

Explanatioonns for the docuurnentcn class TNbook

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Summary

The document class TWbook was created to provide a uniform corporate identity for LaTeX users. The class is based on the KOMA class srbook by Markus Kohm. It also provides additional optional arguments to control the layout and some new commands to correctly fill the cover page. Until version 0.4 the class was developed and managed by Dr. Andreas Drauschke.

Table of contents

1	Introduction	1
2	Two examples	3
2.1	Example fir a master thesis	3
2.2	Example fir document of the study program MGS	6
3	Declarations	6
4	The basic layout	11
5	Options	13
6	New commands	22
7	Version control	36
8	Only the following index	36
	Index	37

I Introduction

The FH Technikum Vien provides students and employees with predefined designs. To increase the recognition value, a quality-assured corporate identity design was developed for a variety of different documents. In particular, the following different types of documents were developed:

- multi-page book-like publications fir
 - Master theses
 - Bachelor theses
 - Seminar papers
 - Internship Reports
 - Lab Protocols
 - Project work
 - external documents to be used in the corporate identity design of the FH Technikum Wien
 - Documents to be used externally and internally in the corporate identity design of the individual study programs
- Letters
 - single and multi-sided
 - with and without logo of the FH Technikum Wien
 - For electronic sending (fax)
 - Kur**?**briefs
- Beamer presentations
 - external documents to be used in the corporate identity design of the FH Technikum Wien
 - Documents to be used externally and internally in the corporate identity design of the individual study programs
 - External and internal documents in the corporate identity design of individual sub-organizations of the FH Technikum Wien (library, FH Technikum Wien International, LLL).
- Poster-Presentations
 - external documents to be used in the corporate identity design of the FH Technikum Wien
 - Documents to be used externally and internally in the corporate identity design of the individual study programs
 - External and internal documents in the corporate identity design of individual sub-organizations of the FH Technikum Wien (library, FH Technikum Wien International, LLL).

This work was written as a book-like publication fir externally **?**u usable documents in the corporate identity design of the FH Technikum Wien. Documentation and document class were automatically generated from the source file twbook.dtx using the utilities doc and docstrip. Likewise, with version 0.9 the package svn-multi was used in order to be able to specify the current SVN revision number in the document. This allows easy identification of newer versions.

2 Two examples

At the beginning of the documentation, two sample applications of the document class twbook will be presented. The first example demonstrates how an English master thesis in the MBE course can be set as an example. In the second example, a German document of the Game Engineering and Simulation course is generated. The underlying source files and the generated pdf files are attached to the documentation (Masterarbeit.tex, Masterarbeit.pdf, MGS.tex and MGS.pdf).

2.1 Example of a master thesis

```
1  X ! TEX encoding = Iso Latin 2
   \documentclass [ Master , BBE , english ]{ twbook }
   \usepackage [ T I ]{ fontenc }
   X Depending on the operating system, one of the following options may be necessary
   here
     . to correctly render the umlauts :
   X utf B. latin . apple mac
   \usepackage [ ansinew ]{ inputenc }
   X The following 2 packages provide otherwise not needed features
   \usepackage { blindtext , dtklogos }

   \title { The thesis title }
   \author { My name , BSc }
11  \studentnumber { 0000000 }
   \supervisor { Dr. Ing . My supervisor }
   \secondsupervisor { Prof . Dr. More }
   \place { Vienna }
   \abstract {\blindtext }
   \keywords { keyword 1 , keyword 2 , keyword 3 , keyword 4 }
   \outline {\blindtext }
   \keywords { Keyword 1 , Keyword 2 , Keyword 3 , Keyword 4 }
   \acknowledgements {\blindtext }
21
   \begin { document }
   \maketitle

   \Blind Document

   \chapter { first level heading 1( chapter ) }
   \blinddocument

   \blindmathpaper
31
   \section { First heading depth 2}( section )
   \blindtext

   \subsection { First heading depth 3 ( subsection ) }
   \blindtext

   \subsubsection { first heading depth 4 ( subsubsection ) }
   \blindtext
41
   \chapter { Second heading of depth 1 ( chapter ) }
   \blindtext

   \section { Second heading depth 2 ( section ) }
   \blindtext

   \section { Second heading depth 2 ( section ) }
   \blindtext

   \subsection { Second heading depth 3 ( subsection ) }
51  \blindtext

   \subsection { third heading depth 3 ( subsection ) }
   \blindtext
```

```

\chapter { Second heading depth 0 ( chapter )}
\blind text

\ noindent cross references are automatically created and managed in \ LaTeX {}
so that they can be easily updated. For example, Figure \ ref { Fig 1} is
referenced here.

61 \begin { figure }[! htbp ]
\centering
\includegraphics [ width =0.5\ linewidth ]{ PICs / book spine }
\caption { example of bookplate labeling .}\ label { fig 1}
\end { figure }

\begin { figure }[! htbp ]
\centering
\includegraphics [ width =0.5\ linewidth ]{ PICs / book spine }
71 \caption { example of bookplate labeling .}\ label { fig 3}
\end { figure }

And here is a reference to table \ ref { tab 1}. The shown table format is only an
example. Tables can be customized.

\begin { table }[! htbp ]
\centering
\begin { tabular }{I p {0.3\ linewidth } I p @\ linewidth } I p @\ linewidth }
I}\ hline
Date & Topic & Room\hline
81 2 0. 0 8 . 2 00 8 & Graph Theory& HS 3.13\ 0 1 .
1 0. 2 00 8 & Biomathematics & HS 1. 05\ hline.
\end { tabular }
\caption { semester schedule of the course \ glqq Applied Mathematics\grqq
.}\ label { tab 1}
\end { table }

Here we refer to the formula \ ref{ Eq 1} .

\begin { align }
x = -\ frac { p }{2}\ pm\ sqrt {\ frac { p -2}{4} - q}\ label { Eq 1}
91 \end { align }

Literature references should be managed automatically , especially if there are
many source references . Here is referred to \ cite { Balzert :2005} and \
cite { Wagner :2007 , Aloyetal :1995} . The used citation format ( or the
format of the bibliography ) is selected automatically according to the
requirements of the study programs . It is strongly recommended to use \
BibTeX ( not to enter the sources manually in the document as in this example
.

\chapter { Second heading depth 0 ( chapter )}
\blind text

\ noindent cross references are automatically created and managed in \ LaTeX {}
so that they can be easily updated. For example, Figure \ ref { Fig 1} is
referenced here.

\begin { figure }[! htbp ]
101 \centering
\includegraphics [ width =0.5\ linewidth ]{ PICs / book spine }
\caption { example of bookplate labeling .}\ label { fig 2}
\end { figure }

And here is a reference to table \ ref { tab 1}. The shown table format is only an
example. Tables can be customized.

\begin { table }[! htbp ]
\centering
\begin { tabular }{I p {0.3\ linewidth } I p @\ linewidth } I p @\ linewidth }
I}\ hline
111 Date & Topic & Room\hline
2 0. 0 8 . 2 00 8 & Graph Theory& HS 3.13\ 0 1 .
1 0. 2 00 8 & Biomathematics & HS 1. 05\ hline.
\end { tabular }

```

```

\caption { semester schedule of the course \ glqq Applied Mathematics\grqq
.}\label { tab 2}
\end { table }

Here we refer to the formula \ ref{ Eq 1} .

\begin { align }
21 x = -\frac { p } { 2}\pm\sqrt {\frac { p -2 } { 4} - q}\label { Eq 2}
\end { align }

Literature references should be managed automatically , especially if there are
many source references . Here is referred to \ cite { Balzert :2005} and \
cite { Wagner :2007 , Aloyetal :1995} . The used citation format ( or the
format of the bibliography ) is selected automatically according to the
requirements of the study programs . It is strongly recommended to use \
BibTeX ( not to enter the sources manually in the document as in this example
.

\clearpage
\bibliographystyle { plain }
\begin { thebibliography } { 99}
\bibitem { Balzert :2005}
H. - Balzert \ newblock {\ em{ Textbook of Object Modeling - Analysis and
131 Design with UML 2} } , 2nd ed. , Elsevier GmbH , Munchen 2005.

\ bibitem { Wagner :2007}
K. W. - Wagner \ newblock {\ em{ Performance Excellence . The practical guide to
effective process management } } , Hanser Fachbuch , Munchen 2007.

\ bibitem { Aloyetal :1995}
A. - Aloy , E. - Schragl , H. - Neth , A. - Donner , and A. - Kluwick \ newblock {\ em{
current behavior of respiratory gas in SHFJ jet - laryngoscope }}
\ newblock { textsc { The Anesthesist } } , 44:558 - -565 , 1995.
\end { thebibliography }
\clearpage
Hello
41 \clearpage

X The List of Figures
\ listoffigures
\ clearpage

X The List of Tables
\ listoftables
\ clearpage

51 \phantomsection
\addcontentsline { toc } { chapter } { list of abbreviations }
\chapter * { list of abbreviations }
\begin { acronym } [ XXXXX ]
\acro { ABC } [ ABC ] { alphabet }
\acro { WWW } [ WWW ] { world wide web }
\acro { ROFL } [ ROFL ] { Rolling on floor laughing }
\end { acronym }
\end { document }

```

2.2 Example fiir document of the study program MGS

```

1  X ! TEX encoding = Iso Latin 2
   \documentclass [ MGS ]{ twbook }
   \usepackage [ T 1 ]{ fontenc }
   \usepackage [ ansinew ]{ inputenc }
   \usepackage { blindtext }

   \title { The title of the presentation }
   \extratitle { The subtitle }
   \author { Dr. my name }
   \begin { document }
11  \maketitle
   \chapter *{ heading 1}
   \blindtext

   \section *{ heading 2}
   \blindtext

   \subsection *{ heading 3}
   \blindtext

21  \subsubsection *{ heading 4}
   \begin { itemize }
       \item Surcharge Template          1 Format template Additional
                                         payment 1
                                         Surcharge 1 template Surcharge 1 template
                                         Surcharge 1 template
       \item Surcharge Template 1
   \item Surcharge Template          1
   \begin { itemize }
       \item Format Template Additional Payment 2
       \item Format Template Additional Payment 2
       \begin { itemize }
           \item Format Template Extra Payment 3
31          \item Format Template Additional
                                         Payment 3

           \end { itemize }
       \end { itemize }
   \end { itemize }

   \subsection *{ heading 3}
   Formatting Hyperlink : \href { www . technikum - wien . at }{ www . technikum - wien
   . at}
   \end { document }

```

3 Declarations

The document class allows the passing of various new optional parameters. Use, definition and processing of the parameters is described in detail in chapter 5 on page 13. The declaration of the individual commands is done here. By default, the German assignments and the neutral TV design are selected.

```

1  \newcommand{language} {english}
2  \DeclareOption{german} {\renewcommand*{\language} {german}}
3  \DeclareOption{ngerman} {\renewcommand*{\language} {ngerman}}
4  \DeclareOption{english} {\renewcommand*{english}}
5
6  \newcommand{\institution} {technical center}
7  \newcommand{\degreecourse} {TW}
8  \DeclareOption{ACADEMY} {\renewcommand*{\degreecourse} {Academy}%
9  \renewcommand*{\institution} {Academy}}
10  \DeclareOption{BBE} {\renewcommand*{\degreecourse} {BBE}}
11  \DeclareOption{BEE} {\renewcommand*{\degreecourse} {BEE}}
12  \DeclareOption{BEL} {\renewcommand*{\degreecourse} {BEL}}

