

Guide on Using uumthesis

version 1.02

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uumthesis is a \LaTeX class for authoring theses that fulfill formatting specifications required by Universiti Utara Malaysia (UUM), Malaysia. Credits go to Dr. Mohd. Hasbullah bin Omar for getting the class and template files endorsed by UUM's Graduate School.

A sample `thesis.tex` (and `thesis.lyx` fo LyX users) is included in the package, which I recommend you modify for your own thesis write-up. You can rename the files, but I'll stick with the file name 'thesis.tex' throughout this guide.

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1 Before You Start

1.1 Printing from Acrobat Reader

This is such an important point that I've decided to make it the *first* section:

In the `Print...` dialog, remember to

- set the **paper size** to **A4**;
- set **page scaling** to **None** or **Actual size** or **100%**,

otherwise the page margins and visual font sizes would be incorrect!

1.2 Files

Here's a quick list of the files required when writing your thesis with the `uumthesis` class. Easiest way to go about things is to put all the files in the same directory.

- **`uumthesis.cls`**, the \LaTeX class file implementing the `UUM` thesis formatting requirements.
- **`thesis.tex`**, a sample thesis `.tex` file using `uumthesis.cls`.
- **`myrefs.bib`**, a sample bibliography database file.

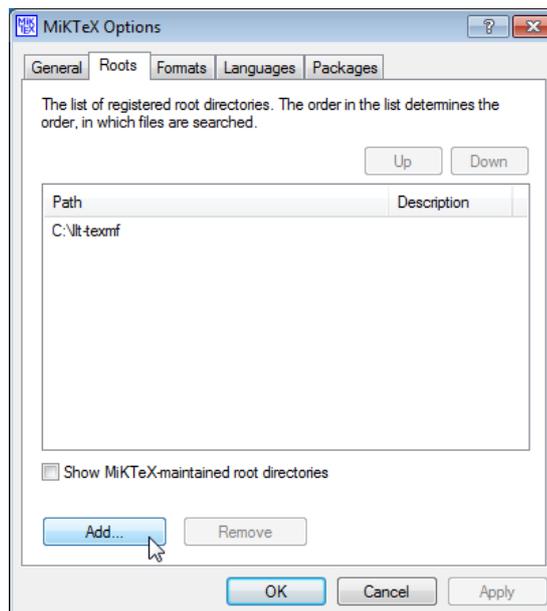
The following two files will be helpful to LyX users too:

- **`uumthesis.layout`**, the LyX layout file for `uumthesis.cls`.
- **`thesis.lyx`**, a sample thesis `.lyx` file using `uumthesis.layout`.

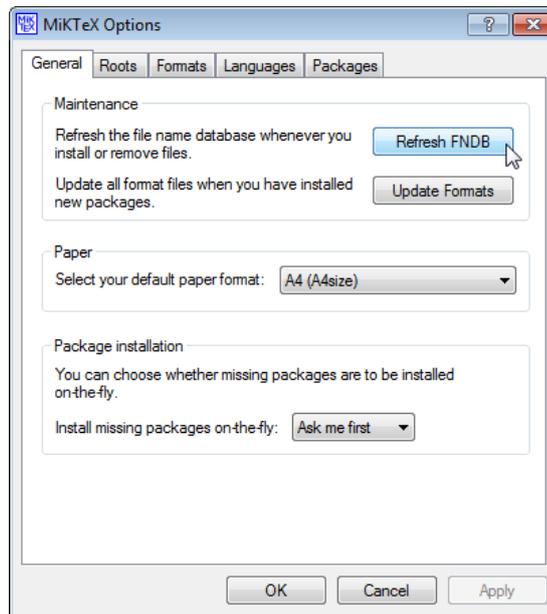
Things should work if you put all the files in the same directory. If you want to install `uumthesis` 'properly', see the next subsection.

1.3 File Installation

1. `Windows Start` \gg `MikTeX` \gg `Maintenance (Admin)` \gg `Settings (Admin)`
2. Click on `Roots` tab.
3. Create a new directory on your system, e.g. `C:\llt-texmf`.
4. `Add...` a user $\$$ TEXMF tree.



