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**Date**

March 29, 2016

**Version**

0.1




## TU/e report & book style

made for  $\text{\LaTeX}$

# 1 Introduction ★

The TU/e report & book style document class has been written for reports and books in the TU/e style.

## Legend

- ★ A base component of the TU/e report/book style, easily applied using the package.
- ☆ A non-basic component of the TU/e report/book style, “easily” applied using the package.
-  A drafting component, should be removed in the final document.
- ✿ A styling component, used to beautify the document.
- ✕ A variant on the TU/e style to which the authors advice against, but for which the package provides an option.

## Table of contents

Title		
TU/e report & book style		
<b>1 Introduction ★</b>		<b>2</b>
1.1 Legend		2
<b>2 Basic usage ★</b>		<b>5</b>
<b>3 Introduction to options &amp; commands ★</b>		<b>6</b>
<b>4 Document-layout options ★</b>		<b>8</b>
<b>5 Table of contents and other “lists of”</b>		<b>10</b>
5.1 TU/e Table of contents ★		10
5.2 Basic table of contents ☆		10
5.3 List of figures ★		10
5.4 List of tables ★		10
<b>6 TU/e colors</b>		<b>11</b>
6.1 TU/e main Colors ★		12
6.2 TU/e support Colors ★		12
<b>7 General class options</b>		<b>13</b>
7.1 Language options ★		13
7.2 General style options ★		13
7.3 Equation options ☆		14
<b>8 Information commands</b>		<b>15</b>
8.1 Information commands explained ★		15
8.2 Information commands extended ☆		16
8.3 PDF-Metadata ☆		17
<b>9 User commands</b>		<b>18</b>
9.1 Styling commands 🌸		18
<b>10 Drafting</b>		<b>20</b>
10.1 Drafting commands 🖋		20
10.2 Drafting/debug options 🖋		21
<b>11 Frontpage</b>		<b>22</b>
11.1 Create frontpage ★		22
11.2 Customize frontpage ★/☆		22
<b>12 Structure styling</b>		<b>24</b>

## Table of contents

<b>Title</b>		
TU/e report & book style		
12.1 Example styling ★		24
12.2 Disable styling ✕		24
12.3 Numberless items ★		25
12.4 Temporarily disable ToC listing ★		25
12.5 Possible changes ☆/ ✕		26
<b>13 Page margins</b>		<b>27</b>
<b>14 Header &amp; footer</b>		<b>29</b>
14.1 Slight customization ★/☆		29
14.2 Different headers and footers ✕		30
<b>15 Extra Lists</b>		<b>31</b>
15.1 List of definitions and abbreviations ☆		31
15.1.1 Define ☆		31
15.1.2 Reference ☆		31
15.1.3 List ☆		31
<b>16 Loaded packages</b>		<b>33</b>
<b>17 Examples</b>		<b>34</b>

## 2 Basic usage ★

Start by creating a **.tex** file in the same folder as the **TUestyle\_ReportBook.cls** file.

The content of your report is situated in the **.tex** file.  
The styling of your report is situated in the **.cls** file.

The following code creates a TU/e report in  $\text{\LaTeX}$ , in the **.tex** file:

```
\documentclass[] {TUestyle_ReportBook}
\usepackage[english]{babel}

\title{...}
\author{...}
\date{...} % Optional, if not specified -> currentdate

\begin{document}

\maketitle % Optional
\tableofcontents % Optional

\end{document}
```

Some explanation about the code above:

- The first line loads the TU/e report & book style document class. Possible parameters/arguments/options to be used are described in the class options chapter.
- The second line loads the standard  $\text{\LaTeX}$  package babel which specifies the document language. Use the option dutch for Dutch documents.
  - The last language is the default one. You can switch languages in the middle of the document using the `\selectlanguage{...}` command.
  - For documents containing both Dutch and English text, use `\usepackage[dutch,english]{babel}`
- The `\title{...}` and `\author{...}` are required. If you don't use in `\date{...}` the current date will be used. Other information commands are elaborated on in the information commands chapter.

