

# The univie-ling-thesis class

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## Abstract

The univie-ling-thesis class provides a  $\text{\LaTeX}$  2 $\epsilon$  class suitable for Bachelor's, Master's, Diploma and Doctoral theses in (Applied) Linguistics at the Department of Linguistics, University of Vienna. The class implements some standards required for those theses (such as a suitable title page) and pre-loads some packages that are considered useful in the context of Applied Linguistics. The class might also be used for General and Historical Linguistics as well as for other fields of study at Vienna University. In this case, however, some settings might have to be adjusted. This manual documents the class as well as the configuration possibilities.

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\*Please report issues via <https://github.com/jspitz/univie-ling>.

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## 1 Aims and scope

The univie-ling-thesis class has been written mainly with my own field in mind: Applied Linguistics. Therefore, the defaults are closely tied to the requirements in this field. This particularly concerns the preloaded bibliography style, which conforms to the standards that are proposed by the Viennese Applied Linguistics staff (see sec. 8). Furthermore, some frequently used packages (such as covington) are preloaded. As documented later, however, you can disable this (and other) default(s), use a bibliography style of your choice and load alternative packages.

The design matches as closely as necessary the standards set up by the university. This particularly concerns the title page, which follows the recommendations specified by the *StudienServiceCenter*.<sup>1</sup>

## 2 Requirements of univie-ling-thesis

The following class and packages are required and loaded by univie-ling-thesis:

- scrreprt: KOMA-Script report class (base class).
- array: Tabular extensions.
- csquotes: Context sensitive quotations.
- geometry: Page layout settings.
- graphicx: Graphic support.
- sclayer-scrpage: Page header settings.
- setspace: Line spacing adjustments.
- translations: Localization machinery.
- url: Support for typesetting URLs.
- xkeyval: Key-value interface for class options.

The following packages are required for specific features and loaded by default. However, the loading can be individually and generally omitted (see sec. 4):

- mathpazo: Default serif font (*Palatino*).
- urw-arial or helvet: Default sans serif font (*Arial* or *Helvetica*).
- biblatex: Contemporary bibliography support.
- caption: Caption layout adjustments.
- covington: Support for linguistic examples/glosses.
- fontenc: Set the font encoding for PostScript fonts. Loaded with option **T1**.
- inputenc: Set the input encoding of the document. The encoding used is **utf8**.

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<sup>1</sup>See <http://ssc-philkultur.univie.ac.at/studium/masterstudien/abgabe-der-masterarbeit> for master's theses, <http://ssc-philkultur.univie.ac.at/studium/doktoratsstudium-neu-792-xxx/dissertation> for doctoral theses <25.01.2017>.

- microtype: Micro-typographic adjustments.
- prettyref: Verbose cross-references.
- varioref: Context-sensitive cross references.

The following package is required for an optional feature (not used by default):

- biblatex-apa: APA style for biblatex.
- fontspec: Load OpenType fonts (with LuaTeX or XeTeX)

### 3 Fonts

The class uses, by default, PostScript (a. k. a. Type 1) fonts and thus requires classic (PDF)LaTeX. Optionally, however, you can also use OpenType fonts via the fontspec package and the XeTeX or LuaTeX engine instead. In order to do this, use the class option **fonts=otf** (see sec. 4 for details).

In both cases, the class uses by default *Palatino* as a serif font and *Arial* (or, alternatively, *Helvetica*) as a sans serif font. Note that *Arial* (PostScript) font support is not included in most  $\text{\LaTeX}$  distributions by default, due to license reasons. You can install it easily via the getnonfreefonts script.<sup>2</sup> If *Arial* is not installed, however, *Helvetica* (which is part of the  $\text{\LaTeX}$  core packages) is used as a fallback. This is usually a suitable alternative, since *Arial* and *Helvetica* only differ in subtle details. If you use **fonts=otf**, you just have to make sure that you have the fonts *Arial* and *Palatino* installed on your operating system (with exactly these names, i. e., fonts named *Arial Unicode MS* or *Linotype Palatino* will not be recognized!).

