

**The Honours Dissertation  
Class for L<sup>A</sup>T<sub>E</sub>X2e**

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# Abstract

This is a short report on how to use the `cshonours.cls` class to prepare dissertations using the latest  $\text{\LaTeX}$  version,  $\text{\LaTeX}2\text{e}$ . This class is based on the standard class `report.cls`.

**Keywords:** Honours, report preparation,  $\text{\LaTeX}$   
**CR Categories:** A.2, I.7.2

# Acknowledgements

This class is designed to produce reports that look the same as those produced by the older `cshonours.sty` style for L<sup>A</sup>T<sub>E</sub>X2.09, which was modified by Nick Spadaccini from a style provided by Ken Wessen..

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## CHAPTER 1

# The Honours Dissertation Style Guide

This style was produced to standardize the “look and feel” of dissertations produced by the Honours students of this department.

## 1.1 Getting Started

The `cshonours` files are located in:

```
/cslinux/cstex/local
```

In order to use the `cshonours` class you need to tell  $\text{T}_{\text{E}}\text{X}$  how to find it. To do this simply add the following to your shell resource file (ie. `.zshrc`, `.bashrc`, etc):

```
export TEXINPUTS=$TEXINPUTS:./cslinux/cstex//
```

(The double-slash `//` tells  $\text{T}_{\text{E}}\text{X}$  to search the tree from this point.) Then open a new shell window to run  $\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$  in.

If you are using a machine that doesn't mount `cslinux` or a stand-alone system such as a home machine, you can take a copy of the `cshonours.cls` file and put it on your own machine. Please copy the class file directly from the original in the above directory to make sure you have an unadulterated copy.

Once you have told  $\text{T}_{\text{E}}\text{X}$  how to find the class file, the easiest way to get started is to copy this example file, `cshonours.tex`, and the accompanying example bibliography file, `cshonours.bib`, from the above directory, give them a new name, and start modifying the text.

## 1.2 What does it all mean?

The example file is pretty self explanatory, but here's a little elucidation for those who are interested.

```
\documentclass{cshonours}
```

... tells L<sup>A</sup>T<sub>E</sub>X to use the `cshonours` class. The commands between here and the `\begin{document}` command are known as the *preamble* of the latex document. Font size is automatically set to 12pt in this class.

```
\bibliographystyle{acm}
```

...sets the bibliography style. Default is the style used in Transactions of the ACM.

```
\usepackage{graphics} %optional
```

...this is only needed if you want to include postscript images.

```
\title{The Honours Dissertation Class for \LaTeX2e}  
\author{Cara MacNish}
```

...same as usual.

```
\keywords{Honours, report preparation, \LaTeX}  
\categories{A.2, I.7.2}
```

...keywords and Computing Reviews classification numbers. These will be put at the bottom of the abstract page.

```
\begin{document}
```

...so much for the preamble, now we start the document proper.

```
\maketitle
```

...produces the title page using the title and author stored earlier. Unlike the standard `report` class it also starts roman page numbering.

```
\begin{abstract}
This is a short report...
\end{abstract}
```

... produces the abstract page, including the keywords and categories stored earlier.

```
\begin{acknowledgements}
This style is designed...
\end{acknowledgements}
```

... produces the acknowledgements page.

```
\tableofcontents
\listoftables %optional
\listoffigures %optional
```

...you guessed it! `\listoftables` and `listoffigures` can be omitted if you have no tables or figures respectively.

```
\chapter{The Honours Dissertation Style Guide}
```

...and so the first chapter begins. Unlike the standard `report` class the first `\chapter` command also switches pagenumbering to arabic.

The main body is created using the usual  $\LaTeX$  commands. At the end we come to:

```
\appendix
```

...starts off the appendices.

```
\bibliography{cshonours}
```

... puts in the bibliography, generated in this case from the file `cshonours.bib`.



Figure 1.1: This is a Gnu.