### 3 Introduction to options & commands ★

This documentation uses clear colored boxes to denote types of class options and commands. These are shortly described below.

#### ***Class options***

Class options are general document options which need to be specified when you call the `\documentclass`.

```
\documentclass[<place for class options>]{TUestyle_ReportBook}
```

Class options can be seen as global parameters and change styling/items for the whole document.

The class options are separated by the use of a comma.

**Class option:** `oneside`

**Default for:** `report`

This means that this class option is already set if that class is chosen as a base. Explained better at the beginning of chapter 7.

**Class option:** `Dutch`

**Default:** `False`

This means that this class option is not set by default.

#### ***Information command***

```
\date{...}
```

**Default:** Current date

These commands allow the user to add document data.

#### ***Drafting command***

```
\note{...}
```

This command is used for drafting, should be removed in the final version.

### ***Styling command*** ❀

```
\chrule[<color>]{<height>}
```

This command is used for styling, used to beautify the document.

### ***Basic command***

```
\TUEtableofcontents
```

Basic command.

### ***Package option***

```
Package: geometry
```

This package is used by the class-file.

## 4 Document-layout options ★

### *Single/double sided design* ★

**Class option:** `oneside`

**Default for:** `report`

Sets the design of the document to single sided. Headers, footers and margins will be the same on each page.

**Class option:** `twoside`

**Default for:** `book`

Sets the design of the document to double sided. The alignment of headers, footers and margins will be flipped horizontally every other page.

### *One/two column design* ★

**Class option:** `onecolumn`

**Default for:** `report`

Sets the design of the document to use a single column to display user defined content.

**Class option:** `twocolumn`

**Default for:** `book`

Sets the design of the document to use two columns to display user defined content.

### *Openright/openany design* ★

**Class option:** `openright`

**Default for:** `book`

Sets the design of the document to start chapters and the table of contents on odd pages (right page in a double sided printed document).

**Class option:** `openany`

**Default for:** `report`

Sets the design of the document to start chapters and the table of contents on any page, odd or even.



***Document font size*** ★

**Class option:** 10pt/11pt/12pt

**Default:** 10pt

Sets the document's font size. Does not affect the fontsize at the header, footer & frontpage.  
*i.e.*, this ensures that the header does not grow to wide.

## 5 Table of contents and other “lists of”

### TU/e Table of contents ★

```
\TUeTableofcontents
```

Prints the TU/e style table of contents, with axes.

### Basic table of contents ☆

```
\tableofcontents
```

Prints a standard  $\text{\LaTeX}$  table of contents without axes, instead of the TU/e version.

### List of figures ★

```
\listoffigures
```

Prints a list of figures.

### List of tables ★

```
\listoftables
```

Prints a list of tables.

## 6 TU/e colors

The TU/e report & book style document class for  $\LaTeX$  defines a set of colors that are part of the TU/e palette. They are all listed below. All colors can be referenced by either one of the stated names if they have two.

```
\color{<color-name>}
```

A usage example to set a textcolor would be `\color{tuedarkblue}` or `\color{tuepms2748}`. Both command would have the same effect.

A second example `\color{tuepms2748} Example`  limits the color change to the are between the curly braces.

## TU/e main Colors ★

tuewarmred, tuepmswarmred	tuecyan, tuepmsprocesscyan	tuered, tuepms206
tueblue, tuepms300	tuepms226	tuepms253
tuedarkblue, tuepms2748		

## TU/e support Colors ★

tuepms3135	tueorange, tuepms137	tueyellow, tuepmsyellow012
tuepms396	tuelightgreen, tuepms375	tuegreen, tuepmsgreen

## 7 General class options

First you will have to decide upon choosing the `book` or `report` class as a base. If you want the book class as a base you specify:

```
\documentclass[book]{TUestyle_ReportBook}
```

If you want the report style, you don't need to set a class option.

```
\documentclass[] {TUestyle_ReportBook}
```

The next thing is to customize the document according to your wishes. Some options can be set for both the `book` & `report` base, the `book` base or only the `report` base. All options are stated and shortly elaborated on below.