I have preferred *Palatino* over the serif font specified by the corporate design of Vienna University (viz. *Georgia*) for the following reasons. Firstly, *Georgia* support is not included in every  $\text{\LaTeX}$  distribution; it is provided by the packages winfonts and mathgifs, respectively, but it requires some effort to set up these packages properly. Secondly, the style guide for theses does not urge you to use a specific serif font (only the use of *Arial* for title pages is strongly advised), so there is no need to use *Georgia*. And finally, *Georgia* has been designed particularly for screen reading, not for print, so it is not really a good choice. If you want to use it anyway, please consult the aforementioned package's documentation for details.

If you (or your instructor) prefer(s) *Times New Roman* over *Palatino*, write to your preamble

```
\usepackage{mathptmx}
```

if you use PostScriptFonts, or

```
\setmainfont{Times New Roman}
```

if you use **fonts=otf**, respectively. Note that *Times New Roman*, as the name implies, has been designed for newspapers and thus narrow columns. It is not really a suitable font for books and articles on A4 paper. This is why it is not used by default.

<sup>2</sup><https://www.tug.org/fonts/getnonfreefonts> <25.01.2017>.

A recommendable serif font (and actually the ‘professional’ house font of Vienna university) is *MinionPro*, supported by the excellent FontPro package.<sup>3</sup> However, some effort is needed to install the package and fonts. Please refer to the package’s documentation in case you are interested.

If you want (or need) to load all fonts manually, you can switch off all automatic font loading by the class option **fonts=none** (see sec. 4).

## 4 Class Options

The univie-ling-thesis class provides a range of key=value type options to control the font handling, package loading and some specific behavior. These are documented in this section.

### 4.1 Font selection

As elaborated above, the package supports PostScript fonts (via LaTeX and PDFLaTeX) as well as OpenType fonts (via XeTeX and LuaTeX). PostScript is the traditional LaTeX font format. Specific LaTeX packages and metrics files are needed to use the fonts (but all fonts needed to use this class should be included in your LaTeX distribution and thus ready to use). OpenType fonts, by contrast, are taken directly from the operating system. They usually provide a wider range of glyphs, which might be a crucial factor for a linguistic thesis. However, they can only be used by newer, partly still experimental TeX engines such as XeTeX and LuaTeX.

The class provides the following option to set the font handling:

**fonts=ps|otf|none:** if **ps** is selected, PostScript fonts are used (this is the default and the correct choice if you use LaTeX or PDFLaTeX); if **otf** is selected, OpenType fonts are used, the class loads the fontspec package, sets *Palatino* as main font and *Arial* as sans serif font (this is the correct choice if you use XeTeX or LuaTeX; make sure you have the respective fonts installed on your system); if **none** is selected, finally, the class will not load any font package, and neither inputenc nor fontenc (this choice is useful if you want to control the font handling completely yourself).

### 4.2 Package loading

Most of the extra features provided by the class can be switched off. This might be useful if you do not need the respective feature anyway, and crucial if you need an alternative package that conflicts with one of the preloaded package.

All following options are **true** by default. They can be switched off one-by-one via the value **false**, or altogether, by means of the special option **all=false**. You can also switch selected packages on/off again after this option (e. g., **all=false,microtype=true** will switch off all packages except microtype).

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<sup>3</sup><https://github.com/sebschub/FontPro> <25.01.2017>.

**apa=true|false:** If **true**, the biblatex-apa style is used when biblatex is loaded. By default, the included univie-ling style is loaded, instead. See sec. 8 for details.

**biblatex=true|false:** If **false**, biblatex is not loaded. This is useful if you prefer Bib<sub>T</sub><sub>E</sub><sub>X</sub> over biblatex, but also if you do not want to use the preloaded biblatex-apa style (and thus want to load biblatex manually with different options). See sec. 8 for details.

**caption=true|false:** If **false**, the caption package is not loaded. This affects the caption layout.

**covington=true|false:** If **false**, covington is not loaded. Covington is used for numbered examples.

**microtype=true|false:** If **false**, microtype is not loaded.

**ref=true|false:** If **false**, both prettyref and varioref are not loaded and the string (re)definitions of the class (concerning verbose cross references) are omitted.

### 4.3 Further options

**fddegree=true|false:** Prefer feminine forms for the targeted degree on the title page (such as *Magistra*, *Doktorin*). Default: **false**.