### 1.3 Carrying on...

The rest of the document proceeds in the usual way, with all standard  $\text{\LaTeX}$  commands available. These are described in [2], which is written by the author of  $\text{\LaTeX}$ , Leslie Lamport, and commonly known as the  $\text{\LaTeX}$  “Bible”.

For those who are feeling ambitious, a wealth of contributed packages, some of which are included in our distribution, and some of which you would need to download yourself, are described in [1], commonly known as the “Doggie Book”.

### 1.4 Including Postscript Files

Most drawing packages (such as `xfig` and `xpaint`) and image manipulation packages (such as `xv` and `gimp`) allow you to save your work as (encapsulated) postscript, which can be easily included in your  $\text{\LaTeX}$  document. The recommended (and simplest!) way of doing this is by including the command `\usepackage{graphics}` in the preamble (see Section 1.2) and then include the postscript file using the `\includegraphics` command.

For example, Figure 1.1 shows a Gnu, produced by the following code:

```
\begin{figure}
\begin{center}
\includegraphics{gnu}
\end{center}
\caption{This is a Gnu.}
\label{gnu}
\end{figure}
```

You can scale graphics using the `\scalebox` command. For example, Figure 1.2 shows a smaller Gnu, produced as follows:



Figure 1.2: This is a smaller Gnu.

```
\begin{figure}
\begin{center}
\scalebox{0.6}{\includegraphics{gnu}}
\end{center}
\caption{This is a smaller Gnu.}
\label{smallergnu}
\end{figure}
```

## 1.5 Producing Postscript Output

$\LaTeX$  produces a `.dvi` file which you can convert to postscript using `dvips`. If you have included encapsulated postscript figures the bounding boxes of those figures sometime confuse the printing routines. To overcome this it is recommended you use the `-K` option to strip bounding box comments out. The full recommended format is:

```
dvips -K -f myfile.dvi > myfile.ps
```

To save typing I just use a simple script for all my  $\LaTeX$ ing. Just create a file, called say `laps`, containing something like:

```
latex $1
dvips -K -o $1.ps $1.dvi
```

Then make it executable, run  $\LaTeX$  with the command

```
laps myfile
```

and view with `ghostview` (with “State” set to “Watch file”).

## 1.6 Producing PDF

If you prefer PDF output you can produce this using `pdfelatex`. This does not use `dvi` as an intermediary so you just say:

```
pdfelatex myfile
```

Note that any graphics you include must also be in suitable PDF. There are conversion programs, such as `ps2pdf`, but I've found they often don't work well. It is better to produce the graphics directly in `pdf`.

I've also found that `pdf` viewers don't tend to refresh well, so that you need to keep opening the file. As a result I tend to postscript where possible.

## 1.7 Emacs and L<sup>A</sup>T<sub>E</sub>X

Gnu Emacs and Xemacs recognise both `.tex` and `.bib` files, and provide a number of tools for preparing them. For example you can select `.bib` entry templates from a drop-down menu. Simple commands like `C-c C-e` (puts in the `\end` command to finish an environment) save lots of typing.

## 1.8 Appendices

After the main body comes the appendices. See Appendix A and Appendix B.

## 1.9 Bibliography

Finally, the bibliography can be produced automatically from a `.bib` file using `bibtex` in the usual way. This is described in [2].

The bibliography is the only change from the L<sup>A</sup>T<sub>E</sub>X2.09 `cshonours` style file. The bibliography now comes after the appendices, in line with printed books, and uses alphanumeric citation tags to make reading (and marking) easier.

## APPENDIX A

# Original Honours Proposal

You must include as your first appendix an exact copy (in wording) of your original project proposal. This aids other readers to establish what was the initial focus of the project.

## APPENDIX B

# Another Appendix

Other appendices might include pseudocode for your implementation, a Users Manual, an important data file, etc.

# Bibliography

- [1] GOOSSENS, M., MITTELBACH, F., AND SAMARIN, A. *The LaTeX Companion*. Addison-Wesley, 1994.
- [2] LAMPORT, L. *LaTeX : A Documentation Preparation System User's Guide and Reference Manual*, second ed. Addison-Wesley, 1994.