

An example of a thesis or dissertation

by

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A Dissertation Submitted in Partial Fulfillment of the
Requirements for the Degree of

DOCTOR OF PHILOSOPHY

in the Department of Mad Science

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Supervisory Committee

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(Department of Mad Science)

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Dr. Hubert J. Farnsworth, Departmental Member
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ABSTRACT

This document provides a template to help you write your thesis or dissertation at UVic. The most important part is the `uvicthesis` class, which does much of the work necessary to make your thesis conform to UVic's formatting requirements (as of 2012). As an added bonus, we've filled this template thesis with possibly useful advice, examples, and information about writing a thesis or dissertation.

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DEDICATION

This thesis is dedicated to you, dear reader,
As you are dedicated to your thesis.

Chapter 1

Introduction

You're a graduate student preparing to write your thesis or dissertation. Where should you start? The goal of this document—along with its source and associated files—is to be a reasonable answer to that question.

To begin, download the source file `UVicThesisTemplate.tex` and the class file `uvicthesis.cls`, making sure to put them in the same folder. The `uvicthesis` class does most of the work of making your thesis conform to UVic's style requirements (although you should always double-check, as the requirements may have changed since the class was written in 2012).

I assume you have some \LaTeX implementation already installed on your machine. If you don't, install \TeX Live (<http://www.tug.org/texlive/>) or your favourite \TeX distribution.

If you're ready to start writing, open up `UVicThesisTemplate.tex` in your \LaTeX editor of choice, delete this content, and start writing!

Chapter 2

Getting started with L^AT_EX

2.1 Need an editor?

The cross-platform editor T_EXworks is a good place to start playing around with L^AT_EX. However, there are plenty of other options to choose from. Here are just a few:

Editor	Platform	Website
T _E Xworks	cross-platform	tug.org/texworks/
T _E Xstudio	cross-platform	texstudio.sourceforge.net
LyX	cross-platform	lyx.org
T _E Xshop	Mac OS X	(part of MacTeX distribution)
T _E XnicCenter	Windows	texniccenter.org
Kile	KDE	kile.sourceforge.net

Table 2.1: List of L^AT_EX editors

Since `.tex` is a plaintext format, you can also edit L^AT_EX documents with any text editor (it may just require a bit more effort to compile your source to a PDF). Several popular text editors offer extensions to make compilation easier, as well as enabling features like syntax highlighting and code folding. Table 2.2 lists some of these.

Editor	Platform	L ^A T _E X extension	Website
emacs	cross-platform	AU _C T _E X	gnu.org/software/emacs/
vim	cross-platform	L ^A T _E X-Suite	vim.org
TextWrangler	Mac OS X	Comp _i l _E Te _X	barebones.com/products
Notepad++	Windows	(manual setup)	notepad-plus-plus.org
Eclipse	cross-platform	T _E Xlipse	eclipse.org

Table 2.2: List of other programs which can be used to edit L^AT_EX

2.2 Need help with L^AT_EX?

If you’ve never used L^AT_EX before, there are tons of places online for you to get help. The Wikibook on L^AT_EX (<http://en.wikibooks.org/wiki/LaTeX>) is an excellent resource for the beginner.

Even experts need help with L^AT_EX sometimes. If you’re getting a weird error or can’t figure out how to print some tricky document structure, you can submit a question to the T_EX StackExchange (<http://tex.stackexchange.com>) and get good answers from volunteer T_EXperts—in many cases, the same volunteer T_EXperts who wrote the package you’re asking about.

For those who want to drop some money on a physical book, you can’t go wrong with The L^AT_EX Companion [1].

Finally, it’s worth noting that most L^AT_EX packages are really well documented. If you need help with, say, the `tikz` package, you can use `texdoc tikz` on the command line to open up the TikZ manual.

2.3 Some essential packages

Here are some packages which may be useful to use in your thesis.

2.3.1 `amsmath`, `amsmath`, `amsthm`

These are general packages that a lot of people call in every \LaTeX document they make. The first two give access to some essential macros, including `\mathbb` for blackboard bold letters (like \mathbb{R} and \mathbb{Z}) and the `align` environment for things like this:

$$\begin{aligned} 1 + 2 + \cdots + n + (n + 1) &= (1 + 2 + \cdots + n) + (n + 1) \\ &= \frac{n(n + 1)}{2} + n + 1 \\ &= \frac{n(n + 1) + 2(n + 1)}{2} \\ &= \frac{(n + 1)(n + 2)}{2} \end{aligned}$$

The `amsthm` package gives you a few more options for making theorem-like environments, and provides a prewrapped `proof` environment.

2.3.2 `graphicx`, `tikz`

These packages are for including graphics in your document. With `graphicx` you can include an image file in your thesis using something like

```
\includegraphics[scale=0.5]{kitten.png}
```

The TikZ package is a more complicated way of producing figures from a \LaTeX source. For example, the graph below was produced with just a few lines of code. If you are a graph theorist, there is even a tool—TikZiT (<http://tikzit.sourceforge.net>)—for you to easily generate the TikZ code to make excellent figures for your thesis.

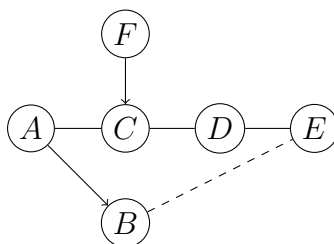


Figure 2.1: A graph drawn in TikZ

2.3.3 booktabs, longtable, tabu

These three packages together make it easy to make beautiful tables. The most important part of **booktabs**—apart from the documentation, which contains an extended rant (worth reading) about good table presentation—are the `\toprule`, `\midrule`, and `\bottomrule` macros. These are to be used instead of `\hrule` to improve the spacing around horizontal rules in tables.

The **longtable** package allows you to make tables which span more than one page.

Finally, the **tabu** package does a better job of easily making tables than the **tabular** environment given by L^AT_EX. The column attributes of the **tabu** environment can be of the form `X[coeff,align,type]`; the resulting table will stretch to fill up the text width so that the column widths are in the ratio given by the values of `coeff`. Adding `$` or `$$` makes the column default to math mode.

Text	<hr/> Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. <hr/>	$\frac{1}{2}mv^2$
------	--	-------------------

Table 2.3: Example table using **tabu**

Chapter 3

Organizing your thesis

Although this template is all in one file, it may be a good idea to separate your thesis into several files. You can do this by “including” each separate chapter file:

```
\include{chapters/tissue_acquisition}
```

```
\include{chapters/incubation_chamber_setup}
```

```
\include{chapters/lightning_storm_induction}
```

```
\include{chapters/damage_mitigation}
```

How you structure your writing may be different depending on your discipline—possibly even on your subfield. Fortunately, UVic publishes all theses and dissertations written by its grad students. Reading other dissertations can help you get an idea for what to do.

Appendix A

Other data

An appendix is a good place to put the source code for any tools you developed for your research. A popular package to use for this is `listings`. I haven't personally used it, but it might be worth looking into.

Bibliography

- [1] Frank Mittelbach and Michel Goossens. *The L^AT_EX Companion*. Addison-Wesley, 2004.