

L^AT_EX 2_ε Cheat Sheet

Sample L^AT_EX document

```
\documentclass[11pt]{article}
\usepackage{...}

\title{My document's title}
\author{My name}
\date{\today}

\begin{document}
\maketitle

\section{section}
\subsection*{subsection without number}
...

\subsection{subsection}
...

\bibliography{bibliography}{}
\bibliographystyle{abbrv}

\end{document}
```

Document classes

book Default is two-sided.
report No `\part` divisions.
article No `\part` or `\chapter` divisions.
letter Letter.
slides Large sans-serif font.
beamer Presentations.

Common documentclass options

10pt/11pt/12pt Font size.
letterpaper/a4paper Paper size.
twocolumn Use two columns.
twoside Set margins for two-sided.
landscape Landscape orientation. Must use dvips
-t landscape.
draft Double-space lines.
Usage: `\documentclass[opt,opt]{class}`.

Packages

fullpage Use 1 inch margins.
anysize Set margins: `\marginsize{l}{r}{t}{b}`.
multicol Use n columns: `\begin{multicols}{n}`.
latexsym Use L^AT_EX symbol font.
graphicx Show image: `\includegraphics[width=x]{file}`.
url Insert URL: `\url{http://...}`.
Use before `\begin{document}`. Usage: `\usepackage{package}`

Title

`\author{text}` Author of document.
`\title{text}` Title of document.
`\date{text}` Date.

These commands go before `\begin{document}`. The declaration `\maketitle` goes at the top of the document.

Author's affiliation

Miscellaneous

`\pagestyle{empty}` Empty header, footer and no page numbers.
`\tableofcontents` Add a table of contents here.

Document structure

<code>\part{title}</code>	<code>\subsubsection{title}</code>
<code>\chapter{title}</code>	<code>\paragraph{title}</code>
<code>\section{title}</code>	<code>\subparagraph{title}</code>
<code>\subsection{title}</code>	

Use `\setcounter{secnumdepth}{x}` suppresses heading numbers of depth $> x$, where **chapter** has depth 0. Use a *****, as in `\section*{title}`, to not number a particular item—these items will also not appear in the table of contents.

Text environments

`\begin{comment}` Comment (not printed). Requires **verbatim** package.
`\begin{quote}` Indented quotation block.
`\begin{quotation}` Like **quote** with indented paragraphs.
`\begin{verse}` Quotation block for verse.

Lists

`\begin{enumerate}` Numbered list.
`\begin{itemize}` Bulleted list.
`\begin{description}` Description list.
`\item text` Add an item.
`\item[x] text` Use x instead of normal bullet or number. Required for descriptions.

References

`\label{label}` Set a marker for cross-reference, often of the form `\label{sec:item}`.
`\ref{label}` Give section/body number of marker.
`\pageref{label}` Give page number of marker.
`\footnote{text}` Print footnote at bottom of page.

Floating bodies (Tables/Figures/Equations)

`\begin{table}[place]` Add numbered table.
`\begin{figure}[place]` Add numbered figure.
`\begin{equation}[place]` Add numbered equation.
`\caption{text}` Caption for the body.

The *place* is a list valid placements for the body. **t**=top, **h**=here, **b**=bottom, **p**=separate page, **!**=place even if ugly. Captions and label markers should be within the environment.

Text properties

Font face

Command	Declaration	Effect
<code>\textrm{text}</code>	<code>\rmfamily text</code>	Roman family
<code>\textsf{text}</code>	<code>\sffamily text</code>	Sans serif family
<code>\texttt{text}</code>	<code>\ttfamily text</code>	Typewriter family
<code>\textmd{text}</code>	<code>\mdseries text</code>	Medium series
<code>\textbf{text}</code>	<code>\bfseries text</code>	Bold series
<code>\textup{text}</code>	<code>\upshape text</code>	Upright shape
<code>\textit{text}</code>	<code>\itshape text</code>	<i>Italic shape</i>
<code>\textsl{text}</code>	<code>\slshape text</code>	<i>Slanted shape</i>
<code>\textsc{text}</code>	<code>\scshape text</code>	SMALL CAPS SHAPE
<code>\emph{text}</code>	<code>\em text</code>	<i>Emphasized</i>
<code>\textnormal{text}</code>	<code>\normalfont text</code>	Document font
<code>\underline{text}</code>		<u>Underline</u>

The command (*tttt*) form handles spacing better than the declaration (*tttt*) form.

Font size

<code>\tiny</code>	tiny	<code>\Large</code>	Large
<code>\scriptsize</code>	scriptsize	<code>\LARGE</code>	LARGE
<code>\footnotesize</code>	footnotesize		
<code>\small</code>	small	<code>\huge</code>	huge
<code>\normalsize</code>	normalsize		
<code>\large</code>	large	<code>\Huge</code>	Huge

These are declarations and should be used in the form `\small ...`, or without braces to affect the entire document.

