

# The `uantwerpendocs` classes<sup>\*†</sup>

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## 1 Introduction

This package implements the house style of Universiteit Antwerpen for letters, course texts and master/PhD theses. It also implements a class to format exams (which is for efficiency reasons and ease of copying not fully UAntwerpen house style compliant). Using these class files will make it easy for you to make and keep your course texts and theses compliant to this version and future versions of the UAntwerpen house style.

If you think (1) there's an error in compliancy w.r.t. the house style, (2) there's a feature missing in this class file, or (3) there's a bug in this class file, please, contact me through e-mail (`walter.daems@uantwerpen.be`) about the issue. I'll provide you with an answer and if (and as soon as) possible with a solution to the problem you spotted.

Do you like these class files? You're welcome to send us beer, wine, or just kind words.

## 2 Synopsis

The `coursetext`, `masterthesis` and `phdthesis` classes<sup>1</sup> are an extension of the standard L<sup>A</sup>T<sub>E</sub>X `book` class. They are intended to be used for writing course texts and master's or PhD theses. They provide a title page that is compliant to the UAntwerpen house style, and they also typeset the rest of your document appropriately.

The `letter` class is derived from the standard L<sup>A</sup>T<sub>E</sub>X `letter` class. It is intended to be used for writing business letters. It is compliant to the house style and allows

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<sup>\*</sup>This document corresponds to `uantwerpendocs` 2.0, dated 2018/05/16.

<sup>†</sup>Thanks to Paul Levrie for testing and proofreading.

<sup>1</sup>For readability the class names have been abbreviated by omitting the `uantwerpen` prefix

for using windowed envelopes of the DL format, with right-aligned window.

The `exam` class is derived from the standard  $\text{\LaTeX}$  `article` class and is for efficiency reasons not fully UAntwerpen house style compliant.

They require (and use) the following packages:

- the `atbegshi` package
- the `auto-pst-pdf` package
- the `background` package
- the `color` package
- the `eso-pic` package
- the `etooblox` package
- the `fancyhdr` package
- the `geometry` package
- the `graphicx` package
- the `hyperref` package
- the `ifthen` package
- the `pst-barcode` package
- the `tikz` package
- the `ulem` package

and optionally

- the `varioref` package.

So make sure these packages are available to your  $\text{\LaTeX}$  compiler.

### 3 Portability

This class file should be ready to use with all common  $\text{\LaTeX}$  compilers (PDF $\text{\LaTeX}$ ,  $\text{\LaTeX}$ , X $\text{\LaTeX}$ , Lua $\text{\LaTeX}$ , ...) from the major  $\text{\TeX}$ -distributions (Te $\text{\TeX}$ , TexLive, Mik $\text{\TeX}$ ). If you experience problems, please inform the author.

## 4 Usage

### 4.1 Basic Usage

Use the templates provided below. Remember to  $\LaTeX$  your source file twice in order to have the title and final page correctly aligned.

#### 4.1.1 `uantwerpencoursetext` class

Use the following harness for your  $\LaTeX$  course text:

```
\documentclass[a4paper]{uantwerpencoursetext}

\usepackage{<include any packages you require here>}

\facultyacronym{<put your faculty's acronym here>}

\title{<put your title here>}
\subtitle{<put your subtitle here>}
\author{<put your name here>}

\courseversion{<put a version identifier here>}
\versionyear{<the publication date of the course here>}

\lecturer{<person teaching the course>}
\programme{<descriptor of first programme>}
\course{<course code>}{<name of the course>}%

\academicyear{<XXXX-YYYY>}

\begin{document}

    \maketitle

    % put your LaTeX code here

    \finalpage

\end{document}
```

The available faculty acronyms are listed in a table on page 8.

#### 4.1.2 uantwerpenmasterthesis class

Use the following harness for your L<sup>A</sup>T<sub>E</sub>X master's thesis:

```
\documentclass[a4paper]{uantwerpenmasterthesis}

\usepackage{<include any packages you require here>}

\facultyacronym{<put your faculty's acronym here>}

\title{<put your title here>}
\author{<put your name here>}
\supervisor{i}{<put supervisor's name(s) here>}{<affiliation goes here>}
\supervisor{ii}{<put supervisor's name(s) here>}{<affiliation goes here>}
\supervisor{iii}{<put supervisor's name(s) here>}{<affiliation goes here>}
\supervisor{iv}{<put supervisor's name(s) here>}{<affiliation goes here>}

% classmarker
\academicyear{<XXXX-YYYY>}

\begin{document}

    \maketitle

    % put your LaTeX code here

    \finalpage

\end{document}
```

The available faculty acronyms are listed in a table on page 8.

#### 4.1.3 uantwerpenletter class

Use the following harness for your L<sup>A</sup>T<sub>E</sub>X letter:

```
\documentclass[a4paper]{uantwerpenletter}

% setup fonts according to your specific TeX compiler setup

\usepackage{<include any packages you require here>}

% \logo{} only specify if you want to use your unit's logo

\sender{<put your name here>}{<put your title/role here>}
\facultyacronym{<put your faculty's acronym here>}
\unit{<put your unit here>}
```

```

\address{<put your multi-line address here>}
\email{<user name>}{<domain name>}
\phone{<put your phone number here, start with +32>}
\fax{<put your fax number here, start with +32>}
\mobile{<put your mobile number here, start with +32>}
\returnaddress{<put your single-line return address here>}

\to{<name of the addressee goes here>}
\toorganization{<name of the organization goes here>}
\toaddress{<multi-line address of the addressee goes here>}

\date{<specify date - otherwise today>}
\subject{<specify subject>}

\begin{document}

    \maketitle % generates top of the letter

    \opening{Dear <name>}

    <write your letter here>

    \closing{Kind regards,}

    \carboncopy{<put CC people here>}
    \enclosed{<put reference to enclosed documents here>}

\end{document}

```

The available faculty acronyms are listed in a table on page 8. You may use lists in the `\carboncopy` and `\enclosed` commands. The spacing will be compact.

#### 4.1.4 uantwerpenphdthesis class

```

\documentclass[b5paper,10pt,twoside,openright,filled]{uantwerpenphdthesis}

You may want to use common fonts
\usepackage{<include any additional packages you require here>}

\title{<put your title here>}
\author{<put your name here>}
\facultyacronym{<put your faculty's acronym here>}
\programme{PHD}
    {<put your programme's acronym here>}
    {<put your specialization's acronym here>}
\affiliation{<put your affiliation here>}
\address{<put your contact details here>}

```

```

\supervisor{i}{<put supervisor's name here>}{<affiliation goes here>}
\supervisor{ii}{<put supervisor's name here>}{<affiliation goes here>}

\jurychairman{<put chairman's name here>}{<affiliation goes here>}

\jurymember{i}{<put member's name here>}{<affiliation goes here>}
\jurymember{ii}{<put member's name here>}{<affiliation goes here>}
\jurymember{iii}{<put member's name here>}{<affiliation goes here>}

\phddegree{<put official degree name here>}
\defenselocation{<put location of defense here>}
\defensedate{<put defense year here>}
\titlepageimage{<set file name of title page image here>}

\isbn{<put ISBN13 number here>}
\depot{<put Depot number here>}

\begin{document}

\maketitle
\frontmatter
\tableofcontents
\mainmatter

% write your PhD text here

\appendix

% write appendix material here

\makefinalpage

\end{document}

```

## 4.2 The class options explained

The classes have several options. They are listed below. After every option, it has been indicated to which class the option applies (between square brackets, without prefix uantwerpen).

<b>copyright</b>	[coursetext] This option forces printing a watermark on every page. For the paper version of your document, this is inappropriate, but for any e-copy you make available, this may be appropriate;
<b>examiner</b>	[exam] This option allows to set the exam class in examiner mode, mentioning the exam-

iner mode on every page (as regular text in the header and also in a watermark) to make sure you never hand out that copy to students and suppressing the fillout pages.

**filled** [letter / coursetext / masterthesis / phdthesis]  
 This option causes the text to be filled (simultaneous left and right alignment). Though this setting is not recommended, it is provided because the default `\raggedright` cannot be undone. The **filled** option prevents the `\raggedright` from being issued. However, if you care about the typographic readability of your text, you shouldn't use this option.

**titlepagenoartwork** [coursetext / masterthesis / phdthesis]  
 This option forces the title pages to be typeset without circle graphics and logo. This allows for printing on a pre-printed color sheet that already contains circle graphics and logo;

**titlepagetableonly** [coursetext / masterthesis / phdthesis]  
 This option forces the title-page data to be printed in table form as first page. Some publishers require the manuscript to be delivered in this form. They perform the entire typesetting of the title page.

**qr** [coursetext]  
 This option allows you to generate a QR code containing the details of the course on the title page or the table-only title page. For this option to work, the package `pstricks` is loaded. It will not work with `pdfLATEX` unless you enable shell escape. Read your `pdfLATEX`-package documentation on how to do that.

Common sets of options depend on the purpose:

- to make a text ready for electronic distribution: **a4paper**, **copyright**.
- to make a camera-ready text (for printing) in case the cover is printed on a pre-printed color artwork cover sheet is: **a4paper**, **qr**, **titlepagenoartwork**.
- to make a camera-ready text (for printing) in case the cover is typeset based on table data: **a4paper**, **qr**, **titlepagetableonly**.
- to make a letter: no options (filling a letter is discouraged)
- to make an exam: no options (filling an exam is discouraged)
- to make a PhD text: **b5paper**, **twoside**, **openright** and **filled**

## 4.3 The macros explained

### 4.3.1 Common macros

After every macro, it has been indicated to which class the macro applies (between square brackets), and whether it is mandatory or not.

`\facultyacronym` [coursetext / masterthesis / phdthesis / exam] (mandatory)  
 This macro sets the acronym of the faculty. This macro also sets the faculty name according to the specified acronym. If you're missing a faculty or institute, please ask the author to complete the list.

