

The `kaumasters` class*

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1 Introduction

The `kaumasters` class is part of the `kauthesis` package. The class provides macros for writing a master's thesis at Karlstad University. The latest version can be obtained from

`http://github.com/ZjMNZHgG5jMXw/kauthesis` .

This class requires the URW Garamond font. The latest version can be obtained from

`http://www.ctan.org/pkg/urw-garamond` .

2 Usage

The following example can be found in `kaumasterstemplate.tex`.

The `kaumasters` class is quite similar to L^AT_EX's `article` class. After loading the class, title, author, and institute have to be declared.

```
1 \documentclass{kaumasters}
2 \title{The great thesis}
3 \author{Donald Duck}
4 \institute{Department of Mathematics and Computer Science}
```

The thesis starts with the title (`\maketitle`), followed by `\frontmatter` in order to adjust the page numbering.

```
5 \begin{document}
6 \maketitle
7 \frontmatter
```

The two madatory inhabitants of the front matter are the abstract (`\abstract` environment) and the `\tableofcontents`.

```
8 \begin{abstract}
9   This thesis describes the mathematical and computer science
10  background of Duckburg.
11 \end{abstract}
12 \tableofcontents
```

*This document corresponds to `kaumasters` v1.1, dated 2012/12/14.

The main matter starts with `\mainmatter` for adjusting the page numbering and the content in the main matter is your work. Any macro or environment known from L^AT_EX's article class can be used here.

```
13 \mainmatter
14 \section{Duck Tales}
15 quack.
16 \end{document}
```

3 Implementation

3.1 Class options and dependencies

Class options are neither parsed nor passed to the underlying article class.

```
1 \ProcessOptions\relax
```

`kaumasters` derives all macros from the standard article class.

```
2 \LoadClass{article}
```

Garamond is chosen as default font.

```
3 \RequirePackage[urw-garamond]{mathdesign}
```

A4 is set as the default page layout.

```
4 \RequirePackage[paper=a4,pagesize,twoside=semi]{typearea}
```

`kauclear` provides page style switches in `\cleardoublepage` and `kaumeta` defines the macros relevant for creating title information, e. g., `\institute`.

```
5 \RequirePackage{kauclear}
6 \RequirePackage{kaumeta}
```

3.2 Title page

The university will create the title page for the thesis, thus, creating an own title page is not necessary.

`\kaumas@maketitle` The definition of `\maketitle` in the article class creates a title without creating a separate page. `kaumasters` redefines the macro and preserves the original definition in `\kaumas@maketitle`.

```
7 \let\kaumas@maketitle\maketitle
```

`\maketitle` The macro `\maketitle` creates a working title on the abstract page. Reproducing the title on the abstract page is recommended.

```
8 \renewcommand\maketitle{%
9   \section*{\@title}%
10  \textsc{\@author}\par%
11  \noindent\textit{\@institute}%
12 }
```

3.3 Front matter

The front matter starts after the title on page iii. It contains the abstract of the thesis followed by an optional acknowledgements section and the table of contents.

`\frontmatter` The front matter is started with `\frontmatter`. It is assumed that this macro directly runs after the optional `\maketitle`.

```
13 \newcommand*\frontmatter{%
```

The front matter starts on page iii, i.e., two pages are reserved for the title.

```
14   \setcounter{page}{3}%
```

```
15   \renewcommand\thepage{\roman{page}}%
```

`abstract` The `abstract` environment in the front matter creates an unnumbered abstract section.

```
16   \renewenvironment{abstract}{%
```

```
17     \section*{\abstractname}%
```

```
18     %\addcontentsline{toc}{section}{\abstractname}%
```

```
19   }{%
```

The thesis continues after the abstract on an odd page.

```
20     \cleardoublepage%
```

```
21   }%
```

```
22 }
```

`\kaumas@tableofcontents` The `\tableofcontents` definition from the article class is preserved. It is not reused in this class.

```
23 \let\kaumas@tableofcontents\tableofcontents
```

`\tableofcontents` The redefined macro makes the table of contents start on an odd page. The table of contents starts on an odd page.

```
24 \renewcommand\tableofcontents{%
```

```
25   \cleardoublepage%
```

```
26   \kaumas@tableofcontents%
```

```
27 }
```

3.4 Main matter

The main matter is started with `\mainmatter`.

`\mainmatter` The macro jumps on the next odd page and resets the page counter to page 1.

```
28 \newcommand\mainmatter[1] []{%
```

```
29   \cleardoublepage%
```

The page counter is set to page 1.

```
30   \pagenumbering{arabic}%
```

```
31   \setcounter{page}{1}%
```

```
32 }
```

Change History

v1.0

General: Initial public release 1

v1.1

General: Documentation added . . . 1

Index

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.

Symbols	environments:	P
\@author 10	abstract <u>16</u>	\pagenumbering 30
\@institute 11		\par 10
\@title 9	F	\ProcessOptions 1
	\frontmatter 7, <u>13</u>	
A	I	R
abstract (environ- ment) <u>16</u>	\institute 4	\relax 1
\abstractname ... 17, 18		\renewcommand . 8, 15, 24
\addcontentsline .. 18	K	\renewenvironment . 16
\author 3	\kaumas@maketitle .. <u>7</u>	\RequirePackage ... 3–6
	\kaumas@tableofcontents <u>23</u> , 26	\roman 15
B		S
\begin 5, 8	L	\section 9, 14, 17
	\let 7, 23	\setcounter 14, 31
C	\LoadClass 2	
\cleardoublepage 20, 25, 29	M	T
	\mainmatter 13, <u>28</u>	\tableofcontents 12, 23, <u>24</u>
D	\maketitle 6, 7, <u>8</u>	\textit 11
\documentclass 1		\textsc 10
	N	\thepage 15
E	\noindent 11	\title 2
\end 11, 16		