The fhjbook class*

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Abstract

This class is intended to be used for formatting books and thesis in the FHJ style. It is based on the scrbook class and provides a set of macros and commands to simplify the formatting of thesis and books.

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1 Configuration and styling

It is important to note that this class is based on the scrbook class and we support forwarding options to it.

```
\newcommand{\FHJ@ClassName}{fhjbook}
\DeclareOption*{\PassOptionsToClass{\CurrentOption}{scrbook}}
\ProcessOptions\relax
```

We load the scrbook class with the following options:

- `a4paper`: We want to use A4 paper size
- `DIV=14`: The DIV parameter should be set to 14 to ensure a good balance between text width and height

*This document corresponds to fhjbook v4.3e, dated 2026-11-19.

- `BCOR=10mm`: The binding correction should be set to 10mm to ensure proper binding of the printed document

Remark: Feel free to switch to `twoside` which we clearly recommend!

```
\LoadClass[a4paper,DIV=14,BCOR=10mm]{scrbook}
```

For styling of the document headers we rely on the predefined stylings from KOMA-Script.

```
\pagestyle{headings}
```

1.1 Used packages

For the styling of the document we use the following packages and therefore they are preloaded and you might not load them again in your document:

```
\RequirePackage{fhjcommon}
\PassOptionsToPackage{hidelinks}{hyperref}
\RequirePackage{hyperref}
\RequirePackage{array}
\RequirePackage{supertabular}
\RequirePackage{xstring}
\RequirePackage{etoolbox}
```

2 Preamble

For using the class you need to define a few macros (preferably in your preamble). To have the correct icon and name for the study program typeset on the title page and some other locations in the document, you **need to** define the study program with the macro from `fhjcommon` package:

```
\FHJProgram{DAT-25}
```

Remark: The `fhjcommon` package documentation is listing which study programs are currently defined.

2.1 Multilingual support

This class supports multilingual documents and therefore we recommend to load the `babel` package and set one of two supported languages – either `ngerman` or `english`. A possible boilerplate for the preamble could look like this:

```
\usepackage[T1]{fontenc}
\usepackage[⟨language⟩]{babel}
```

2.2 Title page

The class supports the creation of a standardized title page. For this purpose it is **mandatory** to provide macro definitions to have all relevant facts.

`\title` This macro defines the title of your master thesis and is placed on the title page on the according position. It is supported to use line breaks in the title, so you can have up to three lines in the title, e.g.:

```
\title{First line\\second line}
```

`\subtitle` This command defines the subtitle of your master thesis and is placed on the title page on the according position. The subtitle is optional and it is expected to be a single line.

```
\subtitle{An explanatory subtitle}
```

`\author` `\authorinfo` On the title page it is mandatory to define the author of the thesis. The command `\author` is used for this purpose and must be followed by the author's name in the following format – make sure to use first name first and the last name second in all capital letters:

```
\author{Lisa MUSTERFRAU}
```

Besides the name of the author, you need to provide some additional information with the macro `\authorinfo{`⟨*gender*⟩`}{`⟨*mat-nr*⟩`}{`⟨*year*⟩`}` which may look as follows:

```
\authorinfo{f}{0130508}{2024}
```

Currently we support the following values for the gender – `m`, `f` and `o` (for other). The matrikel number is the student's ID number and the year is the cohort of the student. The option `{`⟨*year*⟩`}` is the year of your cohort - not the current your of writing the thesis.

`\supervisor` Finally it is mandatory to define the supervisor of the thesis with the help of `\supervisor{`⟨*name*⟩`}{`⟨*gender*⟩`}` macro:

```
\supervisor{MMMMag. DDr. Wolfgang GRANIGG}{m}
```

`\cosupervisor` It may be the case that you have a second supervisor, which is optional and can be defined with the help of `\cosupervisor{`⟨*name*⟩`}{`⟨*gender*⟩`}` macro in the same way as for `\supervisor`.