```

```

13 \DeclareOption{BEW} {\renewcommand*\degreecourse{BEW}}
14 \DeclareOption{BHF} {\renewcommand*\degreecourse{BHF}}
15 \DeclareOption{BIC} {\renewcommand*\degreecourse{BIC}}
16 \DeclareOption{BIF} {\renewcommand*\degreecourse{BIF}}
17 \DeclareOption{BIW} {\renewcommand*\degreecourse{BIW}}
18 \DeclareOption{BMB} {\renewcommand*\degreecourse{BMB}}
19 \DeclareOption{BMR} {\renewcommand*\degreecourse{BMR}}
20 \DeclareOption{BSA} {\renewcommand*\degreecourse{BSA}}
21 \DeclareOption{BWI} {\renewcommand*\degreecourse{BWI}}
22 \DeclareOption{LAA} {\renewcommand*\degreecourse{LAA}}
23 \DeclareOption{LAM} {\renewcommand*\degreecourse{LAM}}
24 \DeclareOption{LAZ} {\renewcommand*\degreecourse{LAZ}}
25 \DeclareOption{LBA} {\renewcommand*\degreecourse{LBA}}
26 \DeclareOption{LBD} {\renewcommand*\degreecourse{LBD}}
27 \DeclareOption{LBM} {\renewcommand*\degreecourse{LBM}}
28 \DeclareOption{LDA} {\renewcommand*\degreecourse{LDA}}
29 \DeclareOption{LDZ} {\renewcommand*\degreecourse{LDZ}}
30 \DeclareOption{LMD} {\renewcommand*\degreecourse{LMD}}
31 \DeclareOption{LPA} {\renewcommand*\degreecourse{LPA}}
32 \DeclareOption{LPC} {\renewcommand*\degreecourse{LPC}}
33 \DeclareOption{LPE} {\renewcommand*\degreecourse{LPE}}
34 \DeclareOption{LPJ} {\renewcommand*\degreecourse{LPJ}}
35 \DeclareOption{LPM} {\renewcommand*\degreecourse{LPM}}
36 \DeclareOption{LPP} {\renewcommand*\degreecourse{LPP}}
37 \DeclareOption{LPW} {\renewcommand*\degreecourse{LPW}}
38 \DeclareOption{LRA} {\renewcommand*\degreecourse{LRA}}
39 \DeclareOption{LRM} {\renewcommand*\degreecourse{LRM}}
40 \DeclareOption{LRZ} {\renewcommand*\degreecourse{LRZ}}
41 \DeclareOption{LUE} {\renewcommand*\degreecourse{LUE}}
42 \DeclareOption{LUM} {\renewcommand*\degreecourse{LUM}}
43 \DeclareOption{LUX} {\renewcommand*\degreecourse{LUX}}
44 \DeclareOption{LZA} {\renewcommand*\degreecourse{LZA}}
45 \DeclareOption{LZM} {\renewcommand*\degreecourse{LZM}}
46 \DeclareOption{LZZ} {\renewcommand*\degreecourse{LZZ}}
47 \DeclareOption{MCS} {\renewcommand*\degreecourse{MCS}}
48 \DeclareOption{MDS} {\renewcommand*\degreecourse{MDS}}
49 \DeclareOption{MEE} {\renewcommand*\degreecourse{MEE}}
50 \DeclareOption{MES} {\renewcommand*\degreecourse{MES}}
51 \DeclareOption{MGR} {\renewcommand*\degreecourse{MGR}}
52 \DeclareOption{MGS} {\renewcommand*\degreecourse{MGS}}
53 \DeclareOption{MIW} {\renewcommand*\degreecourse{MIW}}
54 \DeclareOption{MLE} {\renewcommand*\degreecourse{MLE}}
55 \DeclareOption{MMB} {\renewcommand*\degreecourse{MMB}}
56 \DeclareOption{MME} {\renewcommand*\degreecourse{MME}}
57 \DeclareOption{MMR} {\renewcommand*\degreecourse{MMR}}
58 \DeclareOption{MSC} {\renewcommand*\degreecourse{MSC}}
59 \DeclareOption{MSE} {\renewcommand*\degreecourse{MSE}}
60 \DeclareOption{MST} {\renewcommand*\degreecourse{MST}}
61 \DeclareOption{MTE} {\renewcommand*\degreecourse{MTE}}
62 \DeclareOption{MTI} {\renewcommand*\degreecourse{MTI}}
63 \DeclareOption{MTM} {\renewcommand*\degreecourse{MTM}}
64 \DeclareOption{MUT} {\renewcommand*\degreecourse{MUT}}
65 \DeclareOption{MWI} {\renewcommand*\degreecourse{MWI}}

```

```

66
67 \newcommand{\doctype} {}
68 \newcommand{\doctypeprint} {}
69 \DeclareOption{Bachelor} {\renewcommand*{\doctype} {BACHELARBEIT}}
70 \DeclareOption{Master} {\renewcommand*{\doctype} {MASTERARBEIT}}
71 \DeclareOption{Seminar} {\renewcommand*{\doctype} {SEMINARBEIT}}
72 \DeclareOption{Project} {\renewcommand*{\doctype} {PROJEKTREPORT}}
73 \DeclareOption{Internship} {\renewcommand*{\doctype} {PRACTICE REPORT}}
74 \DeclareOption{Laboratory} {\renewcommand*{\doctype} {LABORPRÜFUNG}}
75
76 \newcommand{\cover} {PICS/TW}
77

```

The KOMA class scrbook is used as the basis for the class. The font size is 11pt. Printing is done on one side of A4 paper, where the page margins are automatically adjusted to the FH specifications.

The following additional packages are automatically loaded with the twbook class and therefore do not need to be called again by the user:

scrhack: Check compatibility of some packages with the class

color, xcolor: provide colors for text and stroke-based graphics

xifthen: allows the input-specific processing of the user's input.

ifpdf: Allows to query whether the document is compiled with pdf_latex or latex. This can be used to adapt some settings for certain packages

wallpaper: Allows the simple inclusion of background images

palatino: Defines new standard fonts, fir roman: palatino, fir sserif: helvet, fir ttypter: courier

scrpage2: allows customization of the page layout

acronym: allows automated creation and management of an abkir-directory. Attention: the package has incompatibilities with the glossary package.

amsmath, amssymb, amsfonts, amstext: loading mathematical fonts and symbols

babel: advanced language adaptation for optimizing hyphenation, leading characters, etc.

array: Advanced options for customization in tables

hyperref: is automatically selected depending on compilation with pdf_latex or latex-dvips. Allows easy creation and management of hyperlinks in the document

graphicx: is automatically selected depending on the compilation with pdflatex or latex-dvips. Allows the inclusion and adaptation of externally available graphics.

iftex: To distinguish the TeX engine used. ifdraft: To distinguish whether a draft is created.

tikz-external: To distinguish whether the current LATEX run is the main document.

caption: This package is used to adjust the signatures of figures, tables and other objects.

Attention. If additional packages are loaded, the user may have to adjust the hypersetup afterwards.

Attention! Do not define macros with a single letter as namef Self-created macros should have at least three characters as namef

The loading of the basic document class and the required add-on packages is done after the initialization of the class iber

```
78 \Processoptions\relax
79
80 \LoadClass[a4paper, fontsize=11pt, twoside=false, %
81 headings=normal, toc=listof, listof=entryprefix, %
82 listof=nochaptergap, bibliography=totoc, %
83 numbers=noendperiod] {scrbook}
84 \RequirePackage{scrhack}
85 \RequirePackage{color, xcolor}
86 \RequirePackage{xifthen}
87 \RequirePackage{ifpdf}
88 \RequirePackage{ifdraft}
89 \RequirePackage{wallpaper}
90 \RequirePackage{palatino}
91 \RequirePackage{scrfile}
92 \ReplacePackage{scrpage2} {scrlayer-scrpage}
93 \RequirePackage{scrlayer-scrpage}
94 \RequirePackage{acronym}
95 \RequirePackage{amsmath, amssymb, amsfonts, amstext}
96 \RequirePackage[\language] {babel}
97 \Ifstr{language} {ngerman}
98 {%
99 %ngerman
100 %change \language to german to translate everything else; babel's already loaded
101 \renewcommand*{\language} {german}
102 }%
103 {%
104 %german & english
105 %Do nothing; everything's fine
106 }%
107 \RequirePackage{array}
108 \RequirePackage{tikz}
```

```

109 \usetikzlibrary{external}
110 \RequirePackage{caption}
111 \DeclareCaptionLabelSeparator{periodcolon}{.:}
112 \captionsetup{labelsep=colon}
113 \renewcommand*{\figureformat}{\figurename~\thefigure}
114 \renewcommand*{\tableformat}{\tablename~\thetable}

```

Additionally, a distinction is made which TEX engine is used. Here, further specific packages can be integrated and adjustments can be made.

```

115 \RequirePackage{iftex}
116 % Choose package options according to the TeX-engine
117 \ifPDFTeX
118 % PDFLaTeX
119 \ifpdf
120 \RequirePackage[pdftex]{hyperref}
121 \RequirePackage{graphicx}
122 \else
123 \RequirePackage[dvips]{hyperref}
124 \RequirePackage[dvips]{graphicx}
125 \fi
126 \else
127 \ifXeTeX
128 % XeTeX
129 \RequirePackage{hyperref}
130 \RequirePackage{graphicx}
131 \else
132 \ifLuaTeX
133 % LuaTeX
134 \RequirePackage{hyperref}
135 \RequirePackage{graphicx}
136 \else
137 % Some obscure engine!
138 \ClassError{twbook}{%
139 The TeX engine you are using is not supported!\MessageBreak%.
140 Try a different Engine!\Messagebreak%
141 Maybe PDFTeX, XeTeX or LuaTeX!
142 }{%
143 Something is wrong with the Tex-Engine you are using.\MessageBreak%.
144 We don't support that one}
145 \fi
146 \fi
147 \fi
148 \RequirePackage{bookmark}
149

```

The following source code creates a file with the extension .refs. In this file the different references are listed according to the following pattern: Name of the label, page number of the reference, page number of the label, ... This makes it possible to check references for their presence. However, since this source code undercuts the linking of references, this section is commented out.

```

150 %\newwrite\refs%

```

```

151 %\openout\refs=\jobname.refs%
152 %\renewcommand\@setref[3] {%
153 %   \ifx#1\relax
154 %     \write\refs{'#3' \thepage\space undefined}%
155 %     \protect \G@refundefinedtrue
156 %     \nfss@text{\reset@font\bfseries ??}%
157 %     \@latex@warning{Reference '#3' on page
158 %       \thepage\space
159 %       undefined}%
160 %   \else
161 %     \write\refs{'#3' \thepage\space
162 %       \expandafter\@secondoftwo#1}%
163 %     \expandafter#2#1\null
164 %   \fi

```

An error message from Babel must be redefined to avoid confusion among users. To avoid error messages in the TEXLive distribution, the command must also be defined.

```

165 \providecommand*\@noopterr}[1] {}
166 \renewcommand*\@noopterr}[1] {%
167   \PackageWarning{babel}%
168   {You haven't loaded the option #1\space yet.\MessageBreak%.
169   Rerun to set the right option.\MessageBreak%.
170   You have not currently loaded the \square option #1\space.\MessageBreak%.
171   Compile again to set the correct \square option}}
172

```

Please note that only the specified language (default English) is supported.