### Language options ★

**Class option:** `Dutch`

**Default:** `False`

sets the Dutch language.

**Class option:** `English`

**Default:** `True`

sets the English language.

**You should always specify the language, even if you specified it in the `babel` package!**

### General style options ★

**Class option:** `graphicspath = "..."`

This option is used to specify a path/folder where all images are located. Afterwards this path/folder does not have to be specified when inserting an image. Be sure to put a "/" as the last character.

*Make sure the parameter has no spaces*

## Equation options ☆

**Class option:** `fleqn`

**Default:** `False`

Left-align formulas

**Class option:** `leqno`

**Default:** `False`

Label formulas on the left-hand side (instead of the right)

*Only useful with the `twoside` mode*

## 8 Information commands

The following commands specify the title, subtitle, author, date, etc.. All of them are optional, except for the title and the author. Note that if you omit the date, today's date will be inserted. Use `\date{}` to omit the date completely. The same holds for the website. If you omit it, the standard website `www.tue.nl` will be inserted. Use `\website{}` if you don't want any website to be printed.

Another remark: note that for most departments, you should specify the department name using the `\administrativeunit{...}` command! The `\department{...}` command can be used to enter a group, section, research area etc..

### Information commands explained ★

```
\title{...}
```

Used to set the document title.

```
\subtitle{...}
```

Used to set the document subtitle.

```
\author{...}
```

Used to set the document author if it is a single author.

```
\authorM{<author1>}
```

```
\authorM{<author2>}
```

Used to set the document authors if there are multiple authors.

There is no set limit as to how many times the `\authorM{...}` command can be used to add an author.

```
\date{...}
```

**Default:** Current date

Used to set the document writing date. If this command is not used, the current date is used automatically.

```
\versionnum{...}
```

Used to set the document version number.

```
\orderissuer{...}
```

Used to set the document orderissuer.

Meaning the person who ordered the document to be created/issued.

```
\copyholder{...}
```

Used to set the copyholder, meaning a responsible “owner/recipient” of a particular copy of the document.

```
\administrativeunit{...}
```

Used to set the administrative unit. This is where you should specify the department name.

*e.g.*, Mathematics and Computer Science, Industrial Engineering etc.

```
\department{...}
```

Used to set the “department”. This can be used to set a group, section, research area etc.

```
\website{...}
```

**Default:** `www.tue.nl`

Used to set the authors or the “department’s” website.

```
\reference{...}
```

Used to set the report’s (main) reference.

```
\address{...}
```

Used to set the address’s street and number.

## Information commands extended ☆

```
\addfrontpage{...}
```

Used to set and add custom text to the frontpage (left column).

Use `\frontpagehead{<content>}` and `\frontpagebody{<content>}` to style accordingly

*Example use:*

```
\addfrontpage{
\frontpagehead{<content>}
\frontpagebody{<content>}
}
```

*Result added to frontpage (left column):*

**Assesor**

Random professor



## PDF-Metadata ☆

The class style automatically takes the relevant data from the used information commands and automatically adds that to the PDF file's METADATA.

*Example for this document:*

Description	
File:	Documentation.pdf
Title:	TU/e report & book style
Author:	Christiaan Dirkx & Alex Dings
Subject:	made for L <sup>A</sup> T <sub>E</sub> X
Keywords:	Version 0.1 Eindhoven University of Technology
Created:	29-03-2016 01:58:4101:58
Modified:	29-03-2016 01:58:4101:58
Application:	CaLaTeX TU/e template

## 9 User commands

There are a couple of commands used to make styling and working with the document easier.

