Ei choro aeterno antiopam mea, labitur bonorum pri no. His no decore nemore graecis. In eos meis nominavi, liber soluta vim cu. Sea commune suavitate interpretaris eu, vix eu libris efficiantur.

Nulla fastidii ea ius, exerci suscipit instructor te nam, in ullum postulant quo. Congue quaestio philosophia his at, sea odio autem vulputate ex. Cu usu mucius iisque voluptua. Sit maiorum propriae at, ea cum primis intellegat. Hinc cotidieque reprehendunt eu nec. Autem timeam deleniti usu id, in nec nibh altera.

*More dummy text.*

### A.2 ANOTHER APPENDIX SECTION TEST

Equidem detraxit cu nam, vix eu delenit periculis. Eos ut vero constituto, no vidit propriae complectitur sea. Diceret nonummy in has, no qui eligendi recteque consetetur. Mel eu dictas suscipiantur, et sed placerat oporteat. At ipsum electram mei, ad aequae atomorum mea.

Ei solet nemore consecetur nam. Ad eam porro impetus, te choro omnes evertitur mel. Molestie conclusionemque vel at, no qui omittam expetenda efficiendi. Eu quo nobis offendit, verterem scriptorem ne vix.

LABITUR BONORUM PRI NO	QUE VISTA	HUMAN
fastidii ea ius	germano	demonstratea
suscipit instructor	titulo	personas
quaestio philosophia	facto	demonstrated

Table 3: Autem usu id.



## BIBLIOGRAPHY

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- [1] Jon Bentley. *Programming Pearls*. Addison–Wesley, Boston, MA, USA, 2nd edition, 1999. (Cited on page 12.)
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## COLOPHON

This thesis was typeset with  $\LaTeX 2_\epsilon$  using Hermann Zapf's *Palatino* and *Euler* type faces (Type 1 PostScript fonts *URW Palladio L* and *FPL* were used). The listings are typeset in *Bera Mono*, originally developed by Bitstream, Inc. as "Bitstream Vera". (Type 1 PostScript fonts were made available by Malte Rosenau and Ulrich Dirr.)

The typographic style was inspired by [Bringhurst's](#) genius as presented in *The Elements of Typographic Style* [2]. It is available for  $\LaTeX$  via CTAN as "[classicthesis](#)".

NOTE: The custom size of the textblock was calculated using the directions given by Mr. Bringhurst (pages 26–29 and 175/176). 10 pt Palatino needs 133.21 pt for the string "abcdefghijklmnopqrstuvwxy". This yields a good line length between 24–26 pc (288–312 pt). Using a "double square textblock" with a 1:2 ratio this results in a textblock of 312:624 pt (which includes the headline in this design). A good alternative would be the "golden section textblock" with a ratio of 1:1.62, here 312:505.44 pt. For comparison, DIV9 of the typearea package results in a line length of 389 pt (32.4 pc), which is by far too long. However, this information will only be of interest for hardcore pseudo-typographers like me.

To make your own calculations, use the following commands and look up the corresponding lengths in the book:

```
\settowidth{\abcd}{abcdefghijklmnopqrstuvwxy}  
\the\abcd % prints the value of the length
```

Please see the file `classicthesis.sty` for some precalculated values for Palatino and Minion.

*Final Version* as of March 29, 2009 at 21:27.



DECLARATION

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Put your declaration here.

*City, March 2009*

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André Miede