4 The basic layout

For further use in the document, the two basic colors of the FH Technikum Wien are defined. These colors are available to every user in the documents.

```

173 \definecolor{TWgreen}{RGB}{140,177,16}
174 \definecolor{TWblue}{RGB}{0,101,156}
175 \definecolor{TWgray}{RGB}{113,120,125}
176

```

The definition of the colors for the internal links (black), the quoted sources (black), referenced files (black) and urls (TW-blue) as well as their borders will be defined below for the final pdf document. Here you the corresponding settings are set with `hypersetup`. Finally, the font for the left is set to sans serif fonts.

```

177 \hypersetup{colorlinks=true, linkcolor=black, linkbordercolor=white,%
178 citecolor=black, citebordercolor=white,%
179 filecolor=black, filebordercolor=white,%
180 urlcolor=TWblue, urlbordercolor=white}
181 \urlstyle{sf}
182

```

The page layout is adapted so that the header in the document is completely removed and the current page number is output on the right in the footer. The font of the page number is also changed from a serial font to a sans-serif font. This is done with

```

183 \addtocounter{tocdepth}{0}
184 \addtokomafont{pagenumber}{\sffamily}
185 \pagestyle{scrheadings}
186 \clearmainofpairofpagestyles
187 \ihead[]{}
188 \chead[]{}
189 \ohead[]{}
190 \ifoot[]{}
191 \cfoot[]{}
192 \foot[\footnotesize\pagemark]{\footnotesize\pagemark}
193 \renewcommand*{\chapterpagestyle}{plain}
194

```

achieved.

The payers should not start again with 1 after the beginning of new chapters, therefore

```

195 \@removefromreset{figure}{chapter}
196 \@removefromreset{table}{chapter}
197 \@removefromreset{equation}{chapter}
198

```

Equations are numbered in Arabic. The chapter-wise numbering of equations, which is usual in the book class, is excluded. Font and Gri:e of numbering and labels of figures and tables are adjusted. By using the protect command, the draft mode of the class can also be used without problems. Since the numbering is set one font size smaller than the text, this change must be reversed after setting the number. These adjustments are made in the document using

```

199 \renewcommand*{\theequation}{\protect\small\arabic{equation}\protect\normalsize}
200 \renewcommand*{\thefigure}{\protect\small\arabic{figure}\protect\normalsize}
201 \renewcommand*{\thetable}{\protect\small\arabic{table}\protect\normalsize}
202 \setkomafont{caption}{\protect\small}
203 \setkomafont{captionlabel}{\protect\small}
204

```

achieved.

In the tables, a \diamond us at \diamond ual distance \diamond around the top of the line is introduced. The required \extrarowheight command is defined in the array package:

```

205 \renewcommand*{\extrarowheight}{3pt}

```

Finally, the text height, the text width, the height of the line header (to avoid warnings) and the line spacing (the given vert of 1.2 allows for 1.5 times the line spacing) are defined. To reduce varnishing of overfull and underfull boxes, the following is defined with

\sloppy\tolerance=10000 a freer strain parameter is allowed:

```

206 \addtolength{\textheight}{5\baselineskip}

```

```

207 \addtolength{\textwidth}{38pt}
208 \setlength{\headheight}{1.3\baselineskip}
209 \renewcommand*{\baselinestretch}{1.21% \changes{v0.3}{2013/03/24}{Dokumentation
210 }
211 \sloppy\tolerance=10000
212

```

The page layout differs slightly between the individual templates. The settings of the page margins and formatting of the headings are done by means of the

```

213 \Ifstr{\doctype}{}
214 {
215   \addtolength{\oddsidemargin}{-33pt}
216   \addtolength{\evensidemargin}{-33pt}
217   \setkomafont{chapter}{\color{TWblue}\mdseries\Huge}
218   \setkomafont{section}{\color{TWblue}\mdseries\huge}
219   \setkomafont{subsection}{\color{TWblue}\mdseries\Large}
220   \setkomafont{subsubsection}{\bfseries\normalsize}}
221 {
222   \addtolength{\oddsidemargin}{-19pt}
223   \addtolength{\evensidemargin}{-19pt}
224   \setkomafont{chapter}{\mdseries\huge}
225   \setkomafont{section}{\mdseries\LARGE}
226   \setkomafont{subsection}{\mdseries\large}
227   \setkomafont{subsubsection}{\bfseries\normalsize}}
228

```

In the KOMA Book class, chapters each start on a new page. This is switched off in the current template. The responsibility for any formatting of new chapters thus lies with the authors of the texts. Switching off page breaks at the beginning of a chapter is done with

```

229 \renewcommand*\chapter{\par\global\@topnum\z@\afterindentfalse%
230 \secdef\@chapter}
231

```

achieved.

5 Options

In general, if an invalid parameter is passed when compiling the file, the following applies

LaTeX Warning: Unused global option(s): <wrong option> is
output in the log file.

\Language The language is the first optional argument that can be passed. You can choose between German (define by German) and English (define by English). The German language is set by default and does not have to be specified explicitly. For English-language documents, the language must be specified, otherwise the correct version of the babel package will not be loaded.

\This command is used to select the selected program. The definition of the program selection command is set to TV (general template) by default and is overwritten when a program is transferred. The programs can be selected using the three-letter¹ abbreviation of the selected program. (Note - in the following list there are still comments which are needed for the alpha test. These will be deleted in the final version).

TW (default): neutral blue cover of the Technikum Wien gOK

BBE: Bachelor Biomedical Engineering (Biomedizinisches Ingenieurwesen) gOK

BEE: Bachelor Urban Renewable Energy Technologies

gOK BEL: Bachelor Electronics gOK

BEW: Bachelor electronics/economy gOK

BIC: Bachelor Information and Communication Systems gOK

BIF: Bachelor Computer Science gOK

BIW: Bachelor International Virtual Engineering gOK BMR:

Bachelor Mechatronics/Robotics gOK

BMB: Bachelor mechanical engineering gOK

BSA: Bachelor Smart Homes and Assistive Technologies gOK

BST: Bachelor Sports Equipment technology gOK BVU: Bachelor Transport and Environment gOK

BWI: Bachelor of Business Informatics

MBE: Master Biomedical Engineering Sciences gOK only

MEE: Master Renewable Urban Energy Systems gOK MES:

Master Embedded Systems gOK only

MGR: Master Health and Rehabilitation Engineering gOK

MGS: Master Game Engineering and Simulation gOK

MCS: Master Information Management and Computer Security gOK

MIE: Master Industrial Electronics gOK

MIT: Master Intelligent Transport Systems gOk only

MIW: Master International Virtual Engineering gOK

¹ The only exception to the three-letter rule is the general template

MMR: Master Mechatronics/Robotics gOK

MSE: Master Software Development gOK

MST: Master Sports Equipment Technology gOK only

MTE: Master Tissue Engineering and Regenerative Medicine gOK

only MTI: Master Telecommunications and Internet Technologies
gOK


MTM: Master Innovation and Technology Management gOK


MTU: Master Technical Environmental Management and Okotoxicology
gOK MWI: Master Wirtschaftsinformatik gOK

The initialization of the options for the individual courses is done by means of the

\Document type The document type determines the design of the cover page and the introduction of a possibly defined preamble (affidavit, summary and keywords in German and English, acknowledgement and table of contents). The initialization of the option is done by means of
The following options are available for

t h e preparation of a bachelor's thesis

Master  u r preparation of a master thesis

Seminar  u r preparation of a seminar
thesis

Project  u r preparation of a project report

Internship  u r preparation of an internship report or



Laboratory  u r preparation of a laboratory protocol.

Table 1 summarizes which scientific work is given which title. X means that this part of the title is set unconditionally. P means that this part of the title is set depending on the language (project report in German ==> only an abstract).

Table 1: Titles in dependence of the scientific work

	Bachelor	Master	Seminar	Project	Internship	Laboratory
Affidavit Declaration	X	X				
Kur  fassung	X	X	X	P		

Abstract	X	X	X	P		
Acknowledgement	X	X				

If the English language is selected, \doctype is also switched to English:

```

232 \Ifstr{\sprache} {english} {%
233   \Ifstr{\doctype} {BACHELORARBEIT} {%
234     \renewcommand*{\doctype} {BACHELORTHESIS} {}
235   \Ifstr{\doctype} {MASTER WORK} {%
236     \renewcommand*{\doctype} {MASTERTHESIS} {}
237   \Ifstr{\doctype} {SEMINARBEIT} {%
238     \renewcommand*{\doctype} {SEMINAR PAPER} {}
239   \Ifstr{\doctype} {PROJEKT REPORT} {%
240     \renewcommand*{\doctype} {PROJEKT REPORT} {}
241   \Ifstr{\doctype} {PRAKTIKUMSBERICHT} {%
242     \renewcommand*{\doctype} {INTERNSHIP REPORT} {}
243   \Ifstr{\doctype} {Laboratory report} {%
244     \renewcommand*{\doctype} {LABORATORY REPORT} {}
245
246   \renewcommand*{\doctypeprint} {\doctype}
247   \Ifstr{\doctypeprint} {MASTERTHESIS} {%
248     \renewcommand*{\doctypeprint} {MASTER THESIS} {}
249   \Ifstr{\doctypeprint} {BACHELORTHESIS} {%
250     \renewcommand*{\doctypeprint} {BACHELOR PAPER} {}
251

```

\This option cannot be changed by the user. The choice of the background of the cover page is made automatically according to the choice of the study program and the set language².

