

Latex Short Course

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Abstract

This is a mini-course for using Latex as a tool for writing articles. The good thing of Latex is that you can use formula's quite easily (once you know how to do it). For just writing text, one could also use other tools. You can get the files for this course from: <http://www.cs.uu.nl/people/marco>

1 Note about compiling

If you want to compile a latex file named course.tex, do the following:

1) `pdflatex course.tex`

That should work, unless your file contains errors. Another option is to use:

1) `latex course.tex`

2) `dvips course.dvi -o course.ps`

3) `ghostview course.ps` or `ps2pdf course.ps`

2 Template for writing simple text

It's simple to write text using Latex. Just use this template and write your own text. The template always consists of the following:

```
\documentstyle[a4]{article}
\title{Your title}
\author{Your name}
\begin{document}
\maketitle
\section{Start}
\section{Second}
\end{document}
```

Instead of using article, one can also use book or letter.

3 Spacing and typesetting

We can use spacing with the following command: `\vspace*{1cm}` gives us:

and then the rest of the text. Also with `\hspace*{3cm}` we get and then the rest of the text. Finally with `\newpage` you can end the current page. We do not give an example of this.

We can start at the left of a new paragraph using `\noindent`:
We continue the text here We can also stop a line and make vertical spacing using
and continue here.

3.1 Typesetting

You can write in boldface using `{\bf text}` as example: **This is boldface (bf)**. Also possible is using: **This part in boldface.** Another possibility is to use `it` or `em` instead of `bf`. Let's try this: *This text uses it, and this text uses em.*

For enlarging text or making text smaller we can use: Huge, LARGE, Large, small, tiny.

4 Figures

You can include figures using the following (see `course.tex`):

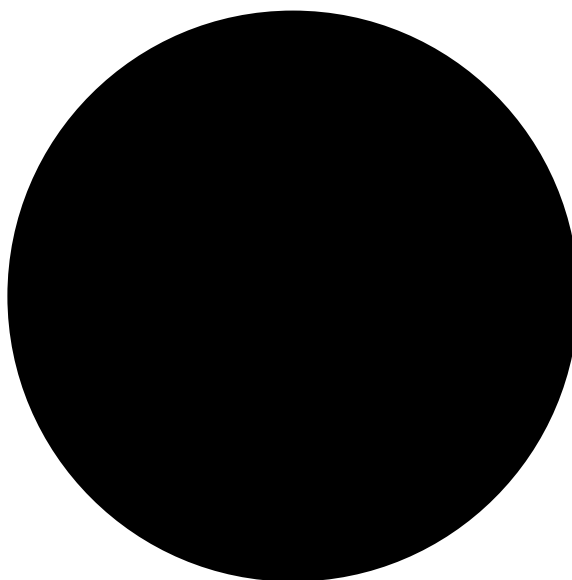


Figure 1: *This figure displays pure beauty*

Figure 1 shows the most beautiful picture I've ever seen. And you?

5 Tables

We can put tables in a text as follows:

Me	You	Them
27	12	14
30	15	11

Table 1: *We can see in the table that me is bigger than you or them*

We can also refer to the table (or figure) using `\label{name}` and `\ref{name}`. As an example, we refer to table 1 that shows good results for me.

6 Mathematics

This one gives most problems, since there are so many symbols. I cannot write them down all here, but refer to the copied part of the text-book. One can also have a look at free available Latex-books on the internet, an example is: <http://www.cs.uu.nl/people/piet/ltx-errata.html>

Some examples of using mathematical environments are: `(displaymath)`

$$e^x = e^{\frac{1}{2}x} e^{\frac{1}{2}x}$$

What is also possible is: `(equation)`

$$\sum_{i=0}^n i = \frac{1}{2}n(n+1) \quad (1)$$

Finally, we can stack those formula's: `(eqnarray)`

$$2x = 6 \quad (2)$$

$$x = 3 \quad (3)$$

Of course we can also write mathematical symbols in the text, e.g. α or $x_1 \wedge x_2$, or just use: $x \leq 10$, or $x \rightarrow \infty$. See the additional copied pages for more information.

6.1 Super- and subscript

We can use subscript and superscript using mathematical formula's. Examples are: x_i and x^{this} .

7 Boxes

Let's try some box:

1) Do that
2) Do this
3) Stop it

8 Using References

We can use references by using a separate bib file. What we do is we add at the end of the document the used bib. format (here we use `apalike`, but e.g. `plain` is also possible), and after using

1. latex course.tex
2. bibtex course
3. latex course.tex

We can cite papers using `\cite{papername}`. For example: (Aertsen et al., 1989), if we want to cite two articles, we can do the following: (Allender, 1992; Wiering, 2000).

References

- Aertsen, A., Gerstein, G., Habib, M., and Palm, G. (1989). Dynamics of neuronal firing correlation: Modulation of “effective connectivity”. *Journal of Neurophysiology*, 61:900–917.
- Allender, A. (1992). Application of time-bounded Kolmogorov complexity in complexity theory. In Watanabe, O., editor, *Kolmogorov complexity and computational complexity*, pages 6–22. EATCS Monographs on Theoretical Computer Science, Springer.
- Wiering, M. A. (2000). Multi-agent reinforcement learning for traffic light control. In Langley, P., editor, *Proceedings of the Seventeenth International Conference on Machine Learning*, pages 1151–1158.