The class builds on scrreprt (KOMA report), which provides many more options to tweak the appearance of your document. You can use all these options via the `\KOMAoptions` macro. Please refer to the KOMA-Script manual [3] for details.

## 5 General settings

In this section, it is explained how you can enter some general settings, particular the information that must be given on the title page. The title page, following the university guidelines, is automatically set up by the `\maketitle` command, given that you have specified the following data in the preamble.

### 5.1 Author-related data

**\author{<name>}**: Name of the thesis author. Separate multiple authors by `\and`.

**\studienkennzahl{<code>}**: The degree programme code (*Studienkennzahl*) as it appears on the student record sheet, e. g. *A 792 327*.

**\studienrichtung{<field of study>}**: Your degree programme (*Studienrichtung*) or field of study (*Dissertationsgebiet*) as it appears on the student record sheet, e. g. *Sprachwissenschaft*.

### 5.2 Thesis-related data

**\thesistype{<type>}**: The type of your thesis. Possible values include **magister** (Magisterarbeit), **diplo**m (Diploma Thesis), **bachelor** (Bachelor's Thesis), **master** (Master's Thesis) and **diss** (Doctoral Thesis).

`\title{<title>}`: Title of the thesis.

`\subtitle{<subtitle>}`: Subtitle of the thesis.

`\volume{<current>}{<total>}`: If your thesis consists of multiple volumes, specify the current volume as well as the total number of volumes.

`\supervisor{<name>}`: Title and name of your (main) supervisor.

`\cosupervisor{<name>}`: Title and name of your co-supervisor.

The suitable degree (*Angestrebter akademischer Grad*) is automatically set by the `\thesistype` command, but you can override it with the optional command `\degree{<custom degree>}`. Note that female forms of degrees, where appropriate, are used if you use the class option `fdegree=true` (see sec. 4).

## 6 Semantic markup

The class defines some basic semantic markup common in linguistics:

`\Expression{<text>}`: To mark expressions (object language). Typeset in *italics*.

`\Concept{<text>}`: To mark concepts. Typeset in SMALL CAPITALS.

`\Meaning{<text>}`: To mark meaning. Typeset in ‘single quotation marks’.

You can redefine each of these commands, if needed, like this:

```
\renewcommand*\Expression[1]{\textit{#1}}
\renewcommand*\Concept[1]{\textsc{#1}}
\renewcommand*\Meaning[1]{\enquote*{#1}}
```

## 7 Linguistic examples and glosses

The class automatically loads the covington package which provides macros for examples and glosses. Please refer to the covington manual for details.

In addition to covington’s own macros, univie-ling-thesis defines a `subexamples` environment for sub-examples. The code

```
\begin{subexamples}
\item First subexample.
\item Second subexample.
\end{subexamples}
```

will print something like this:

- (1) (a) First subexample.
- (b) Second subexample.

as opposed to covington’s

```
\begin{examples}
\item First example.
\item Second example.
\end{examples}
```

which will print:

- (1) First example.
- (2) Second example.

An `\item` can also hold glosses.

## 8 Bibliography

### 8.1 Default bibliography style (*Unified Style for Linguistics*)

By default, the `univie-ling-thesis` class loads a bibliography style which matches the conventions that are recommended by the Applied Linguistics staff of the department.<sup>4</sup> These conventions draw on the *Unified Style Sheet for Linguistics* of the LSA (*Linguistic Society of America*), a style that is also quite common in General Linguistics nowadays. In order to conform to this style, the `univie-ling-thesis` class uses the `biblatex` package with the `univie-ling` style that is included in the `univie-ling-thesis` package.

If you are in Applied Linguistics, using the default style is highly recommended. The style recommended until 2017, namely APA/DGPs, is also still supported, but its use is no longer encouraged; see sec. 8.2 for details. If you want/need to use a different style, please refer to section 8.3 for instructions.

### 8.2 Using APA/DGPs style

Until 2017, rather than the Unified Style, the Applied Linguistics staff recommended conventions that drew on the citation style guide of the APA (*American Psychological Association*) and its adaptation for German by the DGPs (*Deutsche Gesellschaft für Psychologie*).