Attention! If a document type (Master, Bachelor, Seminar, Project, Internship, Lab) is specified, \cover is automatically overwritten with the corresponding neutral background. Therefore, in case of assigning the document type, the specification of a study program will be ignored. The assignment of the background image is done using

```

252 \Ifstr{\sprache} {german} {%
253   \Ifstr{\degreecourse} {BBE} {\renewcommand*{\cover} {PICs/BBE}%
254   \renewcommand*{\degreecourse} {Biomedical Engineering} {}
255   \Ifstr{\degreecourse} {BEE} {\renewcommand*{\cover} {PICs/BEE}%
256   \renewcommand*{\degreecourse} {Urban Renewable Energy Technologies} {}
257   \Ifstr{\degreecourse} {BEL} {\renewcommand*{\cover} {PICs/BEL}%
258   \renewcommand*{\degreecourse} {electronics} {}
259   \Ifstr{\degreecourse} {BEW} {\renewcommand*{\cover} {PICs/BEW}%
260   \renewcommand*{\degreecourse} {electronics/economics} {}
261   \Ifstr{\degreecourse} {BHF} {\renewcommand*{\cover} {PICs/BHF}%
262   \renewcommand*{\degreecourse} {Human Factors and Sports Engineering} {}
263   \Ifstr{\degreecourse} {BIC} {\renewcommand*{\cover} {PICs/BIC}%
264   \renewcommand*{\degreecourse} {Information and Communication Systems} {}
265   \Ifstr{\degreecourse} {BIF} {\renewcommand*{\cover} {PICs/BIF}%
266   \renewcommand*{\degreecourse} {Computer Science} {}
267   \Ifstr{\degreecourse} {BIW} {\renewcommand*{\cover} {PICs/BIW}%
268   \renewcommand*{\degreecourse} {International Industrial Engineering} {}
269   \Ifstr{\degreecourse} {BMB} {\renewcommand*{\cover} {PICs/BMB}%
270   \renewcommand*{\degreecourse} {engineering} {}

```

² Not all degree programs allow a cover sheet in both languages.

```

271 \Ifstr{\degreecourse} {BMR} {\renewcommand*{\cover} {PICs/BMR}%
272 \renewcommand*{\degreecourse} {mechatronics/robotics}} {}
273 \Ifstr{\degreecourse} {BSA} {\renewcommand*{\cover} {PICs/BSA}%
274 \renewcommand*{\degreecourse} {Smart Homes and Assistive Technologies}} {}
275 \Ifstr{\degreecourse} {BWI} {\renewcommand*{\cover} {PICs/BWI}%
276 \renewcommand*{\degreecourse} {business informatics}} {}
277 \Ifstr{\degreecourse} {LAA} {\renewcommand*{\cover} {PICs/LAA}%
278 \renewcommand*{\institution} {Academy}%
279 \renewcommand*{\degreecourse} {Software Quality Assurance Management}} {}
280 \Ifstr{\degreecourse} {LAM} {\renewcommand*{\cover} {PICs/LAM}%
281 \renewcommand*{\institution} {Academy}%
282 \renewcommand*{\degreecourse} {Software Quality Assurance Management}} {}
283 \Ifstr{\degreecourse} {LAZ} {\renewcommand*{\cover} {PICs/LAZ}%
284 \renewcommand*{\institution} {Academy}%
285 \renewcommand*{\degreecourse} {Software Quality Assurance Management}} {}
286 \Ifstr{\degreecourse} {LBA} {\renewcommand*{\cover} {PICs/LBA}%
287 \renewcommand*{\institution} {Academy}%
288 \renewcommand*{\degreecourse} {Business Development and Transformation}} {}
289 \Ifstr{\degreecourse} {LBD} {\renewcommand*{\cover} {PICs/LBD}%
290 \renewcommand*{\institution} {Academy}%
291 \renewcommand*{\degreecourse} {Business Development and Transformation}} {}
292 \Ifstr{\degreecourse} {LBM} {\renewcommand*{\cover} {PICs/LBM}%
293 \renewcommand*{\institution} {Academy}%
294 \renewcommand*{\degreecourse} {Business Development and Transformation}} {}
295 \Ifstr{\degreecourse} {LDA} {\renewcommand*{\cover} {PICs/LDA}%
296 \renewcommand*{\institution} {Academy}%
297 \renewcommand*{\degreecourse} {Digital Business}} {}
298 \Ifstr{\degreecourse} {LDZ} {\renewcommand*{\cover} {PICs/LDZ}%
299 \renewcommand*{\institution} {Academy}%
300 \renewcommand*{\degreecourse} {Digital Business}} {}
301 \Ifstr{\degreecourse} {LMD} {\renewcommand*{\cover} {PICs/LMD}%
302 \renewcommand*{\institution} {Academy}%
303 \renewcommand*{\degreecourse} {Digital Business}} {}
304 \Ifstr{\degreecourse} {LPA} {\renewcommand*{\cover} {PICs/LPA}%
305 \renewcommand*{\institution} {Academy}%
306 \renewcommand*{\degreecourse} {App-Development}} {}
307 \Ifstr{\degreecourse} {LPC} {\renewcommand*{\cover} {PICs/LPC}%
308 \renewcommand*{\institution} {Academy}%
309 \renewcommand*{\degreecourse} {Pre College Program}} {}
310 \Ifstr{\degreecourse} {LPE} {\renewcommand*{\cover} {PICs/LPE}%
311 \renewcommand*{\institution} {Academy}%
312 \renewcommand*{\degreecourse} {Pre College Program Extended}} {}
313 \Ifstr{\degreecourse} {LPJ} {\renewcommand*{\cover} {PICs/LPJ}%
314 \renewcommand*{\institution} {Academy}%
315 \renewcommand*{\degreecourse} {project and process management}} {}
316 \Ifstr{\degreecourse} {LPM} {\renewcommand*{\cover} {PICs/LPM}%
317 \renewcommand*{\institution} {Academy}%
318 \renewcommand*{\degreecourse} {project and process management}} {}
319 \Ifstr{\degreecourse} {LPP} {\renewcommand*{\cover} {PICs/LPP}%
320 \renewcommand*{\institution} {Academy}%
321 \renewcommand*{\degreecourse} {project and process management}} {}
322 \Ifstr{\degreecourse} {LPW} {\renewcommand*{\cover} {PICs/LPW}%
323 \renewcommand*{\institution} {Academy}%

```

```

324 \renewcommand*{\degreecourse}{Web-Development}}{}
325 \Ifstr{\degreecourse}{LRA}{\renewcommand*{\cover}{PICs/LRA}%
326 \renewcommand*{\institution}{Academy}%
327 \renewcommand*{\degreecourse}{Rolling Stock Engineering}}{}
328 \Ifstr{\degreecourse}{LRM}{\renewcommand*{\cover}{PICs/LRM}%
329 \renewcommand*{\institution}{Academy}%
330 \renewcommand*{\degreecourse}{Rolling Stock Engineering}}{}
331 \Ifstr{\degreecourse}{LRZ}{\renewcommand*{\cover}{PICs/LRZ}%
332 \renewcommand*{\institution}{Academy}%
333 \renewcommand*{\degreecourse}{Rolling Stock Engineering}}{}
334 \Ifstr{\degreecourse}{LUE}{\renewcommand*{\cover}{PICs/LUE}%
335 \renewcommand*{\institution}{Academy}%
336 \renewcommand*{\degreecourse}{User Experience Management}}{}
337 \Ifstr{\degreecourse}{LUM}{\renewcommand*{\cover}{PICs/LUM}%
338 \renewcommand*{\institution}{Academy}%
339 \renewcommand*{\degreecourse}{User Experience Management}}{}
340 \Ifstr{\degreecourse}{LUX}{\renewcommand*{\cover}{PICs/LUX}%
341 \renewcommand*{\institution}{Academy}%
342 \renewcommand*{\degreecourse}{User Experience Management}}{}
343 \Ifstr{\degreecourse}{LZA}{\renewcommand*{\cover}{PICs/LZA}%
344 \renewcommand*{\institution}{Academy}%
345 \renewcommand*{\degreecourse}{Engineering Management}}{}
346 \Ifstr{\degreecourse}{LZM}{\renewcommand*{\cover}{PICs/LZM}%
347 \renewcommand*{\institution}{Academy}%
348 \renewcommand*{\degreecourse}{Engineering Management}}{}
349 \Ifstr{\degreecourse}{LZZ}{\renewcommand*{\cover}{PICs/LZZ}%
350 \renewcommand*{\institution}{Academy}%
351 \renewcommand*{\degreecourse}{Engineering Management}}{}
352 \Ifstr{\degreecourse}{MCS}{\renewcommand*{\cover}{PICs/MCS}%
353 \renewcommand*{\degreecourse}{IT-Security}}{}
354 \Ifstr{\degreecourse}{MDS}{\renewcommand*{\cover}{PICs/MDS}%
355 \renewcommand*{\degreecourse}{Data Science}}{}
356 \Ifstr{\degreecourse}{MEE}{\renewcommand*{\cover}{PICs/MEE}%
357 \renewcommand*{\degreecourse}{Renewable Urban Energy Systems}}{}
358 \Ifstr{\degreecourse}{MES}{\renewcommand*{\cover}{PICs/MES}%
359 \renewcommand*{\degreecourse}{Embedded Systems}}{}
360 \Ifstr{\degreecourse}{MGR}{\renewcommand*{\cover}{PICs/MGR}%
361 \renewcommand*{\degreecourse}{Health and Rehabilitation Engineering}}{}
362 \Ifstr{\degreecourse}{MGS}{\renewcommand*{\cover}{PICs/MGS}%
363 \renewcommand*{\degreecourse}{Game Engineering and Simulation}}{}
364 \Ifstr{\degreecourse}{MIW}{\renewcommand*{\cover}{PICs/MIW}%
365 \renewcommand*{\degreecourse}{International Industrial Engineering}}{}
366 \Ifstr{\degreecourse}{MLE}{\renewcommand*{\cover}{PICs/MLE}%
367 \renewcommand*{\degreecourse}{power electronics}}{}
368 \Ifstr{\degreecourse}{MMB}{\renewcommand*{\cover}{PICs/MMB}%
369 \renewcommand*{\degreecourse}{engineering}}{}
370 \Ifstr{\degreecourse}{MME}{\renewcommand*{\cover}{PICs/MME}%
371 \renewcommand*{\degreecourse}{Medical Engineering \& eHealth}}{}
372 \Ifstr{\degreecourse}{MMR}{\renewcommand*{\cover}{PICs/MMR}%
373 \renewcommand*{\degreecourse}{mechatronics/robotics}}{}
374 \Ifstr{\degreecourse}{MSC}{\renewcommand*{\cover}{PICs/MSC}%
375 \renewcommand*{\degreecourse}{Integrative Urban Development - Smart City}}{}
376 \Ifstr{\degreecourse}{MSE}{\renewcommand*{\cover}{PICs/MSE}%