### Styling commands ❁

#### *Changemargin* ❁

```
\begin{changemargin}{<left>}{<right>}  
<content>  
\end{changemargin}
```

Where <left> and <right> are units of length.

*Example:*

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer id feugiat lectus. Aliquam eros dui, consectetur hendrerit gravida eu, vulputate sit amet velit.

#### *Superscript* ❁

```
\up{<content>}
```

*Example:*

1<sup>st</sup>, 2<sup>nd</sup> & 3<sup>rd</sup>

#### *Enquote* ❁

```
\enquote{<content>}
```

*Example:*

“This text is enquoted nicely”

### **Abbreviations** ❀

```
\ie/
```

```
\viz/
```

```
\eg/
```

```
\etc/
```

```
\etal/
```

*Example:*

*i.e.,*

*viz.,*

*e.g.,*

*etc.*

*et al.*

### **Color rule** ❀

```
\crule[<color>]{<height>}{<width>}
```

Can be used to set a colored rule.

*Example:*



### **Color horizontal rule** ❀

```
\chrule[<color>]{<height>}
```

Can be used to set a colored horizontal rule.

*Example:*



## 10 Drafting

### Drafting commands

#### Note

```
\note{<content>}
```

Used to set notes in the document when working on it.  
Especially useful when working with multiple authors.

**Class option:** `drawnotes`

**Default:** `False`

To display the instructions as seen below throughout the document, the `drawnotes` class option needs to be set.

*Final example:*

**[NOTE 1: <content>]**

```
\listofnotes
```

Draws a list of notes, creating an overview.

```
\listnotename{<name>}
```

Used to change the name on top of the list of Notes.

#### Instruction

```
\instruction{<content>}
```

Used to set (assignments) instructions in the document when working on it.

**Class option:** `drawinstructions`

**Default:** `False`

To display the instructions as seen below throughout the document, the `drawinstructions` class option needs to be set.

*Final example:*

**[INSTRUCTION: <content>]**

## Drafting/debug options

These options are used when drafting/debugging and should be removed in the final document version.

### *Show draft mark on each page*

**Class option:** `draftmark`

**Default:** `False`

Prints the word “Draft” in a large font on the background of each page. An example can be seen on this page.

### *Show page margins on each page*

**Class option:** `margins`

**Default:** `False`

Shows defined margins.

### *Draw the notes in the document*

**Class option:** `drawnotes`

**Default:** `False`

Shows `\note{Example}` as **[NOTE 2: Example]**  
Used to set notes in the document when working on it.  
Especially useful when working with multiple authors.

### *Draw the instructions in the document*

**Class option:** `drawinstructions`

**Default:** `False`

Shows `\instruction{Example}` as **[INSTRUCTION: Example]** Used to set (assignments) instructions in the document when working on it.

### *Quick draft typesetting*

**Class option:** `draft`

**Default:** `False`

Setting the draft option will speed up typesetting, because figures are not loaded, just indicated by a frame. LaTeX will also display hyphenation (Overfull hbox warning) and justification problems with a small black square.

## 11 Frontpage

### Create frontpage ★

```
\maketitle
```

### Customize frontpage ★/☆

#### Cover image ★

**Class option:** `cover = "..."`

Takes the image from the root of the image folder and sets it as the cover image. The title and subtitle then move down.

If no parameter is specified the file will look for an image called "cover".

*Make sure the parameter has no spaces*

**Class option:** `coverratio = "..."`

**Default:** 3/2

Cover ratio, minimum of 3/2, no maximum.

#### TU/e logo ☆

**Class option:** `notuelogo`

**Default:** False

Does not draw the TU/e logo, the axes and "Where innovation starts". Use this, if you plan on printing the first page(s) on official TU/e paper.

#### Slogan ✕

**Class option:** `noinnovation`

**Default:** False

Does not print the “Where innovation starts” text, but does draw the logo and the axes. This option is not recommended, because officially the “Where innovation starts” message should always be printed.