`\date` The date of submission is defined with the `\date` macro and it is expected to be a single line in the following format:

```
\date{YYYY-MM-DD}
```

Remark: Most of above macros are safeguarded and you will get according warnings if macro definitions are missing and replacement text is set.

`\FHJLocation` The location which is used on the titlepage is defined with the `\FHJLocation` macro and it is expected to be a single line, e.g.

```
\FHJLocation{Graz}
```

All this macros are part of the preamble and do **not** directly set text content in the document. Look into `\FHJMakeTitlePage` macro.

2.3 Abstract and keywords

All master's theses must contain an abstract in both German **and** English. The abstract should provide a brief summary of the research question, methodology, and key findings. To support you in typesetting the abstract, we provide macros for defining the abstract itself and the keywords.

`\FHJAbstractDE` `\FHJAbstractEN` These macros are used to define the abstract in German and English respectively. Both commands follow the same syntax:

```
\FHJAbstractDE{⟨abstract text⟩}{⟨keyword1,keyword2,...⟩}
\FHJAbstractEN{⟨abstract text⟩}{⟨keyword1,keyword2,...⟩}
```

Note: The keywords are expected to be a comma-separated list of keywords whithout spaces before or after the commas. Do not forget to define the abstract and keywords in both languages!

3 Thesis document

3.1 Front matter

If you have defined all necessary macros in the preamble, you can start with the document itself. In most cases you will want to use the following boilerplate at the beginning:

```
\begin{document}
    \frontmatter
    \FHJThesisFrontMatter
    \tableofcontents
    \listoftables
    \listoffigures
    \mainmatter
    ...
\end{document}
```

The macros `\frontmatter`, `\mainmatter` are special macros from KOMA-Script which seperate the front matter from the main content of the thesis – one consequence for example is roman numbering of the pages in the front matter and arabic numbering in the main matter.

`\FHJMakeTitlePage` The macro `\FHJMakeTitlePage` is used to typeset the title page of the thesis. It is expected to be called in the document body and will take care of all necessary formatting for you. It generates an empty page and should be the first page of the document.

`\FHJMakeDeclaration` The macro `\FHJDeclaration` is used to typeset the declaration page of the thesis. It is actually contained in package `fhjcommon`.

`\FHJMakeAbstract` The macro `\FHJMakeAbstract` is used to typeset the abstract of the thesis including keywords in both languages.

`\FHJThesisFrontMatter` The macro `\FHJThesisFrontMatter` is used to typeset the front matter of the thesis. If you would like to typeset all the frontmatter pages in the default order it can take care of it for you (for title page, abstract and declarations). Nevertheless, we also export the individual macros for the title page, abstract and declarations.

```
\newcommand{\FHJThesisFrontMatter}{%
% Main title page
\FHJMakeTitlePage%
% Declaration
\FHJMakeDeclaration%
% Abstract
\FHJMakeAbstract%
}
```

3.2 Appendix

The appendix is a section at the end of the thesis where you can include additional material that is not essential to the main text but may be helpful for the reader. This can include supplementary data, detailed explanations of methods or source code, or other relevant information.

We at least recommend to include the list of abbreviations.

```
\appendix
\chapter{Appendix}
\section{Source Code}
...
\section{···}
...
% Will create its own section in the table of contents
\printacronyms[template=supertabular,heading=section]
```

3.3 Bibliography

The bibliography is an essential part of any thesis, as it provides a list of all the sources that were cited or consulted during the research process. It is important to follow a consistent citation style throughout the thesis and to include all necessary information for each source (see `fhj_guide.pdf` for further information on writing a thesis in LaTeX).

A possible boilerplate for printing the bibliography in the document could look like this (`heading=bibnumbered` ensures that the bibliography is listed and numbered in the table of contents):

```
\printbibliography[heading=bibnumbered]
```

4 Acknowledgements

The original work for creating a base class for the study program "Data Science and Artificial Intelligence" was done by **Klaus Lichtenegger**. All appreciation goes to him for creating the first version of this class.

Change History

v4.0
General: Initial package version . . 1