

HUMBOLDT-UNIVERSITÄT ZU BERLIN



L^AT_EX for Linguists

L^AT_EX 03: Graphics, tables & floats

Antonio Machicao y Priemer

<https://www.linguistik.hu-berlin.de/staff/amyp>

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Reader

L^AT_EX Reader (Freitag & Machicao y Priemer 2019b):
<https://doi.org/10.13140/RG.2.2.29299.27682>

Exercises and Handouts:
<https://www.linguistik.hu-berlin.de/de/staff/amyp/latex>

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Including a graphic

- Load the **package** `graphicx`: `\usepackage{graphicx}`
- To include the graphic, use the following command (**file ending**, i.e. .pdf, doesn't need to be added):

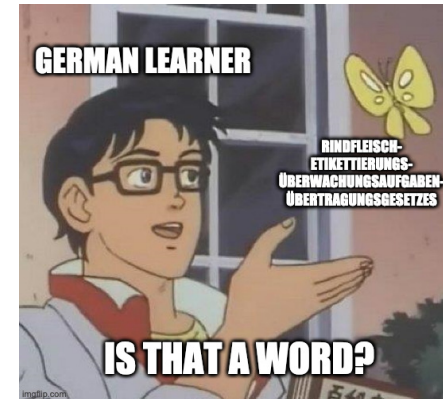
```
\includegraphics[size of graphic]{path/name of graphic}
```



Rescaling the graphic

Rescaling **relative** to the **original size** with the option `scale`
(`scale=0.3` = 30 % of the original size)

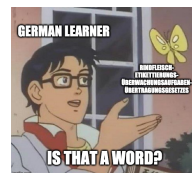
```
\includegraphics[scale=0.3]{myp-word.jpg}
```



Rescaling the graphic

Rescaling with **absolute specification**

```
\includegraphics[width=2.5cm]{myp-word}  
\includegraphics[height=2.5cm]{myp-word}
```



Rescaling **relative** to the **document/line size**

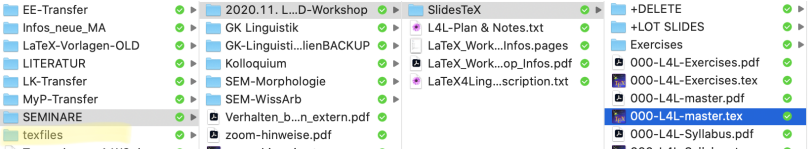
```
\includegraphics[width=\linewidth]{myp-word}  
\includegraphics[width=.2\linewidth]{myp-word}  
\includegraphics[width=.2\textwidth]{myp-word}
```



Formats and paths

- The following **formats** can be used with Xe^LT_EX and PDF^LT_EX:
 - .pdf (vector graphics)
 - .png (raster graphics)
 - .jpg (raster graphics)
 - .eps (vector graphics) (in Xe^LT_EX or with `epstopdf` package in PDF^LT_EX)
- You must specify the place where you have saved the graphic **starting from the location of your .tex-file**.
 - 1 Graphic and .tex-file are in the same folder:
`\includegraphics{myp-word}`
 - 2 Graphic is in a folder `graphics`. This folder is in the same folder as your .tex-file:
`\includegraphics{graphics/myp-word}`
 - 3 .tex-file is in a folder. This folder and your graphic are in the same folder:
`\includegraphics{../myp-word}`

Imagine that your .tex file is 000-L4L-master.tex and your graphic (named word.jpg) is in the folder texfiles.

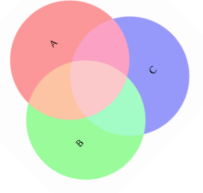


Which command would you have to write to include it to your document?

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Exercise

- Create a new section in your document with the title: Figures, tables & floats.
- Load the package `graphicx`.
- Include the graphic `vennDiagram` with `includegraphics` three times.
- For the first graphic, set width to `textwidth`
- For the second graphic, set height to 30 % of the `textheight`.
- For the third graphic, scale the size of the graphic to 20 % of the original size and rotate the graphic 45 degrees (try out the option `angle=`).