- Copy `uumthesis.cls` to your user tree, e.g.
`C:/llt-texmf/tex/latex/uumthesis/uumthesis.cls`.
- Click on **General** tab, **Refresh FNDB**:



- Your \LaTeX system can now use `uumthesis.cls` from any path. The following steps is only required if you want to use LyX to write your thesis.
- (Mac users: Copy the `.cls` file to `~/Library/texmf/tex/latex/uumthesis/uumthesis.cls` and you're good to go.)
- (GNU/Linux users: Copy the `.cls` file to `~/texmf/tex/latex/uumthesis/uumthesis.cls`, then run `texhash` as *normal user*.)

For LyX users:

- Windows users: Copy `uumthesis.layout` to
`C:\Program Files\LyXxx\Resources\layouts\uumthesis.layout`.
 (On Windows Vista/7, you may have to look under `C:\Program Files (x16)`).
- Mac users: Copy the file to
`~/Library/ApplicationSupport/LyX-xxx/layouts/uumthesis.layout`.
- GNU/Linux users: Copy the file to `~/.lyx/layouts/uumthesis.layout`.
- In LyX, hit **Tools** **Reconfigure**, then restart LyX.
- Create a new document in LyX. Now in **Document** **Settings...** **Document Class**, you should be able to see `book (uumthesis)` in the list.

2 Compiling thesis.tex

The processing tools should be run on `thesis.tex` in the following sequence:

1. `pdflatex` (or `xelatex`)
2. `bibtex`
3. `pdflatex` (or `xelatex`)
4. `pdflatex` (or `xelatex`)

If you run `xelatex`, the *real* Times New Roman font (which has to be already installed on your operating system) will be embedded in your output PDF.

3 Compiling thesis.lyx

When producing the *final* PDF for printing, use `File` `Export` `PDF(XeTeX)` if you want to embed the *real* Times New Roman font. You will need to make sure the Times New Roman font is already installed on your operating system.

4 Writing Your Thesis with L^AT_EX

4.1 Activation

To ‘activate’ the class, make sure your main document file (e.g. `thesis.tex`) starts off with `\documentclass{uumthesis}`

```
\documentclass{uumthesis}
\usepackage{graphicx}
\usepackage{... other packages you need}
```

This will set up the page margins, paragraph spacing, indents, page numbers, font face and size, chapter and section headings, citation and bibliography format, amongst other things.

4.2 Author Information

You need to provide some author information in the preamble. Example lines from `thesis.tex`:

```
\author{Lim Lian Tze}
\title{My Ground-breaking Research}
\date{2012}
\degreetype{Doctor of Philosophy}
```

These information are needed to generate the preliminary pages.

4.3 Preliminary Pages

Once in the main document body, `\frontmatter` sets up the, well, front matter. This include setting the page numbers to lower-case Roman numerals. `\maketitle` can generate the cover page and ‘Permission to Use’ page.

```
\begin{document}
\frontmatter
\maketitle
```

The Malay and English abstracts, and the acknowledgements, are typeset with the `abstrak`, `abstract`, `acknowledge` environments:

```
\begin{abstrak}
Inilah abstrak dalam Bahasa Melayu. ...

\textbf{Kata kunci:} Kek, contoh.
\end{abstrak}

\begin{abstract}
This is the English abstract. ...

\textbf{Keywords:} Kek, contoh.
\end{abstract}

\begin{acknowledge}
This is the acknowledgements. ...
\end{acknowledge}
```

This is followed by the content lists:

```
\tableofcontents
\listoftables
\listoffigures
\listofappendices % Delete/comment this line if not applicable
```

4.4 Glossary and Abbreviation Lists

These can be prepared using a description list and a table, headed by `\myglosslist` and `\myabbrevlist` respectively:

```
\myglosslist
\begin{description}
  \item[database] an organized collection of data...
\end{description}

\myabbrevlist
\begin{tabular}{>{\bfseries}l l}
  CPU & central processing unit\\
  DBMS & database management system\\
\end{tabular}
```

Note that it should also be possible to prepare these lists using the `glossaries` package if you prefer that.

4.5 Main Chapters

Start the main text of your thesis with `\mainmatter`, followed by the usual chapters and sections:

```
\mainmatter
\chapter{Introduction}
...
\section{...}
```

You may want to use `\include` or `\input` to better organise your chapter files. **Note however** that a `\include` immediately after `\mainmatter` will cause problems in the TOC formatting. `\input` will have no problems.

