

L^AT_EX 2_ε Cheat Sheet

Document classes

`book` Default is two-sided.
`report` No `\part` divisions.
`article` No `\part` or `\chapter` divisions.
`letter` Letter (?).
`slides` Large sans-serif font.
Used at the very beginning of a document:
`\documentclass{class}`. Use `\begin{document}` to start contents and `\end{document}` to end the document.

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: `\marginwidth{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.

Miscellaneous

`\pagestyle{empty}` Empty header, footer and no page numbers.

Document structure

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

Section commands can be followed with an `*`, like `\section*{title}`, to suppress heading numbers.
`\setcounter{secnumdepth}{x}` suppresses heading numbers of depth *x*, where `chapter` has depth 0.

Text environments

`\begin{comment}` Comment block (not printed).
`\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{marker}` Set a marker for cross-reference, often of the form `\label{sec:item}`.
`\ref{marker}` Give section/body number of marker.
`\pageref{marker}` Give page number of marker.
`\footnote{text}` Print footnote at bottom of page.

Floating bodies

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

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

Verbatim

`\begin{verbatim}`
`\end{verbatim}`

Justification

`Environment`
`\begin{center}`
`\begin{flushleft}`
`\begin{flushright}`

Miscellaneous

`\linespread`

Text-math

Symbol

`&` `\&`
`$` `\$`
`%` `\%`

Accent

`ò` `\'o`
`ó` `\.o`
`ç` `\c c`
`€` `\OE`
`ø` `\o`
`¡` `\j`

Delimit

`'` `"` `‘` `’`
`‘` `”` `„` `”`

Dashes

Name
hyphen
en-dash
em-dash

Line an

`\`
`*`
`\kill`
`\pagebreak`
`\noindent`

Miscellaneous

`\today`
`\sim`
`~`
`\@.`

`\hspace{}`
`\vspace{}`
`\rule{w}`

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.

Math mode

To use math mode, surround text with `$` or use

`\begin{equation}`.
 Superscript^{*x*} `\^x` Subscript_{*x*} `_x`
 $\frac{x}{y}$ `\frac{x}{y}` $\sum_{k=1}^n$ `\sum_{k=1}^n`
 $\sqrt[n]{x}$ `\sqrt[n]{x}` $\prod_{k=1}^n$ `\prod_{k=1}^n`

Math-mode symbols

<code>\leq</code>	<code>\geq</code>	<code>\neq</code>	<code>\approx</code>
<code>\times</code>	<code>\div</code>	<code>\pm</code>	<code>\cdot</code>
<code>\circ</code>	<code>\circ</code>	<code>\prime</code>	<code>\cdots</code>
<code>\infty</code>	<code>\neg</code>	<code>\wedge</code>	<code>\vee</code>
<code>\supset</code>	<code>\forall</code>	<code>\in</code>	<code>\rightarrow</code>
<code>\subset</code>	<code>\exists</code>	<code>\notin</code>	<code>\Rightarrow</code>
<code>\cup</code>	<code>\cap</code>	<code> </code>	<code>\Leftrightarrow</code>
<code>\dot{a}</code>	<code>\hat{a}</code>	<code>\bar{a}</code>	<code>\tilde{a}</code>
<code>\alpha</code>	<code>\beta</code>	<code>\gamma</code>	<code>\delta</code>
<code>\epsilon</code>	<code>\zeta</code>	<code>\eta</code>	<code>\varepsilon</code>
<code>\theta</code>	<code>\iota</code>	<code>\kappa</code>	<code>\vartheta</code>
<code>\lambda</code>	<code>\mu</code>	<code>\nu</code>	<code>\xi</code>
<code>\pi</code>	<code>\rho</code>	<code>\sigma</code>	<code>\tau</code>
<code>\upsilon</code>	<code>\phi</code>	<code>\chi</code>	<code>\psi</code>
<code>\omega</code>	<code>\Gamma</code>	<code>\Delta</code>	<code>\Theta</code>
<code>\Lambda</code>	<code>\Xi</code>	<code>\Pi</code>	<code>\Sigma</code>
<code>\Upsilon</code>	<code>\Phi</code>	<code>\Psi</code>	<code>\Omega</code>

Bibliography and citations

When using `BIBTEX`, you need to run `latex`, `bibtex`, and `latex` twice more to resolve dependencies.

Citation types

`\cite{key}` Full author list and year. (Watson and Crick 1953)
`\citeA{key}` Full author list. (Watson and Crick)
`\citeN{key}` Full author list and year. Watson and Crick (1953)
`\shortcite{key}` Abbreviated author list and year. ?
`\shortciteA{key}` Abbreviated author list. ?
`\shortciteN{key}` Abbreviated author list and year. ?
`\citeyear{key}` Cite year only. (1953)
 All the above have an NP variant without parentheses; Ex. `\citeNP`.

BIBTEX entry types

`@article` Journal or magazine article.
`@book` Book with publisher.
`@booklet` Book without publisher.
`@conference` Article in conference proceedings.
`@inbook` A part of a book and/or range of pages.
`@incollection` A part of book with its own title.
`@misc` If nothing else fits.
`@phdthesis` PhD. thesis.
`@proceedings` Proceedings of a conference.
`@techreport` Tech report, usually numbered in series.
`@unpublished` Unpublished.

BIBTEX fields

`address` Address of publisher. Not necessary for major publishers.
`author` Names of authors, of format
`booktitle` Title of book when part of it is cited.
`chapter` Chapter or section number.
`edition` Edition of a book.
`editor` Names of editors.
`institution` Sponsoring institution of tech. report.
`journal` Journal name.
`key` Used for cross ref. when no author.
`month` Month published. Use 3-letter abbreviation.
`note` Any additional information.
`number` Number of journal or magazine.
`organization` Organization that sponsors a conference.
`pages` Page range (2,6,9--12).
`publisher` Publisher's name.
`school` Name of school (for thesis).
`series` Name of series of books.
`title` Title of work.
`type` Type of tech. report, ex. “Research Note”.
`volume` Volume of a journal or book.
`year` Year of publication.
 Not all fields need to be filled. See example below.

Common BIBTEX style files

<code>abbrv</code>	Standard	<code>abstract</code>	alpha with abstract
<code>alpha</code>	Standard	<code>apa</code>	APA
<code>plain</code>	Standard	<code>unsorted</code>	Unsorted

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