The available acronyms are:

Acronym	Faculty name
ASoE	Antwerp School of Education
CPG	Centrum Pieter Gillis
FBD	Faculteit Farmaceutische, Biomedische en Diergeneeskundige Wetenschappen
GGW	Faculteit Geneeskunde en Gezondheidswetenschappen
IOB	Instituut voor Ontwikkelingsbeleid- en beheer
IOIW	Instituut voor Onderwijs- en Informatiewetenschappen
LW	Faculteit Letteren en Wijsbegeerte
OW	Faculteit Ontwerpwetenschappen
SW	Faculteit Sociale Wetenschappen
REC	Faculteit Rechten
TEW	Faculteit Toegepaste Economische Wetenschappen
TI	Faculteit Toegepaste Ingenieurswetenschappen
WET	Faculteit Wetenschappen

#### 4.3.2 Macros for the coursetext, masterthesis, phdthesis classes

`\academicyear` [coursetext / masterthesis] (mandatory)  
 Use this macro to specify the academic year in full, i.e. in the form XXXX-YYYY.

`\author` [coursetext / masterthesis / phdthesis] (mandatory)  
 This macro sets the author of the document. It also sets the `pdfauthor` tag of the `hyperref` package, so that the PDF-document meta-information is correct.

`\copyrightnotices` [coursetext] (optional)  
 Use this macro to specify additional copyright notice messages to appear in the copyright notice on the bottom of page 2 of your course text.

`\course` [coursetext] (mandatory)  
 Code (first argument) and name (second argument) of the curriculum course this coursematerial or exam belongs to. The code should be of the form: TNNNFFFAAA, with:



Code	Explanation
T	a number indicating the type of programme (1 for Bachelor courses, 2 for Master courses , 5 for specific courses of preparatory programmes)
NNN	a number assigned by the Faculty's administration
FFF	the acronym of your Faculty, e.g., FTI
AAA	an alphanumeric code assigned by the Faculty's administration

An example of such a code: 1001FTIWIS, for the first-semester mathematics course of the Faculty of Applied Engineering.

For courses of the Faculty of Applied Engineering, the name should be of the form **x-YYYYYYYY** with **x** the number of the semester and **YYYYYYYY** the official name of the course.

In case the course's name contains accented characters, one should also provide a qr version, containing utf8-characters only. The macro for this purpose takes only one argument, i.e. the course's name! This is to avoid inconsistencies in the course codes.

<code>\courseversion</code>	[coursetext] (optional) This macro indicates which version of the course this is.
<code>\defensedate</code>	[masterthesis / phdthesis] (mandatory) Date of the masterthesis defense in Dutch, in the form 'month year', e.g. "juni 2012". In case of a PhD thesis, only the year should be mentioned.
<code>\defenselocation</code>	[masterthesis / phdthesis] (optional) Location of the defense. Defaults to "Antwerpen".
<code>\diploma</code>	[masterthesis] (mandatory) This must be the official title, in Dutch. To avoid errors, we chose to use specific codes, that will expand to the correct description. These codes are specific for the Faculty of Applied Engineering. If you want the author of the package to add codes for your faculty, just ask!

Code	Description (in Dutch!)
Faculteit Toegepaste Ingenieurswetenschappen	
MA-IW-BK	Master of Science in de industriële wetenschappen: bouwkunde
MA-IW-BCH	Master of Science in de industriële wetenschappen: biochemie
MA-IW-CH	Master of Science in de industriële wetenschappen: chemie
MA-IW-EI	Master of Science in de industriële wetenschappen: elektronica-ICT
MA-IW-EI-AE	Master of Science in de industriële wetenschappen: elektronica-ICT, afstudeerrichting, Automotive Engineering
MA-IW-EI-ICT	Master of Science in de industriële wetenschappen: elektronica-ICT, afstudeerrichting ICT
MA-IW-EM-AE	Master of Science in de industriële wetenschappen: Elektromechanica, afstudeerrichting Automotive Engineering
MA-IW-EM-AU	Master of Science in de industriële wetenschappen: Elektromechanica, afstudeerrichting Automatisering
MA-IW-EM-EM	Master of Science in de industriële wetenschappen: Elektromechanica, afstudeerrichting Elektromechanica
MA-IW-EM-EN	Master of Science in de industriële wetenschappen: Elektromechanica, afstudeerrichting Energie
PHD-TI-BK	Doctor in de Toegepaste Ingenieurwetenschappen: Bouwkunde
PHD-TI-BCH	Doctor in de Toegepaste Ingenieurwetenschappen: Biochemie
PHD-TI-CH	Doctor in de Toegepaste Ingenieurwetenschappen: Chemie
PHD-TI-EI	Doctor in de Toegepaste Ingenieurwetenschappen: Elektronica-ICT
PHD-TI-EM	Doctor in de Toegepaste Ingenieurwetenschappen: Elektromechanica
Faculteit Toegepaste Economische Wetenschappen	
MA-TEW-HI	Master of Science in de toegepaste economische wetenschappen: handelsingenieur
MA-TEW-HIBI	Master of Science in de toegepaste economische wetenschappen: handelsingenieur in de beleidsinformatica
MA-TEW-EB	Master of Science in de toegepaste economische wetenschappen: economische beleid
MA-TEW-BK	Master of Science in de toegepaste economische wetenschappen: bedrijfskunde

- `\lecturer` [coursetext] (mandatory)  
This is the name of the person that actually teaches the course (in Dutch: titularis). If there are multiple persons, please, use the macros `\lectureri`, `\lecturerii`, `\lectureriii`, `\lectureriv`.
- `\phddegree` [phdthesis] (mandatory)  
This is the official degree name (in the appropriate language, possibly mixed “dutch (english)”).

<code>\programme</code>	[coursetext] (mandatory) This macro takes three arguments (for the time being, only applicable to the faculty of applied engineering): <ul style="list-style-type: none"> <li>• the type of the programme: BA, SP, VP or MA</li> <li>• the domain of the programme: IW</li> <li>• the qualifier of the programme: BK, CH, BCH, EM, EI</li> </ul> <p>If you need more programme classes or qualifiers, ask the author to complete the available codes. Correct usage of the macro will result in error-free descriptions on your title page. You can overrule the standard descriptions, by specifying 'FREE' as first argument and a free text description as second, leaving the third one empty. However, we strongly advise against taking this route. Instead, ask the author to complete the available codes.</p>
<code>\publisher</code>	[coursetext] (mandatory) This macro sets the publisher information of the document. It is printed on the front page. It defaults to the repographic service of campus Groenenborger, one of the standard printing services of Universiteit Antwerpen.
<code>\publishercode</code>	[coursetext] (mandatory) This macro sets the publisher code of the document. It is printed on the front page. This is code that the publisher uses for its internal administration. It may be a proprietary code, or an ISBN number.
<code>\subtitle</code>	[coursetext / phdthesis] (optional) This macro sets the title of the document. You may use this <ul style="list-style-type: none"> <li>• to further clarify the title</li> <li>• to indicate the nature of this document</li> </ul> <p>The latter is to be considered when you want to provide multiple documents as parts of the full course text (e.g., Course Notes, Formula Collection, Exercise Book, Solution Book). This macro also sets the <b>subject</b> tag of the hyperref package, so that the PDF-document meta-information is correct.</p>
<code>\supervisor</code>	[masterthesis / phdthesis] (mandatory) This is the name of the person that promotes/supervises the thesis. Please, use the macros <code>\supervisor<i>i</i></code> , <code>\supervisor<i>ii</i></code> , <code>\supervisor<i>iii</i></code> , <code>\supervisor<i>iv</i></code> .
<code>\title</code>	[coursetext / masterthesis / phdthesis] (mandatory) This macro sets the title of the document. It also sets the <code>pdftitle</code> tag of the hyperref package, so that the PDF-document meta-information is correct.
<code>\titlepageimage</code>	[phdthesis] (optional) This sets the central image on the title page to appear clipped within the curves.

`\versionyear` [coursetext] (mandatory)  
This is to be the year in which you published the current version of the course in the form YYYY.

### 4.3.3 Macros for the letter class

`\address` [letter] (mandatory)  
Address of the sending unit (or faculty). This can be different from the return address. Newlines are allowed and encouraged.

`\carboncopy` [letter] (optional)  
List of persons receiving a copy of this letter. Format at will.

`\closing` [letter] (mandatory)  
Closing clause of the letter. E.g. 'Best regards,'.

`\date` [letter] (optional)  
Date of the letter. If not specified today's date (at the time of running  $\text{\LaTeX}$ ) will be used.

`\email` [letter] (optional)  
E-mail address of the sending person, or the administrative person tracking the letter. This must definitely be someone that can answer questions related to this letter.

- first argument: user name
- second argument: domain name

`\enclosed` [letter] (optional)  
List of enclosed documents. Format at will.

`\fax` [letter] (optional)  
Probably facsimile is not used anymore, but anyway: fax number of the sending person. See also `\email`.

`\logo` [letter] (optional)  
file name of an alternative logo to use. The file name must be the name of a file in the search path of type PDF. If this macro is not used, The default logo of the university will be used.

`\mobile` [letter] (optional)  
Mobile phone number of the sending person. See also `\email`.

`\opening` [letter] (mandatory)  
Opening address of the letter. E.g. 'Dear X,'.

`\phone` [letter] (optional)  
Phone number of the sending person. See also `\email`.

<code>\returnaddress</code>	[letter] (mandatory) This is a short return address (listed in small font on top of the destination address (such that it is visible in a windowed envelope (European format))). It should fit on a single line. Typically we list an acronym for the unit, a room number, a campus name and address. The goal is to get the undelivered letter back to the person that can take action accordingly.
<code>\sender</code>	[letter] (mandatory) Description of the person writing the letter. <ul style="list-style-type: none"> <li>• first argument: name of the person writing the letter</li> <li>• second argument: title / role of the person</li> </ul> <p>Newlines are not allowed in the arguments.</p>
<code>\signature</code>	[letter] (optional) Add a signature (in between the closing statement of the letter and the sender's name. This might be a text message or a picture of your signature.
<code>\subject</code>	[letter] (mandatory) Short descriptive subject that describes the contents of the letter.
<code>\to</code>	[letter] (mandatory) Name of the addressee. Newlines are allowed. Preferably name and role are split over two lines.
<code>\toaddress</code>	[letter] (mandatory) Address of the addressee. Newlines are allowed. The address should fit on max. 3 lines.
<code>\toorganization</code>	[letter] (optional) Name of the organization that employs the addressee.
<code>\unit</code>	[letter] (optional) Name of the unit to which the person belongs. This can be a research group, a laboratory, an administrative division, etc. Newlines are allowed.