For backwards compatibility reasons, this style is still supported (though not recommended). You can enable it with the package option `apa=true`.

If you want to use APA/DGPs style, consider the following caveats.

- For full conformance with the APA/DGPs conventions (particularly with regard to the rather tricky handling of “and” vs. “&” in- and outside of parentheses), it is mandatory that you adequately use the respective `biblatex(-apa)` citation commands: Use `\textcite` for all inline citations and `\parencite` for all parenthesized citations (instead of manually wrapping `\cite` in parentheses). If you cannot avoid manually set parentheses that contain citations, use `\nptextcite` (a `biblatex-apa`-specific command) inside them.<sup>5</sup> For quotations, it is recommended

<sup>4</sup>See <http://www.spitzmueller.org/docs/Zitierkonventionen.pdf>

<sup>5</sup>Please refer to [4] and [1] for detailed instructions.



to use the quotation macros/environments provided by the `csquotes` package (which is preloaded by `univie-ling-thesis` anyway); the `univie-ling-thesis` class assures that citations are correct if you use the optional arguments of those commands/macros in order to insert references.

- The `biblatex-apa` style automatically lowercases English titles. This conforms to the APA (and DGPs) conventions, which favour “sentence casing” over “title casing”. English titles, from `biblatex`’s point of view, are titles of bibliographic entries that are either coded as `english` via the `LangID` entry field or that have no `LangID` coding but appear in an English document (i. e., a document with main language English). Consequently, if the document’s main language is English, all non-English entries need to be linguistically coded (via `LangID`) in order to prevent erroneous lowercasing, since `biblatex` assumes that non-identified entries use the main language (hence, such a classification is also important for correct hyphenation of the entries).

Note that up to `biblatex` 3.3, the document language was not taken into account by the lowercasing automatism and all non-classified entries were treated like English entries (and thus lowercased), notwithstanding the main language; therefore, any entry needed to be coded. Even if this misbehaviour is fixed as of `biblatex` 3.4, it is still advisable to systematically set the proper `LangID`, since this is a prerequisite for a correct multilingual bibliography.

- The lowercasing automatism described above cannot deal properly with manual punctuation inside titles. Hence, a title such as `Maintitle. A subtitle` will come out as *Main title. a subtitle*. There are several ways to avoid that. The most proper one is to use the `title` and `subtitle` fields rather than adding everything to `title`. Alternatively, everything that is nested inside braces will not get lowercased, i. e. `Maintitle. {A} subtitle` will produce the correct result. This trick is also needed for names and other elements that should not get lowercased (*Introduction to {Germanic} linguistics*). However, please do not configure your BibTeX editor to generally embrace titles (this is a feature provided by many editors) since this will prevent `biblatex-apa` from lowercasing at places where it should be done.
- The `biblatex-apa` style requires that you use `biber` as a bibliography processor instead of `bibtex` (the program). See [2] for details.

### 8.3 Using a different style

If you do not want or are not supposed to use neither the default Unified nor the APA/DGPs style, you can disable automatic `biblatex` loading via the class option `biblatex=false` (see sec. 4.2). In this case, you will need to load your own style manually, by entering the respective `biblatex` or BibTeX commands.

One case where you need to do that is if you prefer classic BibTeX over `biblatex`. If you want to follow the Applied Linguistics conventions, but prefer classic BibTeX over `biblatex`, a BibTeX style file `unified.bst` that implements the *Unified Style Sheet for Linguistics* is available on the Internet.<sup>6</sup> Note, though, that this package does not have

<sup>6</sup><http://celxj.org/downloads/unified.bst>

specific support for German, so it is only really suitable if you write in English. Thus, if you want to follow the Applied Linguistics conventions, it is strongly recommended that you use biblatex with the preloaded univie-ling style.

## 9 Further instructions

### 9.1 Commands and environments

Since the class draws on scrreprt, you can use all commands and environments provided by KOMA report in order to structure and typeset your document. Please refer to the comprehensive KOMA-Script manual [3] for information.

Please also refer to the template files included in the package for some further usage instructions and hints.

