How to use abdnthesis.cls

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Declaration

No portion of the work contained in this document has been submitted in support of an application for a degree or qualification of this or any other university or other institution of learning. All verbatim extracts have been distinguished by quotation marks, and all sources of information have been specifically acknowledged.

Signed:

Date: 2022

Abstract

An expansion of the title and contraction of the thesis.

Acknowledgements

Much stuff borrowed from elsewhere

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Chapter 1

Introduction

Each chapter heading is typeset in this way — this in an integral part of the style, so if you don't like it abdnthesis.cls may not be for you. However, do feel free to modify the .cls file to your needs.

1.1 Defaults

- oneside — assuming single sided printing.
- onecolumn — LaTeX will give you an error if you try to use the twocolumn option, not that anyone would contemplate this for a thesis.
- 11pt — this works best with the text height and width on A4 paper.
- 1.5 line spacing — looks much better than double spacing.
- Times Roman font — for both text and maths with the exception of mathcal, but see below for options.

1.2 Options

- These are mutually exclusive options that are used to specify the type of degree that the thesis is to be submitted in partial fulfilment of the requirements of:
  - phd or PhD – the default.
  - mphil or MPhil – for Master of Philosophy Theses.
  - msc or MSc – for MSc project reports.
  - bsc or BSc – for BSc project reports.
- Two self-explanatory options for changing the line spacing from the default 1.5.
  - singlespace
  - doublespace
- titlebox — this option ensures that the title of the document fits within the window on the standard departmental BSc or MSc project report front cover.
- twoside — this option is if you wish to print your thesis using a double sided printer. Note that the University regulations do not permit the submission of theses printed double sided.

- cmmath — this action changes the font used in math mode to be Computer Modern. The default is for all math mode fonts to be times with the exception of the mathcal font. If you want to also use times for mathcal, you need to comment out these two lines in the abdnthesis.cls file:

```
\SetMathAlphabet{\mathcal}{normal}{OMS}{cmsy}{m}{n}
\SetMathAlphabet{\mathcal}{bold}{OMS}{cmsy}{b}{n}
```

- cmall — if you want to go with Computer Modern for both text and maths, use this option.

There is also an *optional* command for including prior qualifications within the title page; some like to do this. Prior to version 2.3 (2013/08/11) LaTeX would give an error if this was not declared, even if you didn't want this information on the title page. This meant that you would have to have made the declaration `\qualifications{}`, which was an ugly solution. Now, "empty" declaration can simply be omitted.

Chapter 2

Frequently asked questions

In addition to the information provided in chapter 1, here are some brief notes on references (see section 2.1) and figures (see section 2.2).

2.1 References

You can, of course, use any referencing style you like such as `plain`. The `natbib` package, however, allows you to do this with named style citations:

`\citet{key}`	Jones et al. (1990)
`\citet*{key}`	Jones, Baker, and Smith (1990)
`\citep{key}`	(Jones et al., 1990)
`\citep*{key}`	(Jones, Baker, and Smith, 1990)
`\citep[chap. 2]{key}`	(Jones et al., 1990, chap. 2)
`\citep[e.g.][]{key}`	(e.g. Jones et al., 1990)
`\citep[e.g.][p. 32]{key}`	(e.g. Jones et al., p. 32)
`\citeauthor{key}`	Jones et al.
`\citeauthor*{key}`	Jones, Baker, and Smith
`\citeyear{key}`	1990

This template uses BibTeX as the citation engine, and you should learn to fill in citations correctly, perhaps even use a bibfile manager like JabRef. Recall that when citing a book, you should always include the chapter, for example, the first chapter of the classic AI book (Russell and Norvig, 2022, Ch. 1). Papers are easier to cite, such as a recent AAAI paper Amado et al. (2022).

2.2 Figures

To include an encapsulated postscript or PDF file (depending on whether you're using LaTeXor PDFLaTeX) as a figure, do something like the following. Note, to ensure correct cross-referencing, it is best to include the figure label within the caption definition. *Note that the graphicx package is already loaded and used to include the University crest on the title page.*

```
\begin{figure}
 \begin{center}
   \includegraphics{myfigure.pdf}
```

```
   \caption{This is my figure.\label{fig:mylabel}}
 \end{center}
\end{figure}
```

2.3 Frequently used symbols

In LaTeX documents where you want to use a modality or some text consistently in normal text and in equation environments it is often difficult to remember to typeset the text consistently or time-consuming to keep typing in the environment. It may be a good idea to define something like the following in the preamble (i.e. before `\begin{document}`):

```
\def\sfthing#1#2{\def#1{\mbox{{\small\normalfont\sffamily #2}}}}

\sfthing{\PP}{P}
\sfthing{\FF}{F}
```

Then use it in text or math mode. In all cases it looks the same; e.g.

```
\PP\ refers to something, and other things are \FF; $\Phi = \PP\cup\FF$
```

is typeset as:

P refers to something, and other things are F; i.e. $\Phi = \mathsf{P} \cup \mathsf{F}$

Note that you need to put "\" after the command if you want a normal space after it.

Bibliography

Amado, L. R., Mirsky, R., and Meneguzzi, F. (2022). Goal Recognition as Reinforcement Learning. In *Proceedings of the 36th AAAI Conference on Artificial Intelligence (AAAI)*. AAAI Press.

Russell, S. J. and Norvig, P. (2022). *Artificial Intelligence: A Modern Approach*. Prentice Hall, 4th edition.