#### 4.3.4 Macros for the exam class

<code>\author</code>	[exam] (mandatory) The author of the exam (may be multiple authors, separated by commas). On the title page, these will be labeled as 'Professor(s) - Titularis(sen)'.
<code>\academicyear</code>	[exam] (mandatory) Use this macro to specify the academic year in full, i.e. in the form XXXX-YYYY.
<code>\course</code>	[exam] (mandatory) see description of <code>\course</code> macro on page 8.

<code>\examdate</code>	specifies the date of the exam. We recommend the YYYY-MM-DD format, but you are free to chose your own coding scheme for dates. We advise against using UNIX epoch time, to avoid problems in the first semester exams in 2038.
<code>\examgroupnumber</code>	[exam] mentions the group number (may be empty)
<code>\examlength</code>	specifies the length of the exam in a unit of time, e.g. '4h'
<code>\exampart</code>	[exam] (mandatory) Description of the part of the course the exam covers. Often the evaluation of a course consists of multiple evaluation elements (e.g. a written exam, a portfolio defense and lab reports). Using this macro you can indicate the part this exam covers. E.g. it could be 'Written Exam' (to distinguish from the other parts 'portfolio defense' and 'lab reports').
<code>\extrainfo</code>	specifies the extra information that appears on the back of the title page, regarding the materials that can be used during the examination and cautioning the students not to commit fraude.
<code>\programme</code>	[exam] (mandatory) see description of <code>\programme</code> macro on page 11.
<code>\rooms</code>	specifies the rooms in which the exam will take place. This is useless info for the student, but may be of convenience for you as author or supervisor of the exam. Use UAntwerpen standard room designators, e.g. 'G.U.025' for room number 025, on the Groenenborgercampus in the U-building.
<code>\studentnr</code>	specifies the exam copy number. This will appear on every page of the exam, easing the reassembly of pages that do not contain any name. Moreover, it allows for blind correction as the student only writes his name ot he front page.
<code>\tend</code>	specifies the end time of the exam in a format identical to the one chosen for <code>\tstart</code> .
<code>\tstart</code>	specifies the start time of the exam, preferable in the format 'HHhMM', e.g. '08h30'.

## 4.4 Examples

### 4.4.1 uantwerpencoursetext

This example uses the `qr` option (that invokes the `auto-pst-pdf` package) so enable 'write18' or 'shell-escape' for your L<sup>A</sup>T<sub>E</sub>X compiler.

```
<*ct-example>
\documentclass[a4paper,11pt,oneside,openright,english,qr,copyright]{uantwerpencoursetext}

\usepackage[english,dutch]{babel}
```

```

\usepackage{lipsum} % this is just for some dummy text, please remove

\title{Z\'agen, zoeken en zuchten}
\qrttitle{Zágen, zoeken en zuchten}
\subtitle{Cursusnota's}
\author{Walter Daems en Paul Levrie}

\courseversion{1.3}
\versionyear{2016}

\lectureri{Zoltan Zo"ekers}
\qrlectureri{Zoltan Zoëkers}
\lecturerii{Siana Sigh}
\lectureriii{Zeger de Z\'ager}
\qrlectureriii{Zeger de Záger}

\facultyacronym{TI}
\programme{MA}{IW}{EI}
\coursei{2023FTIZZ}{5-Zoekmachines in een zaagperspectief}
\courseii{2045FTIIII}{6-Zaagmachines in \'e\'en zuchtperspectief}
\qrcourseii{6-Zaagmachines in één zuchtperspectief}

\academicyear{2015-2016}

\publisher{Universiteit Antwerpen\\
  Cursusdienst en reprografie\\
  Campus Groenenborger, G.U.027\\
  Groenenborgerlaan 171\\
  2020 Antwerpen\\
  T +32 3 265 32 15\\
  F + 32 3 233 32 27\\
  E cursusdienst.cgb@uantwerpen.be}

\publishercode{C11111102}

\copyrightnotices{
  The graphics in this document have been typeset using \texttt{TikZ}.\
  This document has been \TeX-ed on a GNU/Linux workstation.
}

\begin{document}
\selectlanguage{dutch} % or english if your text is in English

\maketitle

\frontmatter

\tableofcontents

```

```

\mainmatter
\chapter*{Inleiding}
\lipsum[1]
\chapter{Onzin voor dummies}

\section{Het gebeuren}
\lipsum[2]
\begin{equation}
e^{-j\pi} + 1 = 0
\end{equation}

\lipsum[3]
\section{En waartoe het geleid heeft}

\lipsum[4]

\subsection{Herhaling}

\lipsum[5]

\subsection{Begint vervelend te worden}

\lipsum[6]
\newpage

\subsection{Begint echt vervelend te worden}

\lipsum[7-10]

\chapter{Besluit}

\appendix

\chapter{Symbolen}
\chapter{Romeinse sprekers}
\chapter{Referentielijst}

\makefinalpage

\end{document}
</ct-example>

```

#### 4.4.2 uantwerpenmasterthesis

```

<*mt-example>
\documentclass[a4paper,11pt,twoside,openright,english]{uantwerpenmasterthesis}

\usepackage[english]{babel} % or dutch if your text is in Dutch

```



```

\usepackage{lipsum} % this is just for some dummy text, please remove

\title{Minimax optimisatie voor performantieruimtemodellering}
\author{Bert Bibber}

\supervisor{i}{Prof. dr. ir. Kumulus}{Universiteit Antwerpen}
\supervisor{ii}{Prof. dr. Hilarius Warwinkel}{TNT-Bang, N.V.}
\supervisor{iii}{ing. Piet Pienter}{POM}

\facultyacronym{TI}
\academicyear{2015-2016}
\diploma{MA-IW-EI-ICT}
\defenselocation{Antwerpen}
\defensedate{juni 2016}

\begin{document}

\maketitle

\frontmatter

\tableofcontents

\mainmatter
\chapter*{Inleiding}

\lipsum[1]

\chapter{Onderzoeksvraag}

\section{Het gebeuren}

\lipsum[2]

\begin{equation}
e^{-j\pi} + 1 = 0
\end{equation}

\lipsum[3]

\chapter{Literatuurstudie}

\chapter{Theoretische achtergrond}

\chapter{Eigen realisatie}

\chapter{Besluit}

\appendix

```

```

\chapter{Symbolen}
\chapter{Referentielijst}

\makefinalpage

\end{document}
</mt-example>

```

#### 4.4.3 uantwerpenphdthesis

##### Dutch

```

<*pt-example1>
\documentclass[b5paper,10pt,twoside,openright,filled]{uantwerpenphdthesis}

  You may want to use common fonts
\usepackage{mathptmx}
\usepackage{fontspec}
\setsansfont{Calibri}

\usepackage[dutch]{babel} % or dutch if your text is in Dutch
\usepackage{lipsum} % this is just for some dummy text, please remove

\title{Harmonische Signaalanalyse\met behulp van Lineaire
  Operatoren}
\subtitle{Waarom moeten titels van doctoraatsthesisen toch altijd
  lang en onverstaanbaar zijn?}
\author{Ing. Theofiel Hoekaff}
\facultyacronym{TI}
\programme{PHD}{IW}{EI}
\affiliation{Universiteit Antwerpen\
  Faculteit Toegepaste Ingenieurswetenschappen\
  Constrained Systems Lab (CoSys-Lab)}
\address{Groenenborgerlaan 171, 2020 Antwerpen, Belgi\~e\
  M: theofiel.hoekaff@uantwerpen.be\
  T: +32 265 00 00
}

\supervisorI{Prof. dr. W. Vlaams}{Universiteit Antwerpen, Belgi\~e}
\supervisorII{Prof. dr. J. Stekker}{Universiteit Antwerpen, Belgi\~e}

\jurychairman{Prof. dr. P. Dalinckx}{Universiteit Antwerpen, Belgi\~e}

\jurymemberI{Prof. dr. J. Dezerooder}{Universiteit Antwerpen, Belgi\~e}
\jurymemberII{Prof. dr. P. De Tollenaere}{Flanders Make, Belgi\~e}
\jurymemberIII{Prof. dr. M. Byr}{IMEC, Nederland}

\phddegree{doctor in de toegepaste ingenieurswetenschappen}

```

```

\defenselocation{Antwerpen}
\defensedate{2018}
\titlepageimage{keyboard.jpg}

\isbn{987-90-57285-34-7}
\depot{D/2018/12.293/03}

\begin{document}

\maketitle

\frontmatter

\tableofcontents

\mainmatter
\chapter*{Inleiding}

\lipsum[1]

\chapter{Onderzoeksvraag}

\section{Het gegeven}

\lipsum[2]

\begin{equation}
e^{-j\pi} + 1 = 0
\end{equation}

\lipsum[3-17]

\chapter{Literatuurstudie}

\lipsum[18-19]

\chapter{Theoretische achtergrond}

\lipsum[20-21]

\chapter{Eigen realisatie}

\lipsum[22-24]

\chapter{Besluit}

\lipsum[25]

\appendix
\chapter{Symbolen}

```

```

\chapter{Publicaties}
  Put your bibliography here using BibTeX

\makefinalpage

\end{document}
</pt-example1>

```

## English

```

<*pt-example2>
\documentclass[b5paper,10pt,twoside,openright,filled]{uantwerpenphdthesis}

  use some fancy font
\usepackage{newpxtext}
\usepackage{newpxmath}

\usepackage[english]{babel} % or dutch if your text is in Dutch
\usepackage{lipsum} % this is just for some dummy text, please remove

\title{Harmonic Signal analysis\\based on Linear Operators}
\subtitle{How did Mindy linearly kill Mork's IC signal analyzer?}
\author{Ing. Theodore Edgeoff}
\facultyacronym{TI}
\affiliation{University of Antwerp\\
  Faculty of Applied Engineering\\
  CoSys-Lab}
\address{Groenenborgerlaan 171, 2020 Antwerpen, Belgi"e\\
  M: theofiel.hoekaff@uantwerpen.be\\
  T: +32 265 00 00
}

\supervisorI{Prof. dr. W. Vlaams}{University of Antwerp, Belgium}
\supervisorII{Prof. dr. J. Stekker}{University of Antwerp, Belgium}

\jurychairman{Prof. dr. P. Dalinckx}{University of Antwerp, Belgium}

\jurymemberI{Prof. dr. J. Dezerooder}{University of Antwerp, Belgium}
\jurymemberII{Prof. dr. P. De Tollenaere}{Flanders Make, Belgium}
\jurymemberIII{Prof. dr. M. Byr}{IMEC, The Netherlands}

\facultyacronym{TI}
\phddegree{doctor in applied engineering}
\defenselocation{Antwerpen}
\defensedate{2018}
\titlepageimage{keyboard.jpg}