```

```

377 \renewcommand*{\degreecourse} {Software Engineering} {}
378 \Ifstr{\degreecourse} {MST} {\renewcommand*{\cover} {PICs/MST}%
379 \renewcommand*{\degreecourse} {Sports Technology} {}
380 \Ifstr{\degreecourse} {MTE} {\renewcommand*{\cover} {PICs/MTE}%
381 \renewcommand*{\degreecourse} {Tissue Engineering and Regenerative Medicine} {}
382 \Ifstr{\degreecourse} {MTI} {\renewcommand*{\cover} {PICs/MTI}%
383 \renewcommand*{\degreecourse} {telecommunications and internet technologies} {}
384 \Ifstr{\degreecourse} {MTM} {\renewcommand*{\cover} {PICs/MTM}%
385 \renewcommand*{\degreecourse} {innovation and technology management} {}
386 \Ifstr{\degreecourse} {MUT} {\renewcommand*{\cover} {PICs/MUT}%
387 \renewcommand*{\degreecourse} {Technical Environmental Management and
    {\text{cotoxicology}}
388 \Ifstr{\degreecourse} {MWI} {\renewcommand*{\cover} {PICs/MWI}%
389 \renewcommand*{\degreecourse} {business informatics} {}
390 } {}
391
392 \Ifstr{\sprache} {english} {}
393 \Ifstr{\degreecourse} {BBE} {\renewcommand*{\cover} {PICs/BBE}%
394 \renewcommand*{\degreecourse} {Biomedical Engineering} {}
395 \Ifstr{\degreecourse} {BEE} {\renewcommand*{\cover} {PICs/BEE}%
396 \renewcommand*{\degreecourse} {Renewable Energies} {} {}
397 \Ifstr{\degreecourse} {BEL} {\renewcommand*{\cover} {PICs/BEL}%
398 \renewcommand*{\degreecourse} {Electronic Engineering} {}
399 \Ifstr{\degreecourse} {BEW} {\renewcommand*{\cover} {PICs/BEW}%
400 \renewcommand*{\degreecourse} {Electronics and business} {}
401 \Ifstr{\degreecourse} {BHF} {\renewcommand*{\cover} {PICs/BHF}%
402 \renewcommand*{\degreecourse} {Human Factors and Sports Engineering} {} {}
403 \Ifstr{\degreecourse} {BIC} {\renewcommand*{\cover} {PICs/BIC}%
404 \renewcommand*{\degreecourse} {Information and Communication Systems and Services} {}
405 \Ifstr{\degreecourse} {BIF} {\renewcommand*{\cover} {PICs/BIF}%
406 \renewcommand*{\degreecourse} {Computer Science} {}
407 \Ifstr{\degreecourse} {BIW} {\renewcommand*{\cover} {PICs/BIW}%
408 \renewcommand*{\degreecourse} {International Business and Engineering} {}
409 \Ifstr{\degreecourse} {BMB} {\renewcommand*{\cover} {PICs/BMB}%
410 \renewcommand*{\degreecourse} {Mechanical Engineering} {}
411 \Ifstr{\degreecourse} {BMR} {\renewcommand*{\cover} {PICs/BMR}%
412 \renewcommand*{\degreecourse} {Mechatronics/Robotics} {} {}
413 \Ifstr{\degreecourse} {BSA} {\renewcommand*{\cover} {PICs/BSA}%
414 \renewcommand*{\degreecourse} {Smart Homes and Assistive Technologies} {} {}
415 \Ifstr{\degreecourse} {BWI} {\renewcommand*{\cover} {PICs/BWI}%
416 \renewcommand*{\degreecourse} {Business Informatics} {} {}
417 \Ifstr{\degreecourse} {LAA} {\renewcommand*{\cover} {PICs/LAA}%
418 \renewcommand*{\institution} {Academy}%
419 \renewcommand*{\degreecourse} {Software Quality Assurance Management} {} {}
420 \Ifstr{\degreecourse} {LAM} {\renewcommand*{\cover} {PICs/LAM}%
421 \renewcommand*{\institution} {Academy}%
422 \renewcommand*{\degreecourse} {Software Quality Assurance Management} {} {}
423 \Ifstr{\degreecourse} {LAZ} {\renewcommand*{\cover} {PICs/LAZ}%
424 \renewcommand*{\institution} {Academy}%
425 \renewcommand*{\degreecourse} {Software Quality Assurance Management} {} {}
426 \Ifstr{\degreecourse} {LBA} {\renewcommand*{\cover} {PICs/LBA}%
427 \renewcommand*{\institution} {Academy}%
428 \renewcommand*{\degreecourse} {Business Development and Transformation} {} {}
429 \Ifstr{\degreecourse} {LBD} {\renewcommand*{\cover} {PICs/LBD}%

```

```

430 \renewcommand*{\institution} {Academy}%
431 \renewcommand*{\degreecourse} {Business Development and Transformation}} {}
432 \Ifstr{\degreecourse} {LBM} {\renewcommand*{\cover} {PICs/LBM}%
433 \renewcommand*{\institution} {Academy}%
434 \renewcommand*{\degreecourse} {Business Development and Transformation}} {}
435 \Ifstr{\degreecourse} {LDA} {\renewcommand*{\cover} {PICs/LDA}%
436 \renewcommand*{\institution} {Academy}%
437 \renewcommand*{\degreecourse} {Digital Business} {}
438 \Ifstr{\degreecourse} {LDZ} {\renewcommand*{\cover} {PICs/LDZ}%
439 \renewcommand*{\institution} {Academy}%
440 \renewcommand*{\degreecourse} {Digital Business} {}
441 \Ifstr{\degreecourse} {LMD} {\renewcommand*{\cover} {PICs/LMD}%
442 \renewcommand*{\institution} {Academy}%
443 \renewcommand*{\degreecourse} {Digital Business} {}
444 \Ifstr{\degreecourse} {LPA} {\renewcommand*{\cover} {PICs/LPA}%
445 \renewcommand*{\institution} {Academy}%
446 \renewcommand*{\degreecourse} {App-Development}} {}
447 \Ifstr{\degreecourse} {LPC} {\renewcommand*{\cover} {PICs/LPC}%
448 \renewcommand*{\institution} {Academy}%
449 \renewcommand*{\degreecourse} {Pre College Program} {}
450 \Ifstr{\degreecourse} {LPE} {\renewcommand*{\cover} {PICs/LPE}%
451 \renewcommand*{\institution} {Academy}%
452 \renewcommand*{\degreecourse} {Pre College Program Extended}} {}
453 \Ifstr{\degreecourse} {LPJ} {\renewcommand*{\cover} {PICs/LPJ}%
454 \renewcommand*{\institution} {Academy}%
455 \renewcommand*{\degreecourse} {project and process management} {}
456 \Ifstr{\degreecourse} {LPM} {\renewcommand*{\cover} {PICs/LPM}%
457 \renewcommand*{\institution} {Academy}%
458 \renewcommand*{\degreecourse} {project and process management} {}
459 \Ifstr{\degreecourse} {LPP} {\renewcommand*{\cover} {PICs/LPP}%
460 \renewcommand*{\institution} {Academy}%
461 \renewcommand*{\degreecourse} {project and process management} {}
462 \Ifstr{\degreecourse} {LPW} {\renewcommand*{\cover} {PICs/LPW}%
463 \renewcommand*{\institution} {Academy}%
464 \renewcommand*{\degreecourse} {Web-Development}} {}
465 \Ifstr{\degreecourse} {LRA} {\renewcommand*{\cover} {PICs/LRA}%
466 \renewcommand*{\institution} {Academy}%
467 \renewcommand*{\degreecourse} {Rolling Stock Engineering} {}
468 \Ifstr{\degreecourse} {LRM} {\renewcommand*{\cover} {PICs/LRM}%
469 \renewcommand*{\institution} {Academy}%
470 \renewcommand*{\degreecourse} {Rolling Stock Engineering} {}
471 \Ifstr{\degreecourse} {LRZ} {\renewcommand*{\cover} {PICs/LRZ}%
472 \renewcommand*{\institution} {Academy}%
473 \renewcommand*{\degreecourse} {Rolling Stock Engineering} {}
474 \Ifstr{\degreecourse} {LUE} {\renewcommand*{\cover} {PICs/LUE}%
475 \renewcommand*{\institution} {Academy}%
476 \renewcommand*{\degreecourse} {User Experience Management} {}
477 \Ifstr{\degreecourse} {LUM} {\renewcommand*{\cover} {PICs/LUM}%
478 \renewcommand*{\institution} {Academy}%
479 \renewcommand*{\degreecourse} {User Experience Management} {}
480 \Ifstr{\degreecourse} {LUX} {\renewcommand*{\cover} {PICs/LUX}%
481 \renewcommand*{\institution} {Academy}%
482 \renewcommand*{\degreecourse} {User Experience Management} {}

```

```

483 \Ifstr{\degreecourse} {LZA} {\renewcommand*{\cover} {PICs/LZA}%
484 \renewcommand*{\institution} {Academy}%
485 \renewcommand*{\degreecourse} {Engineering Management} {}
486 \Ifstr{\degreecourse} {LZM} {\renewcommand*{\cover} {PICs/LZM}%
487 \renewcommand*{\institution} {Academy}%
488 \renewcommand*{\degreecourse} {Engineering Management} {}
489 \Ifstr{\degreecourse} {LZZ} {\renewcommand*{\cover} {PICs/LZZ}%
490 \renewcommand*{\institution} {Academy}%
491 \renewcommand*{\degreecourse} {Engineering Management} {}
492 \Ifstr{\degreecourse} {MCS} {\renewcommand*{\cover} {PICs/MCS}%
493 \renewcommand*{\degreecourse} {IT-Security} {} {}
494 \Ifstr{\degreecourse} {MDS} {\renewcommand*{\cover} {PICs/MDS}%
495 \renewcommand*{\degreecourse} {Data Science} {}
496 \Ifstr{\degreecourse} {MEE} {\renewcommand*{\cover} {PICs/MEE}%
497 \renewcommand*{\degreecourse} {Renewable Energies} {} {}
498 \Ifstr{\degreecourse} {MES} {\renewcommand*{\cover} {PICs/MES}%
499 \renewcommand*{\degreecourse} {Embedded Systems} {}
500 \Ifstr{\degreecourse} {MGR} {\renewcommand*{\cover} {PICs/MGR}%
501 \renewcommand*{\degreecourse} {Healthcare and Rehabilitation Technology} {}
502 \Ifstr{\degreecourse} {MGS} {\renewcommand*{\cover} {PICs/MGS}%
503 \renewcommand*{\degreecourse} {Game Engineering and Simulation Technology} {}
504 \Ifstr{\degreecourse} {MIW} {\renewcommand*{\cover} {PICs/MIW}%
505 \renewcommand*{\degreecourse} {International Business and Engineering} {}
506 \Ifstr{\degreecourse} {MLE} {\renewcommand*{\cover} {PICs/MLE}%
507 \renewcommand*{\degreecourse} {Power Electronics} {}
508 \Ifstr{\degreecourse} {MMB} {\renewcommand*{\cover} {PICs/MMB}%
509 \renewcommand*{\degreecourse} {Mechanical Engineering} {}
510 \Ifstr{\degreecourse} {MME} {\renewcommand*{\cover} {PICs/MME}%
511 \renewcommand*{\degreecourse} {Medical Engineering \& eHealth} {} {}
512 \Ifstr{\degreecourse} {MMR} {\renewcommand*{\cover} {PICs/MMR}%
513 \renewcommand*{\degreecourse} {Mechatronics/Robotics} {} {}
514 \Ifstr{\degreecourse} {MSC} {\renewcommand*{\cover} {PICs/MSC}%
515 \renewcommand*{\degreecourse} {Integrative Urban Development - Smart City} {}
516 \Ifstr{\degreecourse} {MSE} {\renewcommand*{\cover} {PICs/MSE}%
517 \renewcommand*{\degreecourse} {Software Engineering} {}
518 \Ifstr{\degreecourse} {MST} {\renewcommand*{\cover} {PICs/MST}%
519 \renewcommand*{\degreecourse} {Sports Technology} {} {}
520 \Ifstr{\degreecourse} {MTE} {\renewcommand*{\cover} {PICs/MTE}%
521 \renewcommand*{\degreecourse} {Tissue Engineering and Regenerative Medicine} {}
522 \Ifstr{\degreecourse} {MTI} {\renewcommand*{\cover} {PICs/MTI}%
523 \renewcommand*{\degreecourse} {Telecommunications and Internet Technologies} {}
524 \Ifstr{\degreecourse} {MTM} {\renewcommand*{\cover} {PICs/MTM}%
525 \renewcommand*{\degreecourse} {Innovation and Technology Management} {}
526 \Ifstr{\degreecourse} {MUT} {\renewcommand*{\cover} {PICs/MUT}%
527 \renewcommand*{\degreecourse} {Ecotoxicology \& Environmental Management} {} {}
528 \Ifstr{\degreecourse} {MWI} {\renewcommand*{\cover} {PICs/MWI}%
529 \renewcommand*{\degreecourse} {Information Systems Management} {}
530 } {}
531
532 \Ifstr{\doctype} {} {}%
533 \renewcommand*{\cover} {PICs/fhtw_cover.png}%
534 } {\Ifstr{institution} {technical center}%
535 {\renewcommand*{\cover} {PICs/fhtw_cover.png}}}%

```

6 New commands


In order to be able to set the entire preamble of the individual documents, some additional specifications are necessary. Besides well-known layout elements (`\title`, `\extratitle`, `\author`) a number of new commands are provided. In contrast to the optional parameters, which are passed directly to the document class, the following commands are used in the document preamble in the form `\commandl {argument}`.

