Guide on Using UnimasThesis

version 1.0

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UnimasThesis is a LaTeX class for authoring theses that fulfill formatting specifications required by Universiti Malaysia Sarawak (Unimas), Malaysia.

A sample `thesis.tex` 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.

Contents

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.

- **UnimasThesis.cls**, the LaTeX class file implementing the Unimas thesis formatting requirements.
- **thesis.tex**, a sample thesis `.tex` file using `UnimasThesis.cls`.
- **refs.bib**, a sample bibliography database file.

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

1.3 File Installation

1. Windows Start ≫ MikTeX ≫ Maintenance (Admin) ≫ 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.

5. Copy `UnimasThesis.cls` to your user tree, e.g.
   `C:/llt-texmf/tex/latex/UnimasThesis/UnimasThesis.cls`.

6. Click on General tab, Refresh FNDB.

7. Your LaTeX system can now use `UnimasThesis.cls` from any path.

8. (Mac users: Copy the `.cls` file to `~/Library/texmf/tex/latex/UnimasThesis/UnimasThesis.cls` and you're good to go.)

9. (GNU/Linux users: Copy the `.cls` file to `~/texmf/tex/latex/UnimasThesis/UnimasThesis.cls`, then run `texhash` as *normal user.*)

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 Writing Your Thesis with LaTeX

3.1 Activation

To 'activate' the class, make sure your main document file (e.g. `thesis.tex`) starts off with **\documentclass**{Uni

```
\documentclass{UnimasThesis}
\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.

3.2 Language Modes: English and Bahasa Malaysia

`UnimasThesis` uses the English language by default. If you are writing your thesis in Bahasa Malaysia, you should activate the `bahasam` mode like this:

```
\documentclass[bahasam]{UnimasThesis}
```

3.3 Author Information

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

```
\title{<Your Thesis Title>}
\author{<Your Name>}
\faculty{<Your Faculty>}
\facultyColour{FFCC00} %% 6-digit RGB hexadecimal code
\submissionyear{2015}
\degreetype{Doctor of Philosophy\\(Technology and Innovation)}
```

These information are needed to generate the preliminary pages.

3.4 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** will generate the cover page as well.

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

The Malay and English abstracts, and the acknowledgements, are typeset with the `enAbstract`, `msAbstract`, `acknowledgements` environments:

```
\begin{enAbstract}
This is the English abstract. ...
\end{enAbstract}
```

```
\begin{msAbstract}[Terjemahan Tajuk Tesis]
Inilah abstrak dalam Bahasa Melayu. ...
\end{msAbstract}

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

Note that if your thesis is in English, you will need to provide the Bahasa Malaysia translation of your thesis title as an option to your `msAbstract` environment. The Bahasa Malaysia abstract will be automatically italicised.

Conversely, if your thesis is in Bahasa Malaysia (i.e. `bahasam` option is used), you will need to provide the English translation of your thesis title as an option to your `enAbstract` environment. The English abstract will be automatically italicised.

This is followed by the content lists:

```
\tableofcontents
\listoftables
\listoffigures
```

3.5 List of Abbreviations, Symbols, Specialized Nomenclature

These can be prepared using a `tabular`:

```
\chapter{List of Abbreviations, Symbols, Specialized Nomenclature}

{\centering
\begin{tabular}{ll}
$b, c$ & constants\\
$C_f$ & local friction coefficient\\
\end{tabular}
\par}
```

3.6 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.

3.7 Figures and Tables

Figures and tables can be inserted using the usual ways in LaTeX. However, note that the Unimas formatting guidelines states

> 'It is advisable that all tables and figures are placed on separate pages and not together with the text.' (Graduate Studies Regulations, CGS UNIMAS 4th Edition, p. 33)

To achieve this, use the `[p!]` placement option for your `table` and `figure` environments.

3.8 Bibliography

Specify your bibliography style and BibTeX database file with

```
\bibliography{refs}
```

The bibliography and citation style has been set to `apacite`, so you may want to consult the documentation of that package to get the most out of it.

3.9 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.