```

```

\isbn{987-90-57285-34-7}
\depot{D/2018/12.293/03}

\begin{document}

\maketitle

\frontmatter

\tableofcontents

\mainmatter
\chapter*{Introduction}

\lipsum[1]

\chapter{Research question}

\section{The datum}

\lipsum[2]

\begin{equation}
e^{-j\pi} + 1 = 0
\end{equation}

\lipsum[3-17]

\chapter{Literature review}

\lipsum[18-19]

\chapter{Theoretical background}

\lipsum[20-21]

\chapter{Technical results}

\lipsum[22-24]

\chapter{Conclusion}

\lipsum[25]

\appendix

\chapter{Symbols}

Put your bibliography here using BibTeX

```

```

\makefinalpage

\end{document}
</pt-example2>

```

#### 4.4.4 uantwerpenletter

##### Plain example

```

<*le-example>
\documentclass[a4paper]{uantwerpenletter}

% As a good UAntwerpen citizen, you would use the calibri font.
% As this only works for XeLaTeX or LuaLaTeX, we chose to include
% cmbright instead. So for ease of use, we include:
\usepackage{cmbright}
% But if you have XeLaTeX or LuaLaTeX, use the following instead:
%\usepackage{fontspec}
%\setmainfont{Calibri}

\usepackage[english]{babel}
\usepackage{lipsum} % this is just for some dummy text, please remove

\sender{Prof. Walter Daems}{Senior Lecturer}
\facultyacronym{TI}
\unit{CoSys-Lab}
\address{
  Campus Groenenborger\\
  Groenenborgerlaan 171\\
  B-2020 Antwerpen\\
  BELGIUM}
\email{walter.daems}{uantwerpen.be}
\phone{+32 3 265 98 43}
\mobile{+32 499 355 115}
\returnaddress{FTI - U.301 -- Groenenborgerlaan 171, 2020 Antwerpen, BELGIUM}

\to{Prof. B. Bonette}
\toorganization{Mumford University}
\toaddress{
  450 Morning Mall\\
  Mumford, DX 94305-2004\\
  USA}

\date{January 3, 2016}
\subject{Congratulations for online video lectures}

\begin{document}
\maketitle

```

```

\opening{Dear Prof. Bonette,}

I'd like to congratulate you and the other professors of your
university on the very instructive video lectures
provided by your University. They are valued very
highly.

You inspired many a professor at our university to provide more
technical content beyond classical paper courses.
Based on your inspiring lectures, some students desire to candidate
themselves for taking an internship at your university. You can find
their details enclosed.

Below, you can find a few more paragraphs to illustrate that this
class can generate multipage letters.

\lipsum[1-3]

\closing{Kind regards,}
% you might want to insert a signature picture or text:
% \signature{\includegraphics{signature.jpg}}
\carboncopy{Prof. S. Mariotte, Mumford University}
\enclosed{
  \begin{enumerate}
    \item list of course numbers that are most frequently viewed at
      our university (1pp)
    \item a list of students desiring to take an internship at
      Mumford University (2pp)
    \end{enumerate}
}
\end{document}
</le-example>

```

### Example with configuration file

Probably, one has to write many letters. The sender details will be most certainly valid for many an occasion. Therefore, you might want to consider putting this default setup in a configuration file, e.g. `uantwerpenletter.cfg`:

```

<*le-cfg>
% configuration file for uantwerpenletter class
\usepackage{fontspec} % XeLaTeX/LuaTeX specific, replace by e.g.
\setmainfont{Calibri} % \usepackage{cmbright}
\sender{Prof. Walter Daems}{Senior Lecturer}
\facultyacronym{TI}
\unit{CoSys-Lab}
\address{

```

```

Campus Groenenborger\\
Groenenborgerlaan 171\\
B-2020 Antwerpen\\
BELGIUM}
\email{walter.daems}{uantwerpen.be}
\phone{+32 3 265 98 43}
\mobile{+32 499 355 115}
\returnaddress{FTI - U.301 -- Groenenborgerlaan 171, 2020 Antwerpen, BELGIUM}
</le-cfg>

```

The file can then be loaded in the preamble of your letter:

```
\input{uantwerpenletter.cfg}
```

After loading this configuration file, you may override some elements if this is appropriate.

You may also consider using multiple configuration files in case you have multiple roles in the university. Just make sure they are on your L<sup>A</sup>T<sub>E</sub>X search path.

#### 4.4.5 uantwerpenexam

Below you can find two examples:

- A single column layout (single language) exam
- A double column layout (English-Dutch) exam

If you require more language combinations, ask the author to implement this.

#### Single column

```

<*ex-example1>
\documentclass[a4paper,10pt]{uantwerpenexam}
\usepackage{newpxtext} % demonstration of some fine font packages
\usepackage{newpxmath}
\usepackage{enumitem}
\usepackage[dutch]{babel} % last language loaded will
                           % determine logo version (change to
                           % [dutch] for a monolingual version)
\course{19876FTIDUM}{5-Bistrologie}
\author{Walter Daems}
\facultyacronym{TI}
\programme{BA}{IW}{EI}

```



```

\academicyear{2017-2018}
\exampart{Schriftelijk Examen}
\examgroupnumber{1 (eerste examenkans-inhaal)}
\examdate{2018-01-29}
\examlength{4h}
\tstart{08h30}
\tend{12h30}
\rooms{G.U.025}
\extrainfo{
  Belangrijke informatie:\\par
  Het volledige Onderwijs- en Examenreglement (OER) is van toepassing
  op dit examen.
  Toch wil ik vooraf nog een aantal regels duidelijk stellen:
  \begin{enumerate}
    \item Mogen op je tafeltje aanwezig zijn:
      (1) schrijfgerief, los d.w.z. \emph{niet} in een pennenzak (geen
      papier; er zit examenpapier bij de opgaven),
      (2) je rekenmachine (zonder alfanumerieke data en zonder
      geheugenkaarten),
      (3) het formularium.
    \item Volledig \emph{verboden te gebruiken}: alle apparatuur met
      geheugen- of communicatiefunctie zoals GSM, smartphone,
      smartwatch, muziekspeler, \ldots
      Je tas staat vooraan in het lokaal. Hang je jas aan de kapstok of
      leg hem bij je tas.
    \item Schrijf je naam op het titelblad van de opgave in het daartoe
      voorziene vak. Op de andere bladen schrijf je je naam
      \emph{niet}. Je examenopgave heeft een uniek nummer dat toelaat het
      te identificeren.
    \item Neem je tijd om \emph{alle vragen schriftelijk te}
      beantwoorden}. Het puntengewicht van een vraag is bovenaan de vraag
      op de opgavebladen vermeld. Wees volledig in je antwoord, maar ter
      zake. Houd rekening met de beschikbare tijd.
    \item Op het einde van het examen geef je \emph{alle} bladen weer af
      aan de aanwezige docent.
  \end{enumerate}
  Succes!
}
\studentnr{127}
\setmcsymbol{\bigcirc}

\begin{document}
\maketitle
\question{[VLATOP-BISTRO]}
\questionweight{3}

Geef de eerste vijf laureaten van de VLATOP-bistro
competitie.

\question{[BECHAMEL]}

```

```

\questionweight{7}

Welk van de onderstaande ingrediënten hoort niet thuis in
een b\'echamel saus:
\mc{Melk}
\mc{Boter}
\mc{Bloem}
\mc{Eieren}
\mc{Suiker}

\insertsolutionspagepartial{2}

\insertsolutionspage{}
\clearpage

\question{[BISTROCULTURE-1]}
\questionweight{10}

\begin{enumerate}[label=\alph*]
\item Bespreek de evolutie van de Noord-Europese bistrocultuur
gedurende de laatste vijftig jaar.
\item Breng dit in relatie tot de
opkomst van de georganiseerde recensies zoals die van Michelin en
Gault-Millau.
\end{enumerate}

\insertsolutionspagepartial{23}
\foreach \i in {1,2,3} {
\insertsolutionspage{}
}
\foreach \i in {1,2} {
\insertsolutionspage{Kladpapier}
}
\end{document}
</ex-example1>

```

## Two columns

```

<*ex-example2>
\documentclass[a4paper,10pt]{uantwerpenexam}
\usepackage{newpxtext} % demonstration of some fine font packages
\usepackage{newpxmath}
\usepackage{enumitem}
\usepackage[dutch,english]{babel} % last language loaded will
% determine logo version (change to
% [dutch] for a monolingual version)
\course{19876FTIDUM}{5-Bistrology}
\author{Walter Daems}

```

```

\facultyacronym{TI}
\programme{BA}{IW}{EI}
\academicyear{2017-2018}
\exampart{Written Exam}
\examgroupnumber{1 (eerste examenkans-inhaal)}
\examdate{2018-01-29}
\examlength{4h}
\tstart{08h30}
\tend{12h30}
\rooms{G.U.025}
\extrainfo{
  \engdut{
    Important information:\\\par
    The Education and Examination Regulations (EER) hold for this
    examination in full.
    However, before starting, I'd like to set some rules straight:
    \begin{enumerate}
      \item \emph{Can be used:} (1) writing gear (\emph{not} in a pencil
        case); you don't need paper; there's plenty of paper in your exam
        copy;
        (2) your calculator (without alphanumerical data and without memory
        cards); (3) the formula collection.
      \item \emph{May not be used:} all equipment with memory or
        communications facilities, like cell phones, smart phones, smart
        watches, music players, \ldots
        Your bag must be put in the front of the room. Put your coat on the
        hallstand or next to your bag.
      \item Write your name on the title page. Don't write your name on
        the subsequent pages. Your copy has a unique number to identify it
        as yours.
      \item Take your time to \emph{answer all questions in writing}. The
        point weights are listed above every question. Be complete in your
        answer, but stick to the point. Take into account the available time.
      \item Hand in \emph{all} papers to the staff member on duty, at the
        end of the examination.
    \end{enumerate}
    Success!
  }
}
{
  Belangrijke informatie:\\\par
  Het volledige Onderwijs- en Examenreglement (OER) is van toepassing
  op dit examen.
  Toch wil ik vooraf nog een aantal regels duidelijk stellen:
  \begin{enumerate}
    \item Mogen op je tafeltje aanwezig zijn:
      (1) schrijfgierief, los d.w.z. \emph{niet} in een pennenzak (geen
        papier; er zit examenpapier bij de opgaven),
      (2) je rekenmachine (zonder alfanumerieke data en zonder
        geheugenkaarten),
      (3) het formularium.
    \end{enumerate}
}