`\supervisor` This command specifies the supervisor of the thesis. Without an optional argument, the UAS supervisor is listed on the German cover page as "BegutachterIn". The format suggested by the FH corresponds:

`\supervisor{title first name last, title}` fir the form with indented I.

`\supervisor[assessor]{title first name last, title}` fir the masculine form.

`\supervisor[assessor]{title first name last, title}` fir the female form.

`\secondsupervisor` This command specifies a  further supervisor. This is especially necessary in bachelor and master theses, since in these cases there is also a company supervisor. Also in this case, the title can be adapted by specifying an optional parameter, in the case of a German cover page. The format suggested by the FH corresponds:

`\secondsupervisor{title firstname lastname, title}` fir the form with indented I.

`\secondsupervisor[assessor]{title first name last, title}` fir the male form.

`\secondsupervisor[assessor]{title first name last, title}` fir the female form.

`\This` command is used to specify the student's individual matriculation number. The number is to be used without any prefix.

`\place` indicates the place where the work was finalized. This will be Viena in most cases, but may differ when the document is completed outside Viena.

`\Abstract` This command specifies the German abstract of the paper. Paragraph formatting can be used within the closed brackets. The German keywords are listed at the bottom of the German abstract. If no German version is specified, the space on the page remains free and only the German keywords are set. If there is no information about the German abridged version and the German keywords, the page will be omitted from the document.

`\Keywords` This command specifies the German keywords of the paper. The German keywords are listed at the bottom of the page of the German version. If no German keywords are specified, the space on the page remains empty and only the German version is set. If there is no information about the German version and the German keywords, the page will be omitted from the document.

`\outline` This command is used to specify the English abstract of the paper (note: since the command is used elsewhere, the usual abstract is not used here). Paragraph formatting can be used within the closed brackets. The English keywords are listed at the bottom of the page of the English abstract. If no English version is given, the space on the page remains empty and only the English keywords are set. If the English version and the English keywords are missing, the page will be omitted from the document.

`\keywords` This command specifies the English keywords of the paper. The English keywords are listed at the bottom of the page of the English version. If no English keywords are specified, the space on the page remains free and only the English version is set. If the English version and the English keywords are missing, the page will be omitted from the document.

`\acknowledgements` This command is used to specify the acknowledgements for work. Absatz formatting can be used within the closed brackets.

The initialization of the commands is done via

```

537 \newcommand*{\@supervisor} {}
538 \newcommand*{\@supervisordesc} {}
539 \newcommand{\supervisor}[2][ ]{\gdef\@supervisordesc{#1}\gdef\@supervisor{#2}}
540 \newcommand*{\@secondsupervisor} {}
541 \newcommand*{\@secondsupervisordesc} {}
542 \newcommand{\secondsupervisor}[2][ ]{\gdef\@secondsupervisordesc{#1}\gdef\@secondsu
543 \newcommand*{\@studentnumber} {}
544 \newcommand{\studentnumber}[1]{\gdef\@studentnumber{#1}}
545 \newcommand*{\@place} {}
546 \newcommand{\place}[1]{\gdef\@place{#1}}
547 \newcommand*{\@short} {}
548 \newcommand{\abstract}[1]{\gdef\@abstract{#1}}
549 \newcommand*{\@keywords} {}
550 \newcommand{\headwords}[1]{\gdef\@headwords{#1}}
551 \newcommand*{\@outline} {}
552 \newcommand{\outline}[1]{\gdef\@outline{#1}}
553 \newcommand*{\@keywords} {}
554 \newcommand{\keywords}[1]{\gdef\@keywords{#1}}
555 \newcommand*{\@acknowledgements} {}
556 \newcommand{\acknowledgements}[1]{\gdef\@acknowledgements{#1}}

```

In the document, sans serif fonts (Helvetica) are used according to the corporate identity design of the FH Technikum Wien. Dau the normal font is defined as sans serif, and then activated.

```

557
558 \providecommand{\sc}{}
559 \renewcommand{\sc}{\normalfont\scshape}
560 \renewcommand*{\familydefault}{\sfdefault}\selectfont
561 \normalfont\selectfont
562

```


\The command for the title page is completely redefined. In the case of a defined document type and fully occupied commands, the command will generate the cover page, the affidavit, the German abstract including the German keywords, the English abstract including the English keywords, the acknowledgement and the table of contents, i.e. at least 6 pages. An attempt was made to catch as many potential errors as possible. The initialization starts with a redefinition of the old \maketitle command. Likewise, the \and command is redefined. The new definition makes it possible to specify multiple authors and multiple student numbers.

```
563 \renewcommand{\and} {\newline}
564 \renewcommand*\maketitle[1][1] {%
```

The initiation of the title page starts with the definition that no page numbers are used in the preamble of the work to be created:

```
565 \begin{titlepage}
566 \pagestyle{empty}
```

The background image of the cover page is set as a wallpaper with the dimensions of the whole page.

```
567 \tikzifexternalizing{}{%
568   \ThisTileWallPaper{\paperwidth}{\paperheight}{\cover}%
569 }
570
```

In case no \documenttype has been defined (no Bachelor, Master, Seminar Internship or Lab has been specified as an optional parameter), this is a document for a specific study program. This one has a one-page preamble (a cover page only) in contrast to the 5 documents listed above. If one of the 5 papers is selected, the alternative code will be executed accordingly.

First of all, we will query the document type stature

```
571 \ifstr{\doctype}{}
572 {
```

Title and subtitle are set in TV blue font at the bottom of the cover page. Then the font color is changed to TV-blue and the correct position for the heading is selected with a vertical jump.

```
573 \color{TWblue}
574 \null\vspace{125pt}
575   \setcounter{page}{-9}
576
```

Then the title is set in a mini-page environment. Using the minipage environment guarantees that there is no text scrolling along the edges of the document. The minipage is moved horizontally to the correct position. The final vertical space is used to position the extra title correctly.

```
577 \hspace*{-26pt}\begin{minipage}{0.66\linewidth}
578   \huge\sffamily \scalebox{1.75}{\begin{minipage}{\linewidth}\@title\end{minipage}}
579 \end{minipage}\vspace{23pt}
580
```

For the course documents an additional document title can be defined with the command `\extratitle{here the extratitel}`. This will be set in a minipage with the following command, so that it is guaranteed that the extra title will be positioned cleanly.

```
581 \hspace*{-24.75pt}\begin{minipage}{0.66\linewidth}
582   \huge\sffamily \scalebox{1.25}{\begin{minipage}{\linewidth}\@extratitle\end{mini
583 \end{minipage}\vspace{47pt}}
584 \setcounter{page}{0}}
```

If a document type is specified, the following alternative code is executed. These documents have a multi-page document cover, which is generated automatically and completely. The font color on the cover page is white. If a draft is generated, the white font color does not allow to recognize if the cover image fits. Therefore, in case of a draft, the font color is left at black. The page number is set to -9, so that no page number is duplicated in the created document. Since the display of page numbers is switched off in the document preamble, this definition does not play any further role.

```
585 {
586   \ifdraft{\color{red}}{\color{black}}
587   \nullspace{8pt}
588   \setcounter{page}{-9}
589 }
```

In the first step the document type is output. This is defined in capital letters according to the above definitions. The selection according to the language has already been done above.

```
590 \ifdraft{\hspace*{-30pt}\scalebox{1.85}{\sffamily\textbf{\doctypeprint -- DRAFT}}}{\
591 \vspace{17pt}}
592
```

In the next step, the course of study is output. Since the title of the program Technical Environmental Management and Ecotoxicology is too long for the page width, it is set in a smaller minipage environment so that the line break appears harmonious.

```
593 \hspace*{-34pt}\scalebox{1.5}{%
594   \Ifstr{\degreecourse}{Technical environmental management and
595     {\text{□}}cototoxicology}
596   {
597     \begin{minipage}{0.72\linewidth}
598       \Ifstr{\language}{german}{\Ifstr{\doctype}{MASTERARBEIT}{to obtain   of
599         \degreecourse                                         the
600       \end{minipage}\vspace{5pt}}
601   {
602     \begin{minipage}{0.72\linewidth}
603       \Ifstr{\language}{german}{\Ifstr{\doctype}{MASTERARBEIT}{to achieve   of
604         \degreecourse\vspace{5pt}                                the
605     \end{minipage}}
606 }
```

The title of the document is also set in a minipage environment to avoid overflowing the limits of the paper format. This

guarantees the correct width of the text even with multi-line titles. It is strongly recommended not to use titles that take up more than three lines.

```
607 \vspace{54.7pt}
608 \hspace*{-30pt}\begin{minipage}{0.9625\linewidth}
609 \huge\bfseries\sffamily \@title
610 \end{minipage}\vspace{47pt}
611
```

The author of the document is printed in small letters under the title of the paper. Depending on the selected language, a prafix is automatically assigned to the author's name. This is Ausge- fiihrt von in German and By in English. By setting the author in the minipage it is possible to set several authors on one title page.

```
612 \Large
613 \hspace*{-34pt}%
614 \Ifstr{language}{german}{Executed by:~}{By:~}%
615 \begin{minipage}[t]{0.5\linewidth}\@author\end{minipage}%
616 \vspace{0.33\baselineskip}%
617
```

The unique identification of a student is done via the personal identification number (comparable to the matriculation number at other universities). This is output next

```
618 \hspace*{-34pt}%
619 \Ifstr{language}{german}{personal identifier:~}{Student Number:~}%
620 \begin{minipage}[t]{0.25\linewidth}\@studentnumber\end{minipage}%
621 \vspace{\baselineskip}%
622
```

In order to ensure a clear assignment of an assessment to the assessing person In order to facilitate the use of the data, the name of the caregiver is indicated on the cover sheet.

```
623 \hspace*{-34pt}%
624 \ifx\@secondsupervisor\@empty%
625 %A caregiver
626 \ifx\@supervisordesc\@empty%
627 \Ifstr{\language}{german}{Examiner:~}{Supervisor:~}%
628 \else%
629 \@supervisordesc:~%
630 \fi%
631 \begin{minipage}[t]{0.6\linewidth}%
632 \bgroup\@supervisor\egroup%
633 \end{minipage}\vspace{0.8\baselineskip}%
634 \else%
635 %Two caregivers
636 \ifx\@supervisordesc\@empty%
637 \Ifstr{\language}{german}{\gdef\@supervisordesc{assessors}}{\gdef\@superviso
638 \fi%
639 \ifx\@secondsupervisordesc\@empty%
640 \gdef\@secondsupervisordesc{}%
641 \fi%
```

```

642 \newlength\TWLength%
643 \newlength\TWLengthA%
644 \newlength\TWLengthB%
645 \settowidth\TWLengthA{\@supervisordesc:}%
646 \settowidth\TWLengthB{\@secondsupervisordesc:}%
647 \ifdim \TWLengthA>\TWLengthB%
648 \setlength\TWLength\TWLengthA%
649 \else%
650 \setlength\TWLength\TWLengthB%
651 \fi%
652 \begin{minipage}[t]{\TWLength}%
653 \@supervisordesc:~%
654 \ifx\@secondsupervisordesc\@empty%
655 \else%
656 \@secondsupervisordesc:~%
657 \fi%
658 \end{minipage}~%
659 \begin{minipage}[t]{0.6\linewidth}%
660 \bgroup\@supervisor\egroup~%
661 \bgroup\@secondsupervisor\egroup%
662 \end{minipage}\vspace{0.8\baselineskip}%
663 \fi%
664