## 12 Structure styling

### Example styling ★

The TU/e report & book style document class redefines the structural headings to the following styles:

#### 1.1 Example section

##### 1.1.1 Example subsection

##### Example subsubsection

*Example paragraph*

*Example subparagraph*

### Disable styling ✕

#### *Disable TU/e style chapters ✕*

**Class option:** `notuechapters`

**Default:** `False`

Does not redefine the `\chapter` command, so the appearance of new chapters is how it is standard in  $\text{\LaTeX}$

#### *Disable TU/e style paragraphs ✕*

**Class option:** `notuepars`

**Default:** `False`

Does not redefine the `\paragraph` command, so the appearance of new paragraph headings is how it is standard in  $\text{\LaTeX}$



## Numberless items ★

If you want to create a part, chapter or section without number you could use the native latex options *e.g.*, `\part*{...}`. However, this does not add anything to the table of contents, nor does it provide correct counting for structure below it.

The below commands come in handy to achieve desired behavior.

### ***Part, no number*** ★

```
\partnn{...}
```

Creates a new part without a number, adds the part name to the table of contents and reset all counters of lower structures to zero.

### ***Chapter, no number*** ★

```
\chapternn{...}
```

Creates a new chapter without a number, adds the chapter name to the table of contents and reset all counters of lower structures to zero.

### ***Section, no number*** ★

```
\sectionnn{...}
```

Creates a new section without a number, adds the section name to the table of contents and reset all counters of lower structures to zero.

## Temporarily disable ToC listing ★

```
\stoptocentries
```

Stops any entries from being added to the table of contents.

```
\starttocentries
```

Re-enables the adding of any entries to the table of contents.

## Possible changes ☆ / ✕

- ☆ If you want to define what level headings get numbered you can set:

`\setcounter{secnumdepth}{5}` in the preamble

- ✕ If you want the paragraph heading styling to be plain  $\text{\LaTeX}$  you can set the option

`\setlength{\parindent}{1cm}`

- ✕ If you want to change the paragraph skip between paragraphs you can set

`\setlength{\parskip}{1ex}`

## 13 Page margins

The class file uses the geometry package to specify the page margins.

If you need to change the default margins we recommend using the options specified below. The use of these options ensures continuity throughout the document as many measurements are calculated from these set lengths.

### *Change left margin* ☆

**Class option:** `left=...`

**Default:** `1.1in`

Sets the left margin. Value should be a number followed by the unit. The unit can be e.g. pt, mm, cm, in, ex or em.

### *Change top margin (Also used in ToC)* ☆

**Class option:** `top=...`

**Default:** `1.6in`

Sets the top margin. Value should be a number followed by the unit. The unit can be e.g. pt, mm, cm, in, ex or em.

### *Change right margin* ☆

**Class option:** `right=...`

**Default:** `1.5in`

Sets the right margin. Value should be a number followed by the unit. The unit can be e.g. pt, mm, cm, in, ex or em.

### *Change bottom margin (Also used in ToC)* ☆

**Class option:** `bottom=...`

**Default:** `1.3in`

Sets the bottom margin. Value should be a number followed by the unit. The unit can be e.g. pt, mm, cm, in, ex or em.

The marginpar-width is calculated by taking the right width and subtracting twice the default marginpar separator from it.

If there is a great need to change the spacing left and right of the margin note area, the options stated below should be used. However, changing these is not recommended. One should rather try to increase the right document spacing.

### **Change left parmarg** ☆

**Class option:** `marginparL=...`

**Default:** 1cm

Sets the left marginpar separator. Value should be a number followed by the unit.

The unit can be e.g. pt, mm, cm, in, ex or em.

### **Change right parmarg** ☆

**Class option:** `marginparR=...`

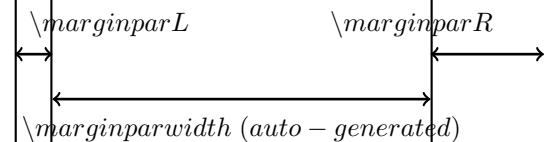
**Default:** 1cm

Sets the right marginpar separator. Value should be a number followed by the unit.