```

```

\item Volledig \emph{verboden te gebruiken}: alle apparatuur met
geheugen- of communicatiefunctie zoals GSM, smartphone,
smartwatch, muziekspeler, \ldots
Je tas staat vooraan in het lokaal. Hang je jas aan de kapstok of
leg hem bij je tas.
\item Schrijf je naam op het titelblad van de opgave in het daartoe
voorzien vak. Op de andere bladen schrijf je je naam
\emph{niet}. Je examenopgave heeft een uniek nummer dat toelaat het
te identificeren.
\item Neem je tijd om \emph{alle vragen schriftelijk te
beantwoorden}. Het puntengewicht van een vraag is bovenaan de vraag
op de opgavebladen vermeld. Wees volledig in je antwoord, maar ter
zake. Houd rekening met de beschikbare tijd.
\item Op het einde van het examen geef je \emph{alle} bladen weer af
aan de aanwezige docent.
\end{enumerate}
Succes!
}
}

\studentnr{29}
\begin{document}
\maketitle
\question{[VLATOP-BISTRO]}
\questionweight{3}

\engdut{
Write down the first five laureates of the VALTOP-bistro competition.
}
{
Geef de eerste vijf laureaten van de VLATOP-bistro
competitie.
}

\question{[BECHAMEL]}
\questionweight{7}

\engdut{
Which of the ingredients below does not belong in a b\'echamel
sauce:
}
{
Welk van de onderstaande ingrediënten hoort niet thuis in
een b\'echamel saus:
}
\engdutmc{Milk}{Melk}
\engdutmc{Butter}{Boter}
\engdutmc{Flower}{Bloem}
\engdutmc{Eggs}{Eieren}
\engdutmc{Sugar}{Suiker}

```

```

\insertsolutionspagepartial{20}

\insertsolutionspage{}
\clearpage

\question{[BISTROCULTURE-1]}
\questionweight{10}

\engdut{
  \begin{enumerate}[label=\alph*]
    \item Discuss the evolution of the Northern European bistro culture during
      the latest fifty years.
    \item Relate this to the rise of organized reviews
      like the ones of Michelin and Gault-Millau.
  \end{enumerate}
}
{
  \begin{enumerate}[label=\alph*]
    \item Bespreek de evolutie van de Noord-Europese bistrocultuur
      gedurende de laatste vijftig jaar.
    \item Breng dit in relatie tot de
      opkomst van de georganiseerde recensies zoals die van Michelin en
      Gault-Millau.
  \end{enumerate}
}

\insertsolutionspagepartial{22.5}
\foreach \i in {1,2,3} {
  \insertsolutionspage{}
}
\foreach \i in {1,2} {
  \insertsolutionspage{Scrap/Klad}
}
\end{document}
</ex-example2>

```

## 5 Implementation

### 5.1 Class inheritance

For convenience, we'll derive from the standard L<sup>A</sup>T<sub>E</sub>X book, letter and article class.

Before loading the class, we provide the extra options.

```
1 <*ct>
```

```

2 \newif\if@copyright
3 \DeclareOption{copyright}{\@copyrighttrue}
4 \newif\if@qr
5 \DeclareOption{qr}{\@qrtrue}
6 \ct

7 <*ct | mt | pt>
8 \newif\if@titlepagenoartwork
9 \DeclareOption{titlepagenoartwork}{\@titlepagenoartworktrue}
10 \newif\if@titlepagetableonly
11 \DeclareOption{titlepagetableonly}{\@titlepagetableonlytrue}
12 </ct | mt | pt>
13 <*ct | mt | pt | le>
14 \newif\if@filled
15 \DeclareOption{filled}{\@filledtrue}
16 </ct | mt | pt | le>
17 <*ex>
18 \newif\if@examiner
19 \DeclareOption{examiner}{\@examinertrue}
20 </ex>

```

We execute some standard options: We load the book class for course texts and master theses.

```

21 <*ct | mt | pt>
22 \ExecuteOptions{a4paper,11pt,final,oneside,openright}
23 \ProcessOptions
24 \LoadClassWithOptions{book}
25 </ct | mt | pt>
26 % We load the |letter| class for letters
27 <*le>
28 \ExecuteOptions{a4paper,10pt,final,oneside,openright}
29 \ProcessOptions
30 \LoadClassWithOptions{letter}
31 \newcommand\tat{\makeatletter @\makeatother}
32 </le>
33 % We load the |article| class for exams
34 <*ex>
35 \ExecuteOptions{a4paper,twoside,10pt}
36 \ProcessOptions
37 \LoadClassWithOptions{article}
38 </ex>

```

## 5.2 Modern typesetting

Let's force some modern typesetting without paragraph indentation and with a decent paragraph spacing.

```

39 <*ct | mt | pt | le | ex>
40 \setlength{\parindent}{0pt}
41 \addtolength{\parskip}{0.75\baselineskip}
42 \setcounter{secnumdepth}{3}
43 </ct | mt | pt | le | ex>

```

## 5.3 Auxiliary packages

Reinventing the wheel is a waste of time, let's preload some appropriate auxiliary packages that have proven their value.

### 5.3.1 Geometry

Let's reduce the margins to 1 inch each.

```

44 <*ct | mt | pt | ex>
45 \RequirePackage[top=1in, bottom=1in, left=1in, right=1in]{geometry}
46 </ct | mt | pt | ex>
47 <*le>
48 \RequirePackage[top=1in, bottom=1in, left=1.34in, right=1in]{geometry}
49 \RequirePackage[normalem]{ulem}
50 \RequirePackage{atbegshi}
51 </le>

```

### 5.3.2 Font packages

Note that the use of cmbright is no longer imposed (as of v1.3). Using a good font is now up to the user. The packages 'newpxtext/newpxmath' and 'cmbright' are highly recommended. For writing letters, 'Calibri' is the official font of the University of Antwerp.

```

52 <*ct | mt | pt | le>
53 % no more font code
54 </ct | mt | pt | le>

```

### 5.3.3 Boilerplate packages

Some boilerplate packages and an empty macro to test against (using\ifx)

```

55 <*ct | mt | pt | le | ex>
56 \RequirePackage{etoolbox}
57 \RequirePackage{ifthen}
58 \IfFileExists{shellesc.sty}{\RequirePackage{shellesc}}{}
59 \newcommand{\@emptymacro}{}
60 </ct | mt | pt | le | ex>

```

### 5.3.4 Graphics packages

Graphics packages that are required for the title page, but may come in handy for regular use as well.

Some packages for coursetext and masterthesis:

```
61 <*ct | mt | pt | le | ex>
62 \RequirePackage{graphicx}
63 \RequirePackage{color}
64 \RequirePackage{tikz}
65 \usetikzlibrary{positioning}
66 \RequirePackage{eso-pic}
67 </ct | mt | pt | le | ex>
68 <*ct>
69 \if@copyright
70 \RequirePackage[firstpage=false,contents={Copyright University of Antwerp, All Rights Reserved}]
71 \fi
72 </ct>
73 <*pt>
74 \usepackage{ean13isbn}
75 </pt>
```

In uantwerpencoursetext we also want to generate a qr code. Therefore we load the `pst-barcode` and `auto-pst-pdf` package. In this case you must enable 'write18' or 'shell-escape' for your L<sup>A</sup>T<sub>E</sub>X compiler. Check your documentation on how to do so!

```
76 <*ct>
77 \if@qr
78 \RequirePackage{auto-pst-pdf}
79 \RequirePackage{pst-barcode}
80 \fi
81 </ct>
```

### 5.3.5 Header/Footer

The de-facto standard for headers and footers:

```
82 <*ct | mt | pt | le | ex>
83 \RequirePackage{fancyhdr}
84 </ct | mt | pt | le | ex>
```

## 5.4 Colors

```
85 <*ct | mt | pt | le | ex>
86 \definecolor{uacorpbord}{cmyk}{0.00,1.00,0.60,0.37}
87 \definecolor{uacorpblue}{cmyk}{1.00,0.25,0.00,0.50}
```



```

88 \definecolor{uacorporlightblue}{cmyk}{1.00,0.00,0.08,0.13}
89 \definecolor{uacorpororange}{cmyk}{0.00,0.32,1.00,0.09}
90 \definecolor{uافتifresh}{cmyk}{0.34,1.00,0.00,0.00}
91 \definecolor{uافتisober}{cmyk}{0.10,1.00,0.00,0.49}
92 \definecolor{lightgray}{cmyk}{0.00,0.00,0.00,0.05}
93 \definecolor{darkgray}{cmyk}{0.00,0.00,0.00,0.80}
94 \definecolor{watermark}{cmyk}{0.00,0.00,0.00,0.05}
95 </ct | mt | pt | le | ex>

```

## 5.5 Babel provisions

```

96 <*ct | mt | pt | le | ex>
97 \newcommand{\uaname}{University of Antwerp}
98 \newcommand{\logoname}{UA_HOR_ENG_CMYK}
99 \newcommand{\footername}{4E_PMS302_BR_ENG_RGB}
100 \newcommand{\arrname}{All rights reserved}
101 \newcommand{\orname}{of}
102 \newcommand{\domainname}{uantwerp.be}
103 \newcommand{\datename}{Date}
104 \newcommand{\subjectname}{Subject}
105 \newcommand{\academicyearname}{Academic year}
106 \newcommand{\masterthesisname}{Master's thesis}
107 \newcommand{\supervisorsname}{Supervisors}
108 \newcommand{\juryname}{Jury}
109 \newcommand{\jurymembersname}{Members}
110 \newcommand{\jurychairmanname}{Chairman}
111 \newcommand{\mthesisname}{Thesis to obtain the degree of}
112 \newcommand{\pthesisnamei}{Thesis submitted in fulfilment of the}
113 requirements for the degree of}
114 \newcommand{\pthesisnameii}{at University of Antwerp}
115 \newcommand{\@faculty}{< Specify faculty using \textbackslash{}facultyacronym\{ABC\} >}
116 \newcommand{\faccpg}{
117   \renewcommand\@faculty{Centre Pieter Gillis}}
118 \newcommand{\facfbd}{
119   \renewcommand\@faculty{
120     Faculty of Pharmaceutical, Biomedical and Veterinary Sciences}}
121 \newcommand{\facggw}{
122   \renewcommand\@faculty{Faculty of Medicine and Health Sciences}}
123 \newcommand{\insiob}{
124   \renewcommand\@faculty{Insitute of Development Policy}}
125 \newcommand{\insoiw}{
126   \renewcommand\@faculty{Institute of Educations and Information Sciences}}
127 \newcommand{\asoe}{
128   \renewcommand\@faculty{Antwerp School of Education}}
129 \newcommand{\faclw}{
130   \renewcommand\@faculty{Faculty of Arts}}
131 \newcommand{\facow}{
132   \renewcommand\@faculty{Faculty of Design Sciences}}
133 \newcommand{\facsw}{