```

Finally, the place where the work was written is mentioned. In most cases this will be Vien. The date of the last compilation of the document is automatically set as the date of writing.

```

665 \hspace*{-34pt}%
666 \@place%
667 \ifstr{language}{german}{, den~}{, ~}\today%
668

```

After a page break and setting the font color to black, the font size to normal and the font size to upright, the declaration including the prepared signatures (place, date, signature) is set on a separate sheet. The language selection automatically defines the language of the declaration.

```

669 \clearpage
670 \color{black}\normalsize\mdseries
671

```

From here on, various settings are made. The project report is dealt with in this block. The project report requires a summary or an abstract in addition to the title page. The distinction is made on the basis of the set language.

```

672 \ifstr{\doctype}{PROJECT REPORT}{
673 \ifx\@short version\@empty
674 \elseclearpage
675 \chapter*{short version}
676 \@short version
677 \ifx\@keywords\@empty
678 \else\vfill\paragraph*{headwords:}\@headwords
679 \fi

```

```

680 \fi} {}
681 \Ifstr{\doctype} {PROJECT REPORT} {
682 \ifx@outline@empty
683 \elseclearpage
684 \chapter*{abstract}
685 \@outline
686 \ifx@keywords@empty
687 \else\vfill\paragraph*{keywords:}\@keywords
688 \fi
689 \fi} {}
690

```

From here on, various settings are made. In this block, the seminar paper is dealt with. In addition to the title page, the seminar paper also requires a summary and an abstract. Depending on the language, either the abstract or the summary must be written first.

```

691 \Ifstr{\doctype} {SEMINARBEIT} {
692 \ifx@short version@empty
693 \elseclearpage
694 \chapter*{short version}
695 \@short version
696 \ifx@keywords@empty
697 \else\vfill\paragraph*{headwords:}\@headwords
698 \fi
699 \fi
700 \ifx@outline@empty
701 \elseclearpage
702 \chapter*{abstract}
703 \@outline
704 \ifx@keywords@empty
705 \else\vfill\paragraph*{keywords:}\@keywords
706 \fi
707 \fi} {}
708 \Ifstr{\doctype} {SEMINAR PAPER} {
709 \ifx@outline@empty
710 \elseclearpage
711 \chapter*{abstract}
712 \@outline
713 \ifx@keywords@empty
714 \else\vfill\paragraph*{keywords:}\@keywords
715 \fi
716 \fi
717 \ifx@short version@empty
718 \elseclearpage
719 \chapter*{short version}
720 \@short version
721 \ifx@keywords@empty
722 \else\vfill\paragraph*{headwords:}\@headwords
723 \fi
724 \fi} {}
725

```

From this block on, the theses are dealt with. The theses require a

Affidavit, a Kurfassung, and an abstract.

```

726 \Ifstr{\doctype} {BACHELORARBEIT} {
727   \chapter*{Affidavit}
728   \glqq I, as author / as author and author of the
729   present work, confirm with my signature the
730   Acknowledgement of the relevant copyright and higher education legislation
731   Provisions (cf. Copyright Act as amended as well as part of the Articles of
       Association).
732   Study regulations / Examination regulations of the UAS Technikum
733   Vienna idgF).\[\baselineskip]
734   I hereby declare that I have independently prepared the present work.
735   and to extract ideas of any kind from other people's and
736   I have quoted from sources I have written myself. I am sure
737   in the absence of proof of self-reliance and independence, as well as the
738   Evidence of intent to defraud a positive
739   assessment of this work aware of the consequences that may result from the
740   The student may be excluded from the program by the head of the program (cf.
741   Study regulations / Examination regulations of the UAS Technikum
742   Vienna idgF).\[\baselineskip]
743   Furthermore, I confirm that I have not reviewed this work to date.
744   not published and neither in the same nor in a similar form.
745   I have not submitted the information in the form of an audit to any other
       regulatory authority. I assure,
746   that the submitted version is the one in the upload tool
747   corresponds.\grqq\vspace{4\baselineskip}
748
749   \noindent \@place, \today\hspace{0.4\linewidth}signature

```

After a page break (if it has been defined) the German Kurfassung and at the bottom of the page the German keywords are set. If one of the two parameters is not defined, the page remains empty. If both parameters are not defined, an empty page will be created. This page will be automatically deleted from the document.

```

750 \ifx\@short version\@empty
751 \ifx\@keywords\@empty
752 \else\clearpage\null\vfill\paragraph*{headwords:}\@headwords
753 \fi
754 \elseclearpage
755 \chapter*{short version}
756 \@short version
757 \ifx\@keywords\@empty
758 \else\vfill\paragraph*{headwords:}\@headwords
759 \fi
760 \fi
761

```

After a page break (if it has been defined), the English summary is set and the English keywords are set at the bottom of the page. If one of the two parameters is not defined, the page remains empty. If both parameters are not defined, an empty page will be created. This page will be automatically deleted from the document.

```

762 \ifx\@outline\@empty

```

```
763 \ifx\keywords\empty
764 \else\clearpage\null\vfill\paragraph*{keywords:}\keywords
```

```

765 \fi
766 \elseclearpage
767 \chapter*{abstract}
768 \@outline
769 \ifx@keywords@empty
770 \else\vfill\paragraph*{keywords:}\@keywords
771 \fi
772 \fi
773

```

After a page break (if defined) the acknowledgement will be set. If this parameter is not defined, an empty page will be created. This page will be automatically deleted from the document.

```

774 \ifx\@acknowledgements\@empty
775 \else\clearpage
776 \chapter*{thanksgiving}\@acknowledgements
777 \fi
778

```

After a page break, the table of contents is automatically displayed. The layout of the table of contents (up to which depth chapters are included, font etc.) is defined here. The language is changed to the set language option.

```

779 \clearpage
780 \tableofcontents
781
782 \clearpage
783 \setcounter{page}{1}}{
784

```

```

785 \Ifstr{\doctype}{MASTERARBEIT}{
786 \chapter*{Affidavit}
787 \glqq I, as author / as author and author of the
788 present work, confirm with my signature the
789 Acknowledgement of the relevant copyright and higher education legislation
790 Provisions (cf. Copyright Act as amended as well as part of the Articles of
Association).
791 Study regulations / Examination regulations of the UAS Technikum
792 Vienna idgF).\[\baselineskip]
793 I hereby declare that I have independently prepared the present work.
794 and to extract ideas of any kind from other people's and
795 I have quoted from sources I have written myself. I am sure
796 in the absence of proof of self-reliance and independence, as well as the
797 Evidence of intent to defraud a positive
798 assessment of this work aware of the consequences that may result from the
799 The student may be excluded from the program by the head of the program (cf.
800 Study regulations / Examination regulations of the UAS Technikum
801 Vienna idgF).\[\baselineskip]
802 Furthermore, I confirm that I have not reviewed this work to date.
803 not published and neither in the same nor in a similar form.
804 I have not submitted the information in the form of an audit to any other
regulatory authority. I assure,
805 that the submitted version is the one in the upload tool
806 corresponds.\grqq\vspace{4\baselineskip}
807
808 \noindent \@place, \today\hspace{0.4\linewidth}signature

```


After a page break (if it has been defined) the German Kurzfassung and at the bottom of the page the German keywords are set. If one of the two parameters is not defined, the page remains empty. If both parameters are not defined, an empty page will be created. This page will be automatically deleted from the document.

```

809 \ifx\@short version\@empty
810   \ifx\@keywords\@empty
811     \else\clearpage\null\vfill\paragraph*{headwords:}\@headwords
812   \fi
813 \elseclearpage
814   \chapter*{short version}
815   \@short version
816   \ifx\@keywords\@empty
817     \else\vfill\paragraph*{headwords:}\@headwords
818   \fi
819 \fi
820

```

After a page break (if it has been defined), the English summary is set and the English keywords are set at the bottom of the page. If one of the two parameters is not defined, the page remains empty. If both parameters are not defined, an empty page will be created. This page will be automatically deleted from the document.

```

821 \ifx\@outline\@empty
822   \ifx\@keywords\@empty
823     \else\clearpage\null\vfill\paragraph*{keywords:}\@keywords
824   \fi
825 \elseclearpage
826   \chapter*{abstract}
827   \@outline
828   \ifx\@keywords\@empty
829     \else\vfill\paragraph*{keywords:}\@keywords
830   \fi
831 \fi
832

```

After a page break (if defined) the acknowledgement will be set. If this parameter is not defined, an empty page will be created. This page will be automatically deleted from the document.

```

833 \ifx\@acknowledgements\@empty
834 \elseclearpage
835   \chapter*{acknowledgements}\@acknowledgements
836 \fi
837

```

After a page break, the table of contents is automatically displayed. The layout of the table of contents (up to which depth chapters are included, font etc.) is defined here. The language is changed to the set language option.

```

838 \clearpage
839 \tableofcontents
840

```

```

841 \clearpage
842 \setcounter{page}{1}}{
843
844 \Ifstr{\doctype}{BACHELOR}{THESIS}{
845 \chapter*{Declaration}
846 ''As author and creator of this work to hand, I confirm with my
847 signature knowledge of the relevant copyright regulations
848 governed by higher education acts (see Copyright Act
849 /Austrian copyright law as amended as well as the Statute on
850 Studies Act Provisions / Examination Regulations of the UAS
851 Technikum Wien as amended).\[\baselineskip].
852 I hereby declare that I completed the present work independently
853 and that any ideas, whether written by others or by myself, have
854 been fully sourced and referenced. I am aware of any consequences
855 I may face on the part of the degree program director if there
856 should be evidence of missing autonomy and independence or
857 evidence of any intent to fraudulently achieve a pass mark for
858 this work (see Statute on Studies Act Provisions / Examination
859 Regulations of the UAS Technikum Wien as amended).\[\baselineskip].
860 I further declare that up to this date I have not published the work to
861 hand nor have I presented it to another examination board in the same or
862 similar form. I affirm that the version submitted matches the version in
863 the upload tool.'' \vspace{4\baselineskip}
864
865 \noindent \@place, \today\hspace{0.4\linewidth}Signature

```

After a page break (if it has been defined) the German Kurfas- sung and at the bottom of the page the German keywords are set. If one of the two parameters is not defined, the page remains empty. If both parameters are not defined, an empty page will be created. This page will be automatically deleted from the document.

```

866 \ifx\@short version\@empty
867 \ifx\@keywords\@empty
868 \else\clearpage\null\vfill\paragraph*{headwords:}\@headwords
869 \fi
870 \elseclearpage
871 \chapter*{short version}
872 \@short version
873 \ifx\@keywords\@empty
874 \else\vfill\paragraph*{headwords:}\@headwords
875 \fi
876 \fi
877

