LaTeX Reference Card

June 8, 2018

German preamble

```
\documentclass[a4paper]{article}
\usepackage[ngerman]{babel}
\usepackage{lmodern}
\usepackage[utf8]{inputenc}
\usepackage[T1]{fontenc}
\usepackage[top=2cm,left=3cm,right=2cm,bottom=2cm]{geometry}
\begin{document}
 Mein erstes \LaTeX~ Dokument
\end{document}
```

Common used `documentclass` options

`10pt/11pt/12pt`	Font size.
`a4paper`	Paper size.

Packages

`graphicx`	`\includegraphics[width=`x`]{`<*Datei*>`}`.
`url`	`\url{`*http://...*`}`.

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

`\tableofcontents`	Add a table of contents here.
`\listoffigures`	Add a list of figures here.

Document structure

`\section{`*title*`}`
`\subsection{`*title*`}`
`\subsubsection{`*title*`}`
`\paragraph{`*title*`}`
`\subparagraph{`*title*`}`

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}`.
`\eqref{`*marker*`}`	Give number of mathematical equation in parenthesis.
`\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, Captions and label markers should be within the environment.

Text properties

Font face

Command	*Declaration*	*Effect*
`\textrm{`*text*`}`	`{\rmfamily` *text*`}`	Roman family
`\texttt{`*text*`}`	`{\ttfamily` *text*`}`	`Typewriter family`
`\textbf{`*text*`}`	`{\bfseries` *text*`}`	**Bold series**
`\textit{`*text*`}`	`{\itshape` *text*`}`	*Italic shape*

Font size

`\tiny{}`	tiny
`\scriptsize{}`	scriptsize
`\footnotesize{}`	footnotesize
`\small{}`	small
`\normalsize{}`	normalsize
`\large{}`	large
`\Large{}`	Large
`\LARGE{}`	LARGE
`\huge{}`	huge
`\Huge{}`	Huge

Justification

Environment	*Declaration*
`\begin{center}`	`\centering`
`\begin{flushleft}`	`\raggedright`
`\begin{flushright}`	`\raggedleft`

Text-mode symbols

Symbols

&	`\&`	_	`\_`	...	`\ldots`	•	`\textbullet`
$	`\$`	^	`\^{}`	|	`\textbar`	\	`\textbackslash`
%	`\%`	~	`\~{}`	#	`\#`	§	`\S`

Delimiters

Code	Ausgabe
`\glqq`	„
`\grqq`	“

Line and page breaks

`\\`	Begin new line without new paragraph.
`\\[1cm]`	Linebreak and 1cm offset.
`\newpage`	Start new page.
`\noindent`	Do not indent current line.

Miscellaneous

`\today`	June 8, 2018.
`$\sim$`	Prints ∼ instead of `\~{}`, which makes ˜.
`~`	Space, disallow linebreak (`W.J.~Clinton`).

Tabular environments

`\begin{tabular}{`<*cols*>`}`

`tabular` <cols> specification

`l`	Left-justified column.
`c`	Centered column.
`r`	Right-justified column.
`|`	Inserts a vertical line between columns.

`tabular` elements

`\hline`	Horizontal line between rows.

Math mode

Include in preamble:

```
\usepackage{amsmath,amssymb,amsfonts,amsthm,mathtools}
```

For inline math, use `\(...\)` or `$...$`. For displayed math, use `\[...\]` or `\begin{equation}`.

Superscript $x^{}$	`^{x}`	Subscript $x_{}$	`_{x}`
current $\frac{x}{y}$	`\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

$\leq$	`\leq`	$\geq$	`\geq`	$\neq$	`\neq`	$\approx$	`\approx`
$\times$	`\times`	$\div$	`\div`	$\pm$	`\pm`	$\cdot$	`\cdot`
$^\circ$	`^{\circ}`	$\circ$	`\circ`	$\prime$	`\prime`	$\cdots$	`\cdots`
∞	`\infty`	$\neg$	`\neg`	$\wedge$	`\wedge`	$\vee$	`\vee`
$\supset$	`\supset`	$\forall$	`\forall`	$\in$	`\in`	$\rightarrow$	`\rightarrow`
$\subset$	`\subset`	$\exists$	`\exists`	$\notin$	`\notin`	$\Rightarrow$	`\Rightarrow`
$\cup$	`\cup`	$\cap$	`\cap`	$\mid$	`\mid`	$\Leftrightarrow$	`\Leftrightarrow`
$\dot{a}$	`\dot a`	$\hat{a}$	`\hat a`	$\bar{a}$	`\bar a`	$\tilde{a}$	`\tilde a`
α	`\alpha`	β	`\beta`	γ	`\gamma`	δ	`\delta`
ϵ	`\epsilon`	ζ	`\zeta`	η	`\eta`	ε	`\varepsilon`
θ	`\theta`	ι	`\iota`	κ	`\kappa`	ϑ	`\vartheta`
λ	`\lambda`	μ	`\mu`	ν	`\nu`	ξ	`\xi`
π	`\pi`	ρ	`\rho`	σ	`\sigma`	τ	`\tau`
υ	`\upsilon`	ϕ	`\phi`	χ	`\chi`	ψ	`\psi`
ω	`\omega`	Γ	`\Gamma`	Δ	`\Delta`	Θ	`\Theta`
Λ	`\Lambda`	Ξ	`\Xi`	Π	`\Pi`	Σ	`\Sigma`
Υ	`\Upsilon`	Φ	`\Phi`	Ψ	`\Psi`	Ω	`\Omega`