```

```

134 \renewcommand\@faculty{Faculty of Social Sciences}}
135 \newcommand{\facrec}{
136 \renewcommand\@faculty{Faculty of Law}}
137 \newcommand{\factew}{
138 \renewcommand\@faculty{Faculty of Applied Economics}}
139 \newcommand{\facti}{
140 \renewcommand\@faculty{Faculty of Applied Engineering}}
141 \newcommand{\facwet}{
142 \renewcommand\@faculty{Faculty of Science}}
143 \newcommand{\weightname}{Weight}
144 \AtBeginDocument{
145 \ifpackageloaded{babel}{
146 \addto\captionsdutch{%
147 \renewcommand\uaname{Universiteit Antwerpen}
148 \renewcommand\logoname{UA_HOR_NED_CMYK}
149 \renewcommand\footername{4E_PMS302_BR_NED_RGB}
150 \renewcommand\arrname{Alle rechten voorbehouden}
151 \renewcommand\orname{van}
152 \renewcommand\domainname{uantwerpen.be}
153 \renewcommand\subjectname{Onderwerp}%
154 \renewcommand\dataname{Datum}%
155 \renewcommand\academicyearname{Academiejaar}
156 \renewcommand\masterthesisname{Masterproef}
157 \renewcommand\supervisorsname{Promotoren}
158 \renewcommand\juryname{Jury}
159 \renewcommand\jurymembersname{Leden}
160 \renewcommand\jurychairmanname{Voorzitter}
161 \renewcommand\mthesisname{Proefschrift tot het behalen van de
162 graad van}
163 \renewcommand\pthesisnamei{Proefschrift voorgelegd tot het
164 behalen van de graad van}
165 \renewcommand\pthesisnameii{aan de \uaname{} te
166 verdedigen door}
167 \renewcommand\faccp{
168 \renewcommand\@faculty{Centrum Pieter Gillis}}
169 \renewcommand\facfbd{
170 \renewcommand\@faculty{
171 Faculteit Farmaceutische, Biomedische en Diergeneeskundige
172 Wetenschappen}}
173 \renewcommand\facggw{
174 \renewcommand\@faculty{Faculteit Geneeskunde en
175 Gezondheidswetenschappen}}
176 \renewcommand\insiob{
177 \renewcommand\@faculty{Instituut voor Ontwikkelingsbeleid- en
178 beheer}}
179 \renewcommand{\insoiw}{
180 \renewcommand\@faculty{Instituut voor Onderwijs- en
181 Informatiewetenschappen}}
182 \renewcommand{\asoe}{
183 \renewcommand\@faculty{Antwerp School of Education}}

```

```

184 \renewcommand{\faciw}{\renewcommand\@faculty{Faculteit
185 Letteren en Wijsbegeerte}}
186 \renewcommand{\facow}{
187 \renewcommand\@faculty{Faculteit Ontwerpwetenschappen}}
188 \renewcommand{\facsw}{
189 \renewcommand\@faculty{Faculteit Sociale Wetenschappen}}
190 \renewcommand{\facrec}{
191 \renewcommand\@faculty{Faculteit Rechten}}
192 \renewcommand{\factew}{
193 \renewcommand\@faculty{Faculteit Toegepaste Economische
194 Wetenschappen}}
195 \renewcommand{\facti}{
196 \renewcommand\@faculty{Faculteit Toegepaste
197 Ingenieurswetenschappen}}
198 \renewcommand{\facwet}{
199 \renewcommand\@faculty{Faculteit Wetenschappen}}
200 \renewcommand{\weightname}{Gewicht}
201 }
202 \addto\captionsgerman{%
203 \renewcommand{\uaname}{Universit\ "at Antwerpen}
204 \renewcommand{\logoname}{UA_HOR_DUI_CMYK}
205 \renewcommand{\footername}{4E_PMS302_BR_NED_RGB}
206 \renewcommand{\arrname}{Alle Rechte vorbehalten}
207 \renewcommand{\orname}{von}
208 \renewcommand{\domainname}{uantwerpen.be}
209 \renewcommand{\subjectname}{Betreff}%
210 \renewcommand{\datename}{Datum}%
211 \renewcommand{\academicyearname}{Akademisches Jahr}
212 \renewcommand{\masterthesisname}{Masterdissertation}
213 \renewcommand{\supervisorsname}{Veranstalter}
214 \renewcommand{\juryname}{Jury}
215 \renewcommand{\jurymembersname}{Mitglieder}
216 \renewcommand{\jurychairmanname}{Vorsitzender}
217 \renewcommand{\mthesisname}{Dissertation zur Erreichung des
218 Grades der}
219 \renewcommand{\pthesisnamei}{Dissertation zur Erreichung des
220 Grades der}
221 \renewcommand{\pthesisnameii}{an die \uaname}
222 \renewcommand{\faccpj}{
223 \renewcommand\@faculty{Centrum Pieter Gillis}}
224 \renewcommand{\facfbd}{
225 \renewcommand\@faculty{
226 Faculteit Farmaceutische, Biomedische en Diergeneeskundige
227 Wetenschappen}}
228 \renewcommand{\facggw}{
229 \renewcommand\@faculty{Faculteit Geneeskunde en
230 Gezondheidswetenschappen}}
231 \renewcommand{\insiob}{
232 \renewcommand\@faculty{Instituut voor Ontwikkelingsbeleid- en
233 beheer}}

```

```

234 \renewcommand{\insoiw}{
235 \renewcommand\@faculty{Instituut voor Onderwijs- en
236 Informatiewetenschappen}}
237 \renewcommand{\asoe}{
238 \renewcommand\@faculty{Antwerp School of Education}}
239 \renewcommand{\faciw}{\renewcommand\@faculty{Faculteit
240 Letteren en Wijsbegeerte}}
241 \renewcommand{\facow}{
242 \renewcommand\@faculty{Faculteit Ontwerpwetenschappen}}
243 \renewcommand{\facsw}{
244 \renewcommand\@faculty{Faculteit Sociale Wetenschappen}}
245 \renewcommand{\facrec}{
246 \renewcommand\@faculty{Faculteit Rechten}}
247 \renewcommand{\factew}{
248 \renewcommand\@faculty{Faculteit Toegepaste Economische
249 Wetenschappen}}
250 \renewcommand{\facti}{
251 \renewcommand\@faculty{Faculteit Toegepaste
252 Ingenieurswetenschappen}}
253 \renewcommand{\facwet}{
254 \renewcommand\@faculty{Faculteit Wetenschappen}}
255 \renewcommand{\weightname}{Gewicht}
256 }
257 \addto\captionsfrench{%
258 \renewcommand{\uaname}{Universit\'e d'Anvers}
259 \renewcommand{\logoname}{UA_HOR_FRA_CMYK}
260 \renewcommand{\footername}{4E_PMS302_BR_ENG_RGB}
261 \renewcommand{\arrname}{Tous les droits sont r\'eserv\'es}
262 \renewcommand{\orname}{de}
263 \renewcommand{\domainname}{uanvers.be}
264 \renewcommand{\subjectname}{Objet}%
265 \renewcommand{\datename}{Date}%
266 \renewcommand{\academicyearname}{Ann\'ee acad\'emique}
267 \renewcommand{\masterthesisname}{Th\'ese de master}
268 \renewcommand{\supervisorsname}{Promoteurs}
269 \renewcommand{\juryname}{Jury}
270 \renewcommand{\jurymembersname}{Membres}
271 \renewcommand{\jurychairmanname}{Pr\'esident}
272 \renewcommand{\mthesisname}{Th\'ese \`a l'atteinte du degr\'e de}
273 \renewcommand{\pthesisnamei}{Th\'ese Doctorale \`a l'atteinte du
274 degr\'e de}
275 \renewcommand{\pthesisnameii}{\`a l'\uaname}
276 \renewcommand{\faccpg}{
277 \renewcommand\@faculty{Centrum Pieter Gillis}}
278 \renewcommand{\facfbid}{
279 \renewcommand\@faculty{
280 Faculteit Farmaceutische, Biomedische en Diergeneeskundige
281 Wetenschappen}}
282 \renewcommand{\facggw}{
283 \renewcommand\@faculty{Faculteit Geneeskunde en