```

After a page break (if it has been defined), the English summary is set and the English keywords are set at the bottom of the page. If one of the two parameters is not defined, the page remains empty. If both parameters are not defined, an empty page will be created. This page will be automatically deleted from the document.

```

878 \ifx\@outline\@empty
879 \ifx\@keywords\@empty
880 \else\clearpage\null\vfill\paragraph*{keywords:}\@keywords

```

```

881 \fi
882 \elseclearpage
883 \chapter*{abstract}
884 \@outline
885 \ifx@keywords@empty
886 \else\vfill\paragraph*{keywords:}\@keywords
887 \fi
888 \fi
889

```

After a page break (if defined) the acknowledgement will be set. If this parameter is not defined, an empty page will be created. This page will be automatically deleted from the document.

```

890 \ifx@acknowledgements@empty
891 \elseclearpage
892 \chapter*{acknowledgements}\@acknowledgements
893 \fi
894

```

After a page break, the table of contents will be displayed automatically. The layout of the table of contents (up to which depth chapters are included, font etc.) is defined here. The language is changed to the set language option.

```

895 \clearpage
896 \tableofcontents
897
898 \clearpage
899 \setcounter{page}{1}}{
900

```

```

901 \Ifstr{\doctype}{MASTERTHESIS}{
902 \chapter*{Declaration}
903 ''As author and creator of this work to hand, I confirm with my
904 signature knowledge of the relevant copyright regulations
905 governed by higher education acts (see Copyright Act
906 /Austrian copyright law as amended as well as the Statute on
907 Studies Act Provisions / Examination Regulations of the UAS
908 Technikum Wien as amended).\[\baselineskip].
909 I hereby declare that I completed the present work independently
910 and that any ideas, whether written by others or by myself, have
911 been fully sourced and referenced. I am aware of any consequences
912 I may face on the part of the degree program director if there
913 should be evidence of missing autonomy and independence or
914 evidence of any intent to fraudulently achieve a pass mark for
915 this work (see Statute on Studies Act Provisions / Examination
916 Regulations of the UAS Technikum Wien as amended).\[\baselineskip].
917 I further declare that up to this date I have not published the work to
918 hand nor have I presented it to another examination board in the same or
919 similar form. I affirm that the version submitted matches the version in
920 the upload tool.'' \vspace{4\baselineskip}
921
922 \noindent \@place, \today\hspace{0.4\linewidth}Signature

```

After a page break (if defined) the German Kurzfassung and at the bottom of the page the German keywords are set.

If one of the two parameters is not defined, the page will remain empty. If both parameters are not defined, an empty page will be created. This will be automatically deleted from the document.

```

923 \ifx\@short version\@empty
924 \ifx\@keywords\@empty
925 \else\clearpage\null\vfill\paragraph*{headwords:}\@headwords
926 \fi
927 \elseclearpage
928 \chapter*{short version}
929 \@short version
930 \ifx\@keywords\@empty
931 \else\vfill\paragraph*{headwords:}\@headwords
932 \fi
933 \fi
934

```

After a page break (if it has been defined), the English summary is set and the English keywords are set at the bottom of the page. If one of the two parameters is not defined, the page remains empty. If both parameters are not defined, an empty page will be created. This page will be automatically deleted from the document.

```

935 \ifx\@outline\@empty
936 \ifx\@keywords\@empty
937 \else\clearpage\null\vfill\paragraph*{keywords:}\@keywords
938 \fi
939 \elseclearpage
940 \chapter*{abstract}
941 \@outline
942 \ifx\@keywords\@empty
943 \else\vfill\paragraph*{keywords:}\@keywords
944 \fi
945 \fi
946

```

After a page break (if defined) the acknowledgement will be set. If this parameter is not defined, an empty page will be created. This page will be automatically deleted from the document.

```

947 \ifx\@acknowledgements\@empty
948 \elseclearpage
949 \chapter*{acknowledgements}\@acknowledgements
950 \fi
951

```

After a page break, the table of contents will be displayed automatically. The layout of the table of contents (up to which depth chapters are included, font etc.) is defined here. The language is changed to the set language option.

```

952 \clearpage
953 \tableofcontents
954
955 \clearpage
956 \setcounter{page}{1}}{
957

```

After a page break, the table of contents will be displayed automatically. The layout of the table of contents (up to which depth chapters are included, font etc.) is defined here. The language is changed to the set language option.

```

958 \clearpage
959 \tableofcontents
960
961 \clearpage
962 \setcounter{page}{1}}}}}}
963 \end{titlepage}
964 }
965

```

The layout of the markup for program documents is adapted to the requirements of the corporate identity. If the document type is defined, the (currently empty) alternative code is executed.

```

966 \Ifstr{\doctype} {}
967 {
968   \renewcommand*{\labelitemi} {
969     \huge\raisebox{0.2ex}{$\centerdot$}\hspace{-5pt}}
970   \renewcommand*{\labelitemii} {
971     \huge\raisebox{-0.15ex}{-}\hspace{-5pt}}
972   \renewcommand*{\labelitemiii} {
973     \LARGE\raisebox{0.3ex}{$\centerdot$}\hspace{-5pt}}
974 } {}

```

7 Version control

twbook.dtx Version: 0.9

10 December 2020, 19:40 Author
of the amendment: Otrebski

8 Only the following index

All new commands are listed in the index on the next page. The following numbers refer to the code sections in the source code where the commands are used.

Change History

v0.1	the specifications of the UK..... 1
General: First executable version . 1	
v0.2	General: improvement of the first reported bugs..... 1
General: Basic layouts ready - not beta tested..... 1	
v0.3	v0.7
General: Documentation implemented..... 1	General: Rectification of the first bugs, extension to XeTeX and LuaTeX 1
v0.4	v0.8
General: Double Table of contents in Master English fixed, page numbering errors in study program documents. fixed. 1	General: Using the standard TeX escape sequences for Umlauts 1
v0.5	v0.9
General: Adaptation of the covers to	General: Installation of the SVN version number 1

Index

Symbols

`\` 387, 595, 614, 727, 729,
 730, 732, 734, 736, 737, 740,
 741, 743-745, 786, 788, 789,
 791, 793, 795, 796, 799, 800,
 802-804
`\&` 371, 511, 527
`\@acknowledgements` . 555, 556,
 774, 776, 833, 835, 890, 892,
 947, 949
`\@author` 615
`\@extratitle` 582
`\@keywords` . 553, 554, 686, 687,
 704, 705, 713, 714, 763, 764,
 769, 770, 822, 823, 828, 829,
 879, 880, 885, 886, 936, 937,
 942, 943
`\@abstract` 547, 548, 673, 676,
 692, 695, 717, 720, 750, 756,
 809, 815, 866, 872, 923, 929
`\@latex@warning` 157
`\@noopterr` 165, 166
`\@outline` .. 551, 552, 682, 685,
 700, 703, 709, 712, 762, 768,
 821, 827, 878, 884, 935, 941
`\@place` 545, 546, 666, 749, 808,
 865, 922
`\@removefromreset` 195-197
`\@schlagworte` .. 549, 550, 677,
 678, 696, 697, 721, 722, 751,
 752, 757, 758, 810, 811, 816,
 817, 867, 868, 873, 874, 924,
 925, 930, 931
`\@secondoftwo` 161
`\@secondsupervisor` . 540, 542,
 624, 661
`\@secondsupervisordesc` . 541,
 542, 639, 640, 646, 654,
 656
`\@setref` 152
`\@studentnumber` . 543, 544, 620
`\@supervisor` 537, 539, 632, 660
`\@supervisordesc` 538, 539, 626,
 629, 636, 637, 645, 653
`\@title` 578, 609

A

`\acknowledgements` 537, 556

`\addtocounter` 183
`\addtokomafont` 184
`\and` 563
`\Aufz\` "ahlungszeichen 966

C

`\captionsetup` 112
`\cfoot` 191
`\changes` 209
`\thead` 188
`\ClassError` 138
`\clearmainofpaairofpagestyles`
 186
`\cover` 76, 252, 568

D

`\DeclareCaptionLabelSeparator`
 111
`\degreecourse` . 7, 8, 10-65, 232,
 253-277, 279, 280, 282, 283,
 285, 286, 288, 289, 291, 292,
 294, 295, 297, 298, 300, 301,
 303, 304, 306, 307, 309, 310,
 312, 313, 315, 316, 318, 319,
 321, 322, 324, 325, 327, 328,
 330, 331, 333, 334, 336, 337,
 339, 340, 342, 343, 345, 346,
 348, 349, 351-389, 393-417,
 419, 420, 422, 423, 425, 426,
 428, 429, 431, 432, 434, 435,
 437, 438, 440, 441, 443, 444,
 446, 447, 449, 450, 452, 453,
 455, 456, 458, 459, 461, 462,
 464, 465, 467, 468, 470, 471,
 473, 474, 476, 477, 479, 480,
 482, 483, 485, 486, 488, 489,
 491-529, 594, 599, 604
`\doctype` . 67, 69-74, 213, 232,
 233-244, 246, 532, 571, 598,
 603, 672, 681, 691, 708, 726,
 785, 844, 901, 966
`\doctypeprint` 68, 246-250, 590

F

`\familydefault` 560
`\figure format` 113
`\figure name` 113

G	
\G@refundefinedtrue.....	155
I	
\ifdraft	586, 590
\ifLuaTeX.....	132
\iffoot	190
\ifPDFTeX.....	117
\ifXeTeX	127
\ihead	187
\institution 6, 9, 278, 281, 284, 287, 290, 293, 296, 299, 302, 305, 308, 311, 314, 317, 320, 323, 326, 329, 332, 335, 338, 341, 344, 347, 350, 418, 421, 424, 427, 430, 433, 436, 439, 442, 445, 448, 451, 454, 457, 460, 463, 466, 469, 472, 475, 478, 481, 484, 487, 490, 534	
K	
\keywords	<u>537</u> , 554
\short version	<u>537</u> , 548
M	
\maketitle.....	<u>563</u>
\MessageBreak 139, 143, 168-170	
\Messagebreak	140
N	
\newline	563
\newwrite.....	150
\nfss@text.....	156
\normalfont.....	559, 561
O	
\ofoot	192
\ohead	189
\openout	151
\outline	<u>537</u> , 552
P	
\PackageWarning	167
\place.....	<u>537</u> , 546
\providecommand.....	165, 558
R	
\refs.....	150, 151, 154, 160
\ReplacePackage	92
\reset@font	156
S	
\sc	558, 559
\schlagwords.....	<u>537</u> , 550
\scshape	559
\secondsupervisor.....	<u>537</u> , 542
\sfdefault	560
\language . 1-4, 96, 97, 100, 101, 232, <u>232</u> , 252, 392, 598, 603, 614, 619, 627, 637, 667	
\studentnumber	<u>537</u> , 544
\supervisor	<u>537</u> , 539
T	
\tableformat.....	114
\tablename	114
\thepage.....	154, 157, 160
\ticcifexternalizing	567
\TWLength.....	642, 648, 650, 652
\TWLengthA . 643, 645, 647, 648	
\TWLengthB . 644, 646, 647, 650	
U	
\usetikzlibrary	109
W	
\write	154, 160