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Tables

- **environment** for tables: `tabular`
- optional argument for **position** of table w.r.t. text (t, c, b)
- obligatory argument for **layout** inside a column (l, c, r, p{ })
- separation of table cells: `&`
- end of a row: `\\`

```
sample text
\begin{tabular}[t]{l|c|r}
0001 & 002 & 03 \\
\hline
0A & 000B & 00C \\
\hline
00i & 0ii & 000iii \\
\end{tabular}
```

sample text	0001	002	03
	0A	000B	00C
	00i	0ii	000iii

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- possible values for **obligatory argument**: l (left), c (centered), r (right), p{length} (fixed width)
- optional: | (pipe, for vertical lines between columns)
- optional: \hline for horizontal lines between
- Each column must have an alignment specification (i.e. l, c, r, or p).

```
\begin{tabular}[t]{lcr|p{1.5cm}}
00001 & 002 & 03 & 0004 \\
\hline
0A & 000B & 00C & 0000D \\
\hline
00i & 0000ii & 000iii & iv \\
\end{tabular}
```

00001	002	03	0004
0A	000B	00C	0000D
00i	0000ii	000iii	iv

Exercise

- Create the following table 3 times:

German case paradigm:

	M	F	N
NOM	Tisch	Lampe	Licht
ACC	Tisch	Lampe	Licht
DAT	Tisch(e)	Lampe	Licht(e)
GEN	Tisch(e)s	Lampe	Licht(e)s

- For each table, play around with the parameters t, c, b, and l, c, r, and p.

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Floating environments

With floating environments, LaTeX puts figures or tables in the best position to avoid gaps in the layout.

```
It is not necessary that this text has
any meaning.
\begin{table}[htb]
\centering
\begin{tabular}[t]{l|l}
Eins & Zwei \\
\hline
Drei & Vier \\
\end{tabular}
\caption{Caption of my table}
\label{fig:TableFloat}
\end{table}
```

It is not necessary that this text has any meaning.

Eins	Zwei
Drei	Vier

Table 1: Caption of my table

- floating environment for **tables**: `table`
- floating environment for **figures**: `figure`
- In these environments, the command `\caption{ }` can be used.
- Optionally, preferences for the position can be given: h (here), t (top), b (bottom), p (extra page for floats).
- In the environment, you can specify the position of the figure/table (e.g. `\centering`).
- With a `\label{ }` after the `\caption{ }`, you can refer to the figure/table.

```
\begin{figure}[htb]
\centering

\includegraphics{myp-word}
\caption{My first float}
\label{fig:FigFloat}
\end{figure}
```

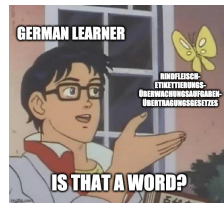


Figure 1: My first float

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List of figures and list of tables

With the following commands, a list of figures or a list of tables is automatically generated:

- `\listoffigures`
- `\listoftables`

Put these commands where your list of figures or tables should appear.

LaTeX collects the information from your **captions**.

Exercise

- Use the figures and tables you created and put them in floating environments.
- Use the `caption` and `label` command for each table and figure.
- Use the commands `\centering`, `\raggedleft`, and `\raggedright` inside the environments.
- Play around with the parameters h, t, b, and p of the floating environments.
- Write a sentence and refer to your figures/tables (with `\ref{ }`), use also the command `\pageref{ }`
- Use the package `subfigure` and try `\subfigure[My caption]{\includegraphics{myfile.jpg}}` inside the `figure` environment.
- Try the following command: `\documentclass[draft]{scrartcl}`
- Rearrange your pages with `\clearpage` and `\newpage`

Internet sources I

- Grafik: Is that a word?: mypling.
<https://mypling.tumblr.com/post/633964511025676289/rindfleischetikettierungs%C3%BCberwachungsaufgaben%C3%BCbertr> [Access: 05/11/2020]
- Link: Language Science Press
www.langsci-press.org [Access: 02/01/2019]
- Twitter: TeX tips
<https://twitter.com/textip> [Access: 10/04/2017]

Literature I

- Freitag, Constantin & Antonio Machicao y Priemer. 2019a. LaTeX-Einführung für Linguisten. Manuskript. <https://doi.org/10.13140/RG.2.2.29299.27682>.
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- Machicao y Priemer, Antonio & Elisabeth Eberle. 2019. LaTeX for Linguists – Slides. Workshop for PhD candidates given at the PhD day of the Department of German Studies and Linguistics – Humboldt-Universität zu Berlin – 09. Oktober 2019.
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- Nordhoff, Sebastian & Stefan Müller. 2018. Language Science Press: Complete set of guidelines. Online. <http://langsci.github.io/guidelines/latexguidelines/LangSci-guidelines.pdf>.