### 9.2 Generating PDF/A

In order to submit your thesis to the *Hochschulschriften-Server*, it must follow the PDF/A-1 or PDF/A-2 standard (a specific form of PDF aimed at long-time archiving).<sup>7</sup> With PDFLaTeX or LuaTeX, you can achieve PDF/A-1b or PDF/A-2b compliant files by means of the pdfx package. If you do not use specific color profiles in your document and provided that all your graphics follow the requirements of the PDF/A standard (all fonts embedded, no transparency groups etc.), producing a PDF/A-1b compliant file is straightforward. Firstly, put the following to the preamble:

```
\usepackage[a-1b]{pdfx}  
\hypersetup{pdfborder={0 0 0}}
```

The second line is not strictly necessary, but it prevents that colored borders are drawn around the hyperlinks in your document.

Secondly, create a text file called <name>.xmpdata (where <name> is to be replaced by the name of your [master] TeX file or the produced PDF file, respectively), which contains some metadata of your document (author's name, title, keywords, etc.). This file needs to be stored next to your TeX file(s). Example \*.xmpdata files are included in the univie-ling-thesis bundle (and used in the accompanying templates); you can use them as a model and adapt them to your needs.

Note that pdfx does not verify whether the produced output really conforms to the standard. You need to use a PDF/A verification tool to ensure that. If you own Adobe Acrobat Pro, you can use its *preflight* tool for this task. Alternatively, a number of free validation programs and online services are available on the Internet.

For detailed instructions, please refer to the pdfx package manual [5]. Furthermore, a step-by-step guide to PDF/A generation with PDFLaTeX and pdfx is available at <http://www.mathstat.dal.ca/~selinger/pdfa/>.

<sup>7</sup><http://e-theses.univie.ac.at/pdf-erstellung.html>

### 9.3 LyX layouts and templates

A layout for LyX<sup>8</sup> can be retrieved from <https://github.com/jspitz/univie-ling/raw/master/lyx/layouts/univie-ling-thesis.layout>.

Templates are provided as well:

- English template:  
<https://github.com/jspitz/univie-ling/raw/master/lyx/templates/template-univie-ling-thesis-english.lyx>
- German template:  
<https://github.com/jspitz/univie-ling/raw/master/lyx/templates/template-univie-ling-thesis-deutsch.lyx>

## 10 Release History

- 2018/09/03 (v. 1.5) Introduce **subexamples** environment.
- 2018/04/26 (v. 1.4) Fix full date issue in biblatex bibliography style.
- 2018/03/02 (v. 1.3) No change to this class.
- 2018/02/13 (v. 1.2) No change to this class.
- 2018/02/11 (v. 1.1) No change to this class.
- 2018/02/08 (v. 1.0)
  - Switch default bibliography style (from APA to Unified).
  - Initial release to CTAN.
- 2016/05/05 (v. 0.9)
  - Fix comma after *et al.* with biblatex-apa.
- 2016/04/30 (v. 0.8)
  - Set proper citation command for csquotes' integrated environments.
  - Improve templates.
- 2016/04/28 (v. 0.7)
  - Fix leading of thesis type on title page.
- 2016/03/23 (v. 0.6)
  - Fix the output of German multi-name citations (DGPs guidelines).
  - Extend documentation of bibliographic features.

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<sup>8</sup>See <https://www.lyx.org>.

- 2016/02/08 (v. 0.5)
  - Fix the PDF logo for PDF/A output.
  - Extend documentation of PDF/A production.
- 2016/01/25 (v. 0.4) First (documented) release.
  - Title page layout has been adapted to the new (bilingual) standards.
  - add `bachelor` thesis type.
  - Possibility to disable some pre-loaded packages.
  - Use key=value option format.

## References

- [1] Kime, Philip: *APA Bib<sub>La</sub>T<sub>E</sub>X style. Citation and References macros for Bib<sub>La</sub>T<sub>E</sub>X*. March 3, 2016. <http://www.ctan.org/pkg/biblatex-apa>.
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- [5] Radhakrishnan, C. V. et al. (2016): Generation of PDF/X and PDF/A compliant PDF's with pdf<sub>La</sub>T<sub>E</sub>X– pdfx.sty. <http://www.ctan.org/pkg/pdfx>.