```

```

284         Gezondheidswetenschappen}}
285 \renewcommand{\insioib}{
286     \renewcommand\@faculty{Instituut voor Ontwikkelingsbeleid- en
287         beheer}}
288 \renewcommand{\insoiw}{
289     \renewcommand\@faculty{Instituut voor Onderwijs- en
290         Informatiewetenschappen}}
291 \renewcommand{\asoe}{
292     \renewcommand\@faculty{Antwerp School of Education}}
293 \renewcommand{\faciw}{\renewcommand\@faculty{Faculteit
294     Letteren en Wijsbegeerte}}
295 \renewcommand{\facow}{
296     \renewcommand\@faculty{Faculteit Ontwerpwetenschappen}}
297 \renewcommand{\facsw}{
298     \renewcommand\@faculty{Faculteit Sociale Wetenschappen}}
299 \renewcommand{\facrec}{
300     \renewcommand\@faculty{Faculteit Rechten}}
301 \renewcommand{\factew}{
302     \renewcommand\@faculty{Faculteit Toegepaste Economische
303         Wetenschappen}}
304 \renewcommand{\facti}{
305     \renewcommand\@faculty{Faculteit Toegepaste
306         Ingenieurswetenschappen}}
307 \renewcommand{\facwet}{
308     \renewcommand\@faculty{Faculteit Wetenschappen}}
309 \renewcommand{\weightname}{Poids}
310 }
311 \addto\captionsspanish{%
312     \renewcommand{\uaname}{Universidad de Amberes}
313     \renewcommand{\logoname}{UA_HOR_SPA_CMYK}
314     \renewcommand{\footername}{4E_PMS302_BR_ENG_RGB}
315     \renewcommand{\arrname}{Todos los derechos reservados}
316     \renewcommand{\orname}{de}
317     \renewcommand{\domainname}{uantwerp.be}
318     \renewcommand{\subjectname}{Asunto}%
319     \renewcommand{\datename}{Fecha}%
320     \renewcommand{\academicyearname}{A\~no acad\'emico}
321     \renewcommand{\masterthesisname}{Tesis de maestr\'ia}
322     \renewcommand{\supervisorsname}{Promotores}
323     \renewcommand{\juryname}{Jurado}
324     \renewcommand{\jurymembersname}{Miembros}
325     \renewcommand{\jurychairmanname}{Presidente}
326     \renewcommand{\mthesisname}{Disertaci\'on a la consecuci\'on del
327         grado de}
328     \renewcommand{\pthesisnamei}{Disertaici\'on a la consecuci\'on del
329         grado de}
330     \renewcommand{\pthesisnameii}{a l'\uaname}
331     \renewcommand{\faccpg}{
332         \renewcommand\@faculty{Centrum Pieter Gillis}}
333     \renewcommand{\facfbd}{

```

```

334     \renewcommand\@faculty{
335         Faculteit Farmaceutische, Biomedische en Diergeneeskundige
336         Wetenschappen}}
337     \renewcommand{\facggw}{
338         \renewcommand\@faculty{Faculteit Geneeskunde en
339         Gezondheidswetenschappen}}
340     \renewcommand{\insiob}{
341         \renewcommand\@faculty{Instituut voor Ontwikkelingsbeleid- en
342         beheer}}
343     \renewcommand{\insoiw}{
344         \renewcommand\@faculty{Instituut voor Onderwijs- en
345         Informatiewetenschappen}}
346     \renewcommand{\asoe}{
347         \renewcommand\@faculty{Antwerp School of Education}}
348     \renewcommand{\faclw}{\renewcommand\@faculty{Faculteit
349         Letteren en Wijsbegeerte}}
350     \renewcommand{\facow}{
351         \renewcommand\@faculty{Faculteit Ontwerpwetenschappen}}
352     \renewcommand{\facsw}{
353         \renewcommand\@faculty{Faculteit Sociale Wetenschappen}}
354     \renewcommand{\facrec}{
355         \renewcommand\@faculty{Faculteit Rechten}}
356     \renewcommand{\factew}{
357         \renewcommand\@faculty{Faculteit Toegepaste Economische
358         Wetenschappen}}
359     \renewcommand{\facti}{
360         \renewcommand\@faculty{Faculteit Toegepaste
361         Ingenieurswetenschappen}}
362     \renewcommand{\facwet}{
363         \renewcommand\@faculty{Faculteit Wetenschappen}}
364     \renewcommand{\weightname}{Peso}
365 }
366 }
367 {}
368 }
369 </ct | mt | pt | le | ex>

```

## 5.6 Tags

`\facultyacronym` The `facultyacronym` sets the faculty acronym tag `\@facultyacronym` that is used in the header/footer information. The correct acronym also sets the faculty's name correctly.

```

370 <*ct | mt | pt | le | ex>
371 \newcommand{\@facultyacronym}{}
372 \newcommand{\facultyacronym}[1]{
373     \renewcommand{\@facultyacronym}{#1}
374     \AtBeginDocument{
375         \ifthenelse{\equal{#1}{CPG}}{\faccpg}{

```

```

376 \ifthenelse{\equal{#1}{FBD}}{\facfbd}{
377 \ifthenelse{\equal{#1}{GGW}}{\facggw}{
378 \ifthenelse{\equal{#1}{IOB}}{\insioib}{
379 \ifthenelse{\equal{#1}{IOIW}}{\insoiw}{
380 \ifthenelse{\equal{#1}{ASoE}}{\asoe}{
381 \ifthenelse{\equal{#1}{LW}}{\faclw}{
382 \ifthenelse{\equal{#1}{OW}}{\facow}{
383 \ifthenelse{\equal{#1}{SW}}{\facsw}{
384 \ifthenelse{\equal{#1}{REC}}{\facrec}{
385 \ifthenelse{\equal{#1}{TEW}}{\factew}{
386 \ifthenelse{\equal{#1}{TI}}{\facti}{
387 \ifthenelse{\equal{#1}{WET}}{\facwet}{
388 \errmessage{Error: wrong faculty acronym; choose one of CPG, FBD, GGW,
389 IOB, IOIW, ASoE, LW, OW, SW, REC, TEW, TI, WET}}}}}}}}}}}}}}
390 }
391 </ct | mt | pt | le | ex>

```

`\title` The `title` tag is native to  $\text{\LaTeX}$ . It sets the `\@title` tag that will be used on the title page. However, in view of the qr trouble, we fiddle a little with it. In case the title contains accented characters, you also need to provide a qr version in full unicode (so without the traditional  $\text{\LaTeX}$  accented characters.)

```

392 <*ct>
393 \newcommand{\@qrtitle}{}
394 \renewcommand{\title}[1]{%
395 \renewcommand{\@title{#1}
396 \ifx\@qrtitle\@emptymacro
397 \renewcommand{\@qrtitle{#1}
398 \fi
399 }
400 \newcommand{\qrtitle}[1]{%
401 \renewcommand{\@qrtitle{#1}
402 }
403 </ct>

```

`\subtitle` This macro sets the `\@subtitle` tag that later will be used on the title page, in the header/footer and to set the appropriate `hyperref` tag.

```

404 <*mt>
405 \newcommand{\@subtitle}{Master's thesis}
406 </mt>
407 <*ct | pt>
408 \newcommand{\@subtitle}{~}
409 \newcommand{\@qrs subtitle}{}
410 \newcommand{\subtitle}[1]{%
411 \renewcommand{\@subtitle{#1}
412 \ifx\@qrs subtitle\@emptymacro
413 \renewcommand{\@qrs subtitle{#1}
414 \fi

```

```

415 }
416 \newcommand{\qrs subtitle}[1]{%
417   \renewcommand\@qrs subtitle{#1}
418 }
419 </ct | pt>

```

**\shorttitle** This macro sets the `\@shorttitle` tag that later will be used in the `uantwerpenexam` class.

```

420 <*ex>
421 \newcommand{\@shorttitle}{}
422 \newcommand{\shorttitle}[1]{%
423   \renewcommand\@shorttitle{#1}
424 }
425 </ex>

```

**\author** The `author` tag is native to  $\text{\LaTeX}$ . It sets the `\@author` tag that will be used on the title page. However, in view of the qr trouble, we fiddle a little with it for the `uantwerpenpencoursetext` class. In case the title contains accented characters, you also need to provide a qr version in full unicode (so without the traditional  $\text{\LaTeX}$  accented characters.)

```

426 <*ct>
427 \newcommand{\@qrauthor}{}
428 \renewcommand{\author}[1]{%
429   \renewcommand\@author{#1}
430   \ifx\@qrauthor\@emptymacro
431     \renewcommand\@qrauthor{#1}
432   \fi
433 }
434 \newcommand{\qrauthor}[1]{%
435   \renewcommand\@qrauthor{#1}
436 }
437 </ct>

```

**\courseversion** This macro sets the `\@courseversion` tag that later will be used on the title page and in the header/footer.

```

438 <*ct>
439 \newcommand{\@courseversion}{}
440 \newcommand{\courseversion}[1]{\renewcommand{\@courseversion}{#1}}
441 </ct>

```

**\versionyear** This macro sets the `\@versionyear` tag that later will be used on the title page and in the copyright message.

```

442 <*ct>
443 \newcommand{\@versionyear}{}

```



```

444 \newcommand{\versionyear}[1]{\renewcommand{\@versionyear}{#1}}
445 \</ct>

```

**\publisher** This macro sets the \@publisher tag that later will be used on the title page.

```

446 \<ct>
447 \newcommand{\@publisher}{\uaname\\
448 Cursusdienst en reprografie\\
449 Campus Groenenborger, G.U.027\\
450 Groenenborgerlaan 171\\
451 2020 Antwerpen\\
452 T +32 3 265 32 15\\
453 F + 32 3 233 32 27\\
454 E cursusdienst.cgb@uantwerpen.be}
455 \newcommand{\publisher}[1]{\renewcommand{\@publisher}{#1}}
456 \</ct>

```

**\publishercode** This macro sets the \@publishercode tag that later will be used on the title page.

```

457 \<ct>
458 \newcommand{\@publishercode}{}
459 \newcommand{\publishercode}[1]{\renewcommand{\@publishercode}{#1}}
460 \</ct>

```

**\lecturer** This macro sets many \@lecturer tags (max. 4) that later will be used on the title page. If there is only one teaching lecturer one can use the convenient shorthand without counter. In case the lecturer's name contains accented characters, you also need to provide a qr version in full unicode (so without the traditional L<sup>A</sup>T<sub>E</sub>X accented characters.)

```

461 \<ct>
462 \newcommand{\@lectureri}{}
463 \newcommand{\@lecturerii}{}
464 \newcommand{\@lectureriii}{}
465 \newcommand{\@lectureriv}{}
466 \newcommand{\@qrlectureri}{}
467 \newcommand{\@qrlecturerii}{}
468 \newcommand{\@qrlectureriii}{}
469 \newcommand{\@qrlectureriv}{}
470 \newcommand{\lecturer}[1]{
471   \renewcommand{\@lectureri}{#1}
472   \ifx\@qrlectureri\emptymacro
473     \renewcommand{\@qrlectureri}{#1}
474   \fi
475 }
476 \newcommand{\qrlecturer}[1]{
477   \renewcommand{\@qrlectureri}{#1}
478 }
479 \newcommand{\lectureri}[1]{

