

LATEX TEMPLATE FOR DHBW STUTTGART SCIENTIFIC ARTICLES

Cedric Donié

Fahrzeug-System-Engineering, TMB17FSE1, DHBW Stuttgart

Abstract: For the practical project a scientific article must be submitted. This template provides an easy method to create a perfectly formatted report.

Keywords: LaTeX, Template, T3.3000 **Kurzfassung:** Für das Praxisprojekt muss ein wissenschaftlicher Bericht vorgelegt werden. Mit dieser Vorlage lässt sich ganz einfach ein perfekt formatierter Bericht erzeugen.

Schlüsselwörter: LaTeX, Vorlage, T3.3000

1 USAGE

1.1 Preamble

The template is defined as a \LaTeX document class. Thus, the first step is to load it in the preamble with `\documentclass[a4paper]{dhbwarticle}`. Next, *babel* should be loaded with `\usepackage[lang1, lang2]{babel}`. `lang1` is the secondary language, `lang2` is the primary language. This is used for hyphenation. A few additional properties of the document must be defined in the preamble as can be seen in **Listing 1.1**.

```
\title{LaTeX Template for DHBW Stuttgart Scientific Articles}
\author{Cedric Donié}
\projectname{Praxisprojekt III (T3\_3000)}
\courseofstudies{Fahrzeug-System-Engineering}
\class{TMB17FSE1}
\classyear{2017}
```

This generates the information shown in the document above. Finally, the *hyperref* package allows for internal links in the document.

1.2 Document Body

In the document body, the first step is to input `\maketitle`. This will display the formatted title. Next, the meta information about the article is included. Two commands, `\abstract{...}` and `\keywords{...}` are provided by the document class. The whole class has support for internationalization, so it is easy to add the abstract and keywords in a second language as shown in **Listing 1.2**.

```
\maketitle
\abstract{For the practical ...}

\keywords{LaTeX, Template, T3\_3000}

\begin{otherlanguage}{ngerman}
  \abstract{Für das Praxisprojekt muss ...}
  \keywords{LaTeX, Vorlage, T3\_3000}
\end{otherlanguage}
```

The spaces between the commands must be kept to ensure a proper layout.

Cross-references can be added easily using the additional commands provided by the class. These are:

- `\tabref{label}`
- `\lstref{label}`
- `\figref{label}`
- `\secref{label}`

- `eqref{label}`

2 TIPS

You can use `hyperref` also to change the properties of the PDF document. If you really want to use Excel instead of something better like Matplotlib [1], you can copy the diagrams into PowerPoint and by right-clicking save as an SVG file. You can open this SVG file in Inkscape [2] and convert to PDF so that you can then use `\includegraphics`. If you use Matplotlib save a PGF file for latex.

REFERENCES

- [1] J. D. Hunter. "Matplotlib: A 2D graphics environment". In: *Computing in Science & Engineering* 9.3 (2007), pp. 90–95. DOI: [10.1109/MCSE.2007.55](https://doi.org/10.1109/MCSE.2007.55).
- [2] *Inkscape. Draw Freely*. Software Freedom Conservancy. URL: <https://inkscape.org/> (visited on 12/21/2019).