Pragmatic Template Cheat Sheet

Folder Structure

Files:

master.tex	Master file (use pdflatex and bibtex)
library.bib	Literature database (edit)
ufo-neu.bst	Citation style (leave alone)
cheatsheet.pdf	Cheat sheet (read)
hints.pdf	Hint chapter (read)

Folders:

contents	Your content (add your .tex files)
graphics	Graphics (add yours)
templates	Templates (edit)
tables	Tabulars (add yours)
internals	Template internals (leave alone)

Note: LaTeX will create a lot of meta files in the main directory. Don't let them confuse you.

Startup Cookbook

1) Install LaTeX for your OS (e.g. **MikTeX, Texlive**)
2) Choose editing environment (e.g. **Texmaker**)
3) Open **master.tex**, pdf**LaTeX** it. **Does it compile?** (If no: fix)
4) Go to **folder contents**, create a file (e.g. **mysection.tex**)
5) Enter some **sample text**
6) Go to master.tex, find **„Load contents"** section and add your created file
7) **pdfLaTeX** again (master.tex). **Does it compile?** (If no: fix)
8) Open **master.pdf**. Can you find your text? (If no: fix)

9) Carefully read through **master.tex**, fill in \my... variables and choose an appropriate **title template**

-> You are ready to start writing

Structure Your Document

```
\chapter{Introduction}
\section{Second Level Headline}
\subsection{Third Level Headline}
\subsubsection{Fourth Level Headline}
```

Variants (suitable for all levels):

```
\subsection*{Headline without number/TOC-Entry}
\section[Short TOC-Entry]{Full Long Headline}
```

TOC = table of contents

Labels and References

You can cross reference your document sections, figures and tables:

Label:	Reference:
`\section{My Section}`	`Section \ref{sec:mysec}`
`\label{sec:mysec}`	`on page \pageref{sec:mysec}...`

Keywords english: chapter, section, figure, table
Keywords german: Kapitel, Abschnitt, Abbildung, Tabelle

Citation

Edit library.bib, either manually or with a software like Jabref. Always save the file in UTF-8 encoding. There are sample entries in the file - be careful: always provide all needed data for full citation (read UFO thesis guideline). In LaTeX use no other than (watch spaces, key = cite key):

After sentence:	After block:
... \citep{key}.	**...last sentence. \citep{key}**

Or Inline:
```
During their study \citet{key} show...
```

Variants:	Multiple:
`\citep[page]{key}`	`\citep{key1,key2,key3}`
`\citep[addition][]{key}`	

Pages: „p. 3-5"	Seiten: „S. 3-5" „S. 3f" „S. 3ff"
Columns: „co. 7"	Spalten: „Sp. 7"
Additions: „according to"	Zusatz: „in Anlehnung an"

Full figure caption example:
```
\caption{Modell \citep[in Anlehnung an][S. 37]{key}}
```

Now listen: this template uses *bibtex*. For citations to show in your document you have to run pdflatex->bibtex->pdflatex->pdflatex (all on master). If the key in \cite commands and the key in library.bib match, you should not see any (?) in your text. Look at the examples.

Figure Placement

While it is possible to place figures manually we strongly encourage you to rely on the automated placement of float environments. Accept the way LaTeX ist placing your figures. Use simple and clean figures, side-by-side only if it helps understanding.

Place your graphics (**pdf, png, jpeg**) in the graphics folder - to keep things in order. Do not use white spaces or special characters in file name. Fully label and reference your figures. Like this:

```
\begin{figure}[bthp]
 \centering
 \includegraphics[width=0.8\linewidth]{graphics/myfigure-xy}
 \caption{Caption title \citep{key}}
 \label{fig:myfigure1}
\end{figure}
```

Always reference your figures in text but do not use keywords like *above* or *below*. Rely on the mechanism shown in **Labels and References**.

If (**and only if**) a figure is your own achievement use the addition „(personal design)" or „(eigener Entwurf)" in stead of a cite command.

Tables can be placed like figures (if created externally), but use the *table* float instead of *figure*.

Placement: in *.tex file place the figure where it semantically belongs. When finalizing your document edit the string *bthp* which is an ordered suggestion of placement, being b=bottom, t=top of page or next page and h=here as well as p=separate-page. LaTeX may still reject your suggestion if the figure doesn't fit the way you think it does. Don't blame the placement algorithm because in many cases it is your figure that is improperly designed, proportioned, cut or scaled.

Text Formatting

Although it is one of the basics in LaTeX I still see lots of beginners misunderstand the way LaTeX handles your text. As you write your document you use **paragraphs to build logical blocks** of content. **Now:** if you want to build a paragraph in LaTex you need to insert an empty line:

Sentence in preceding paragraph.	Anything else like a single line break % or spaces will remain in a single paragraph.
Sentence in following paragraph.	

Just because you put an empty line in *.tex doesn't mean there will be an empty line in your PDF document. This depends on the way the document is set up. This template will indeed place a spacing between paragraphs. **Never use \\ to break paragraphs!**

Over/Underfull hboxes and other warnings

LaTeX uses strong line breaking and hyphenation algorithms to achieve beautiful text blocks. But these still may fail and issue warnings if they do so:
- **Overfull hbox:** LaTeX cannot properly arange and hyphenate words at the line end. The word will overlap.
- **Underfull hbox**: LaTex cannot properly fill a line because there aren't enough words to do so (e.g. LaTeX doesn't want to end a paragraph with a single word line).

In both cases you should have a look and fix it - if necessary rewrite a sentence or two. If you do not use float environments or too big figures it is quite likely you will see these messages as well.

Further Reading:
That's all I could fit on a single page. Learn some LaTeX basics. Check out the rest of the template. Visit **latex.tugraz.at** and look at package documentations. If you cannot solve it, ask someone.