4.6 Bibliography

Specify your bibliography style and BibTeX database file with

```
\bibliographystyle{IEEEtran}
%\bibliographystyle{acm}
%\bibliographystyle{apacite}
\bibliography{myrefs}
```

Scientific and technical fields may prefer to use a number system, e.g. IEEEtran or acm, which has been approved by the UUM Senate. Please add/uncomment the relevant lines in the sample `thesis.tex` to activate your preferred bibliography style.

Note that if you want to use the APA style, you must also uncomment the line

```
%\usepackage[nosectionbib]{apacite}
```

in the preamble.

4.7 Appendices

If you have any appendices, you can add them thus:

```
\appendix
\chapter{Sample Code}
...
```

You may want to use `\include` or `\input` to better organise your appendix files. **Note however** that a `\include` immediately after `\appendix` will cause problems in the appendix chapter headings. `\input` will have no problems.

5 Writing Your Thesis with LyX

5.1 Activation

1. In LyX, make sure your Document Class is set to `book (uumthesis)`:
`Document` » `Settings...` » `Document Class` » `book (uumthesis)`
2. You can use the `Local Layout...` to point to `uumthesis.layout` if it is in the same directory as your `.lyx` file.

3. Or if you have installed `uumthesis.layout` ‘properly’, you can choose `book (uumthesis)` from the drop-down list.
4. Set `Document` `Settings...` `Document Class` `Language` `Encoding` to `Other` `Unicode (utf8)`.
5. Repeat the above steps for any child documents as well.

5.2 Preliminary Pages

1. Start off your thesis with `Style box` `StartFrontmatter`
2. Specify your author information with `Style box` `Author`, `Title`, `DegreeType` (‘Doctor of Philosophy’, ‘Master of Science’ etc) and `Date` (year of submission).
The cover page and the ‘Permission to Use’ page will be automatically generated.
3. Write your Malay and English abstracts, and the acknowledgements using `Style box` `Abstrak`, `Abstract` and `Acknowledgements` environments.
4. Insert the content lists using `Insert` `List / TOC` `Table of Contents`, `List of Tables` and `List of Figures`
5. Insert the List of appendices (if applicable) using `Style box` `ListOfAppendices`

5.3 Glossary and Abbreviation Lists

1. `Style box` `MyGlossary`, then use a `Description` list to prepare the Glossary of Terms.
2. `Style box` `MyAbbrevs`, then use a `tabular` to prepare the List of Abbreviations.

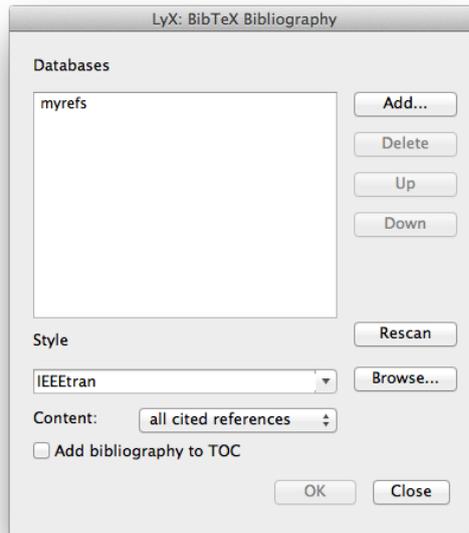
Note that you can also prepare these lists using the `Glossaries` item if you prefer.

5.4 Main Chapters

1. `Style box` `StartMainmatter`. This is required to switch the page numbering to arabic numbers, and for chapter numbering formatting.
2. Write your content as usual using `Chapter`, `Section`, etc.
3. If you are using child documents, make sure the *first* chapter after `Start Main Matter` uses *Input*.

5.5 Bibliography

1. `Insert` `List / TOC` `BibTeX Bibliography...`
2. Specify your BibTeX bibliography database file.
3. Set the style to `IEEEtran`, `acm` or `apacite` as instructed by your School.



4. **Note that if you are using the APA style**, you must add the following line as ERT at the beginning of your .lyx file, or in `Document >> Settings... >> LaTeX Preamble`:

```

\usepackage[nosectionbib]{apacite}
\setlength{\bibitemsep}{\onelineskip}
\renewcommand{\bibliographyprenote}{\vspace{\onelineskip}}

```

5.6 Appendices

1. `Document >> Start Appendix Here`
2. Write your appendix chapters with `Chapter`, `Section` etc.
3. Note that if you are using child documents, the first appendix file after `Start Appendices Here` must use `Input`.

Otherwise you will have problem formatting the appendix chapter titles in the PDF.