Verbatim text

`\begin{verbatim}` Verbatim environment.
`\begin{verbatim*}` Spaces are shown as `␣`.
`\verb!text!` Text between the delimiting characters (in this case ‘!’) is verbatim.

Justification

Environment	Declaration
<code>\begin{center}</code>	<code>\centering</code>
<code>\begin{flushleft}</code>	<code>\raggedright</code>
<code>\begin{flushright}</code>	<code>\raggedleft</code>

Miscellaneous

`\linespread{x}` changes the line spacing by the multiplier x .

Text-mode symbols

Symbols

<code>&</code>	<code>\&</code>	<code>^</code>	<code>_</code>	<code>...</code>	<code>\ldots</code>	<code>•</code>	<code>\textbullet</code>
<code>\$</code>	<code>\\$</code>	<code>~</code>	<code>\^{}{}</code>	<code> </code>	<code>\textbar</code>	<code>\</code>	<code>\textbackslash</code>
<code>%</code>	<code>\%</code>	<code>~</code>	<code>\~{}{}</code>	<code>#</code>	<code>\#</code>	<code>§</code>	<code>\S</code>

Accents

<code>ò</code>	<code>\`o</code>	<code>ó</code>	<code>\'o</code>	<code>ô</code>	<code>\^o</code>	<code>õ</code>	<code>\~o</code>	<code>ō</code>	<code>\=o</code>
<code>ô</code>	<code>\.o</code>	<code>õ</code>	<code>\"o</code>	<code>q</code>	<code>\c o</code>	<code>ô</code>	<code>\v o</code>	<code>ö</code>	<code>\H o</code>
<code>ç</code>	<code>\c c</code>	<code>q</code>	<code>\d o</code>	<code>q</code>	<code>\b o</code>	<code>oo</code>	<code>\t oo</code>	<code>œ</code>	<code>\oe</code>
<code>Œ</code>	<code>\OE</code>	<code>æ</code>	<code>\ae</code>	<code>Æ</code>	<code>\AE</code>	<code>â</code>	<code>\aa</code>	<code>Å</code>	<code>\AA</code>
<code>ø</code>	<code>\o</code>	<code>Ø</code>	<code>\O</code>	<code>l</code>	<code>\l</code>	<code>L</code>	<code>\L</code>	<code>l</code>	<code>\i</code>
<code>j</code>	<code>\j</code>	<code>i</code>	<code>\i</code>	<code>l</code>	<code>\l</code>	<code>l</code>	<code>\l</code>		

Delimiters

`' ' " "` `{ \}` `[] ()` `< \textless`
`' ' " "` `} \}` `]]))` `> \textgreater`

Dashes

Name	Source	Example	Usage
hyphen	-	X-ray	In words.
en-dash	--	1–5	Between numbers.
em-dash	---	Yes—or no?	Punctuation.

Line and page breaks

`\` Begin new line without new paragraph.
`*` Prohibit pagebreak after linebreak.
`\kill` Don't print current line.
`\pagebreak` Start new page.
`\noindent` Do not indent current line.

Miscellaneous

`\today` October 25, 2019.
`\sim` Prints \sim instead of `\~{}`, which makes `\.`
`\.` Space, disallow linebreak (W.J.~Clinton).
`\@.` Indicate that the `.` ends a sentence when following an uppercase letter.
`\hspace{l}` Horizontal space of length l (Ex: $l = 20\text{pt}$).
`\vspace{l}` Vertical space of length l .
`\rule{w}{h}` Line of width w and height h .

Tabular environments

tabbing environment

`\=` Set tab stop. `\>` Go to tab stop.

Tab stops can be set on “invisible” lines with `\kill` at the end of the line. Normally `\` is used to separate lines.

tabular environment

`\begin{array}[pos]{cols}`
`\begin{tabular}[pos]{cols}`
`\begin{tabular*}[width][pos]{cols}`

tabular column specification

`l` Left-justified column.
`c` Centered column.
`r` Right-justified column.
`p{width}` Same as `\parbox[t]{width}`.
`@{decl}` Insert `decl` instead of inter-column space.
`|` Inserts a vertical line between columns.

tabular elements

`\hline` Horizontal line between rows.
`\cline{x-y}` Horizontal line across columns x through y .
`\multicolumn{n}{cols}{text}`
A cell that spans n columns, with `cols` column specification.

On-line Resources

<https://tobi.oetiker.ch/lshort/>
<https://en.wikibooks.org/wiki/LaTeX>
<https://ctan.org/>
<https://tex.stackexchange.com/>
<https://texfaq.org/>

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Based on L^AT_EX Cheat Sheet from Winston Chang

<http://wch.github.io/latexsheet/>