The unit can be e.g. pt, mm, cm, in, ex or em.

If only `marginparL` is specified, `marginparR` is set to equal this.

**Protip:** To calculate self defined environment's lengths one might use the lengths as indicated in this and the previous page's margins.



## 14 Header & footer

The TU/e report style uses the fancyhdr package to redefine headers and footers.

### Slight customization ★/☆

If you want to slightly change the TU/e headers you can use the following options:

#### *Gray header and footer* ☆

**Class option:** `fadehf`

**Default:** `False`

Fades the header and footer to 50% black. The page number remains to be 100% black.

#### *One sided header and footer style* ★

**Class option:** `onesidehf`

**Default for:** `onesided documents`

Headers and footers will be the same on each page. *Only useful with the `twoside mode`*

#### *Current chapter in the footer* ★

**Class option:** `chapterf`

**Default:** `False`

Adds current chapter number and name to the footer on a second line.

#### *Copyholder in the footer* ☆

**Class option:** `copyf`

**Default:** `False`

Adds “copyholder” to the bottom corner of every page.

**Page out of #** ★

**Class option:** drawendf

**Default:** False

Adds the last page number next to the currentpage number in the footer.

**Shortened header** ☆

**Class option:** shorth

**Default:** False

Transforms the bilingual header with the university name into a single language variant.

**Custom text added** ☆

```
\extraf{...}
```

Used to easily add extra data to the footer.

```
\extrah{...}
```

Used to easily add extra data to the header.

## Different headers and footers ✕

If you don't like the TU/e headers completely and want to redefine them yourself, you have to do this by defining the `\setheaders` command.

The following example produces more standard  $\text{\LaTeX}$ -like headers:

```
\newcommand{\setheaders}{
\pagestyle{fancy}
\fancyhf{}
\fancyhead[LE]{\sffamily\leftmark}
\fancyhead[RO]{\sffamily\rightmark}
\fancyfoot[C]{\thepage}
\renewcommand{\headrulewidth}{0.1pt}
}
\setheaders{}
```

This code should be added in the preamble of the document.

## 15 Extra Lists

### List of definitions and abbreviations ☆

#### Define ☆

##### *Define a definition*

```
\definedef{word}{definition}
```

Example:

PP2

##### *Define an abbreviation*

```
\defineabbr{<abbreviation>}{<full meaning>}
```

Example:

YOLO (you only live once)

#### Reference ☆

##### *Reference an abbreviation or a definition*

```
\refdef{<abbreviation>OR<word>}
```

Example:

YOLO

#### List ☆

```
\listofdefinitions
```

Draws a list of definitions (and abbreviations), creating an overview.

```
\listdefinitionname{<name>}
```

Used to change the name on top of the list of Definitions.



## 16 Loaded packages

**Package:** `hyperref`

Used to create proper links

**Package:** `xkeyval`

Used to get document parameters

**Package:** `ifthen`

Used to create if statements

**Package:** `pgf`

Used to get proper coloring

**Package:** `graphicx`

Used to load images

**Package:** `geometry`

Used to edit the page framework and draw things like the TU/e axes

**Package:** `[T1]fontenc`

Used to counter the following:

1. Words containing accented characters cannot be automatically hyphenated,
2. You cannot properly copy-and-paste such words from the output (DVI/PS/PDF),
3. Characters like the pipe sign, less than and greater sign give unexpected results in text.

**Package:** `fancyhdr`

Used to style headers and footers

**Package:** `titletoc`

**Package:** `titlesec`

Used to create and style table of ...

## 17 Examples

Following pages display examples, without explanation given.

## List of Notes

1	<content>	20
2	Example	21

## List of Definitions

PP2	Practicum Processor 2	31
YOLO	you only live once	31