

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}{f}
\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.
ansize Set margins: `\marginize{l}{r}{t}{b}`.
multicol Use *n* columns: `\begin{multicols}{n}`.
latsym 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

`\part{title}` `\subsubsection{title}`
`\chapter{title}` `\paragraph{title}`
`\section{title}` `\subparagraph{title}`
`\subsection{title}`

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

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

Font size

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

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>ö</code> | <code>\=o</code> |
| <code>õ</code> | <code>\o</code> | <code>ö</code> | <code>\"o</code> | <code>ø</code> | <code>\c o</code> | <code>ø</code> | <code>\v o</code> | <code>ő</code> | <code>\H o</code> |
| <code>ç</code> | <code>\c c</code> | <code>ø</code> | <code>\d o</code> | <code>ø</code> | <code>\b o</code> | <code>ö</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>ı</code> | <code>\l</code> | <code>Ł</code> | <code>\L</code> | <code>ı</code> | <code>\i</code> |
| <code>ı</code> | <code>\j</code> | <code>ı</code> | <code>~</code> | <code>ı</code> | <code>?</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{array}[pos]{cols}
\begin{tabular}[pos]{cols}
\begin{tabular*}[width][pos]{cols}

Miscellaneous

\today April 17, 2019.
\$sim\$ Prints ~ 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 = 20pt).
\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/>