```

```

480 \renewcommand{\@lectureri}{#1}
481 \ifx\@qrlectureri\@emptymacro
482 \renewcommand\@qrlectureri{#1}
483 \fi
484 }
485 \newcommand{\qrlectureri}[1]{
486 \renewcommand\@qrlectureri{#1}
487 }
488 \newcommand{\lecturerii}[1]{
489 \renewcommand{\@lecturerii}{#1}
490 \ifx\@qrlecturerii\@emptymacro
491 \renewcommand\@qrlecturerii{#1}
492 \fi
493 }
494 \newcommand{\qrlecturerii}[1]{
495 \renewcommand\@qrlecturerii{#1}
496 }
497 \newcommand{\lectureriii}[1]{
498 \renewcommand{\@lectureriii}{#1}
499 \ifx\@qrlectureriii\@emptymacro
500 \renewcommand\@qrlectureriii{#1}
501 \fi
502 }
503 \newcommand{\qrlectureriii}[1]{
504 \renewcommand\@qrlectureriii{#1}
505 }
506 \newcommand{\lectureriv}[1]{
507 \renewcommand{\@lectureriv}{#1}
508 \ifx\@qrlectureriv\@emptymacro
509 \renewcommand\@qrlectureriv{#1}
510 \fi
511 }
512 \newcommand{\qrlectureriv}[1]{
513 \renewcommand\@qrlectureriv{#1}
514 }
515 \</ct>

```

**\affiliation** The affiliation tag allows to specify the affiliation of the author.

```

516 \<pt>
517 \newcommand\@affiliation{\errmessage{Please, define the affiliation of
518 the author using the \textbackslash{}affiliation command in the
519 preamble of your document.}}
520 \newcommand\affiliation[1]{\renewcommand\@affiliation{#1}}
521 \</pt>

```

**\supervisor** This macro sets many \@supervisor tags (max. 4) that later will be used on the title page.

```

522 <*mt | pt>
523 \newcommand\@supervisor{\errmessage{Please define a supervisor of
524     your thesiswork using the \textbackslash{}supervisor to iv
525     commands} in the preamble of your document.}
526 \newcommand\@supervisoriaff{}
527 \newcommand\@supervisorii{}
528 \newcommand\@supervisoriiiaff{}
529 \newcommand\@supervisoriii{}
530 \newcommand\@supervisoriiiaff{}
531 \newcommand\@supervisoriv{}
532 \newcommand\@supervisorivaff{}
533 \newcommand{\supervisor}[2]{\renewcommand\@supervisor{#1}\renewcommand\@supervisoriaff{#2}}
534 \newcommand{\supervisorii}[2]{\renewcommand\@supervisorii{#1}\renewcommand\@supervisoriiiaff{#2}}
535 \newcommand{\supervisoriii}[2]{\renewcommand\@supervisoriii{#1}\renewcommand\@supervisoriiiaff{#2}}
536 \newcommand{\supervisoriv}[2]{\renewcommand\@supervisoriv{#1}\renewcommand\@supervisorivaff{#2}}
537 </mt | pt>

```

\jurychairman This macro sets the \@jurychairman tag that later will be used on the data page.

```

538 <*pt>
539 \newcommand{\@jurychairman}{\errmessage{Please define a chairman of the jurya
540     using the \textbackslash{}jurychairman command in the preamble of your document.}}
541 \newcommand{\@jurychairmanaff}{}
542 \newcommand{\jurychairman}[2]{\renewcommand{\@jurychairman}{#1}\renewcommand{\@jurychairmanaff}{#2}}
543 </pt>

```

\jurymember This macro sets many \@jurymember tags (max. 6) that later will be used on the data page.

```

544 <*pt>
545 \newcommand{\@jurymemberi}{\errmessage{Please define jury members
546     using the \textbackslash{}jurymemberi to vi commands in the preamble of your document.}}
547 \newcommand\@jurymemberiaff{}
548 \newcommand\@jurymemberii{}
549 \newcommand\@jurymemberiiiaff{}
550 \newcommand\@jurymemberiii{}
551 \newcommand\@jurymemberiiiaff{}
552 \newcommand\@jurymemberiv{}
553 \newcommand\@jurymemberivaff{}
554 \newcommand\@jurymemberv{}
555 \newcommand\@jurymembervaff{}
556 \newcommand\@jurymembervi{}
557 \newcommand\@jurymemberviaff{}
558 \newcommand{\jurymemberi}[2]{\renewcommand\@jurymemberi{#1}\renewcommand\@jurymemberiaff{#2}}
559 \newcommand{\jurymemberii}[2]{\renewcommand\@jurymemberii{#1}\renewcommand\@jurymemberiiiaff{#2}}
560 \newcommand{\jurymemberiii}[2]{\renewcommand\@jurymemberiii{#1}\renewcommand\@jurymemberiiiaff{#2}}
561 \newcommand{\jurymemberiv}[2]{\renewcommand\@jurymemberiv{#1}\renewcommand\@jurymemberivaff{#2}}
562 \newcommand{\jurymemberv}[2]{\renewcommand\@jurymemberv{#1}\renewcommand\@jurymembervaff{#2}}
563 \newcommand{\jurymembervi}[2]{\renewcommand\@jurymembervi{#1}\renewcommand\@jurymemberviaff{#2}}
564 </pt>

```

`\phddegree` This macro sets the `\@phddegree` tag that later will be used on the title pages.

```

565 <*pt>
566 \newcommand\@phddegree{\errmessage{Please, specify the official PhD
567   degree description using the \textbackslash{}phddegree macro in
568   the preamble of your document.}}
569 \newcommand\phddegree[1]{\renewcommand\@phddegree{#1}}
570 </pt>

```

`\programme` This macro sets the `\@programme` tags that later will be used on the title page. The involved way of repeatedly calling the `renewcommand` to set the tags is required for inclusion of the data as QR data.

```

571 <*ct | pt | ex>
572 \newcommand{\@programmet}{} % type
573 \newcommand{\@programmec}{} % class
574 \newcommand{\@programmecqr}{} % class for qr code
575 \newcommand{\@programmes}{} % class
576 \newcommand{\@programmeq}{} % qualifier
577 \newcommand{\programme}[3]{%
578   \ifthenelse{\equal{#1}{BA}}{%
579     {\renewcommand{\@programmet}{Bachelor of Science in de }}{%
580     \ifthenelse{\equal{#1}{MA}}{%
581       {\renewcommand{\@programmet}{Master of Science in de }}{%
582       \ifthenelse{\equal{#1}{PHD}}{%
583         {\renewcommand{\@programmet}{Doctor in de }}{%
584         \ifthenelse{\equal{#1}{VP}}{%
585           {\renewcommand{\@programmet}{Vorbereidingsprogramma voor Master of Science in de }}{%
586           \ifthenelse{\equal{#1}{SP}}{%
587             {\renewcommand{\@programmet}{Schakelprogramma voor Master of Science in de }}{%
588             \ifthenelse{\equal{#1}{FREE}}{%
589               {}{
590               \errmessage{Error in 1st arg of macro programme[3]: invalid
591                 programme type!}}}}}}}%
592   %
593   \ifthenelse{\equal{#2}{IW}}{%
594     {\renewcommand{\@programmec}{industri\ "ele wetenschappen}
595     \renewcommand{\@programmecqr}{industriële wetenschappen}}{
596     \ifthenelse{\equal{#2}{}}{%
597       {}{
598       \errmessage{{Error in 2nd arg of macro programme[3]: invalid
599         programme class! }}}}%
600   %
601   \ifthenelse{\equal{#3}{BK}}{%
602     {\renewcommand{\@programmeq}{Bouwkunde}}{%
603     \ifthenelse{\equal{#3}{CH}}{%
604       {\renewcommand{\@programmeq}{Chemie}}{%
605       \ifthenelse{\equal{#3}{BCH}}{%
606         {\renewcommand{\@programmeq}{Biochemie}}{%

```

```

607 \ifthenelse{\equal{#3}{EM}}{%
608 {\renewcommand{\@programmeq}{Elektromechanica}}{%
609 \ifthenelse{\equal{#3}{EI}}{%
610 {\renewcommand{\@programmeq}{Elektronica-ICT}}{%
611 \ifthenelse{\equal{#3}{}}{%
612 {}{%
613 \ifthenelse{\equal{#1}{FREE}}
614 {\renewcommand{\@programmeq}{#3}}{
615 \errmessage{Error in 3rd arg to macro programme[3]: invalid
616 programme qualifier}}}}}}}%
617 %
618 \ifthenelse{\equal{#2}{IW}\and\not\equal{#3}{}}
619 {\renewcommand{\@programmes}{: }}{}
620 }
621 </ct | pt | ex>

```

`\course` Four the `coursetext` class, this macro sets many `\@coursecode` and `\@course` tags (max. 4) that later will be used on the title page. If there is only one course code one can use the convenient shorthand without counter.

```

622 <*ct>
623 \newcommand{\@coursecodei}{}
624 \newcommand{\@coursecodeii}{}
625 \newcommand{\@coursecodeiii}{}
626 \newcommand{\@coursecodeiv}{}
627 \newcommand{\@coursei}{}
628 \newcommand{\@courseii}{}
629 \newcommand{\@courseiii}{}
630 \newcommand{\@courseiv}{}
631 \newcommand{\@qrcoursei}{}
632 \newcommand{\@qrcourseii}{}
633 \newcommand{\@qrcourseiii}{}
634 \newcommand{\@qrcourseiv}{}
635 \newcommand{\course}[2]{
636 \renewcommand{\@coursecodei}{#1}
637 \renewcommand{\@coursei}{#2}
638 \ifx\@qrcoursei\@emptymacro
639 \renewcommand{\@qrcoursei}{#2}
640 \fi
641 }
642 \newcommand{\qrcourse}[1]{
643 \renewcommand{\@qrcoursei}{#1}
644 }
645 \newcommand{\course}[2]{
646 \renewcommand{\@coursecodei}{#1}
647 \renewcommand{\@coursei}{#2}
648 \ifx\@qrcoursei\@emptymacro
649 \renewcommand{\@qrcoursei}{#2}
650 \fi
651 }

```

```

652 \newcommand{\qrcoursei}[1]{
653   \renewcommand{\@qrcoursei}{#1}
654 }
655 \newcommand{\courseii}[2]{
656   \renewcommand{\@coursecodeii}{#1}
657   \renewcommand{\@courseii}{#2}
658   \ifx\@qrcourseii\emptymacro
659     \renewcommand{\@qrcourseii}{#2}
660   \fi
661 }
662 \newcommand{\qrcourseii}[1]{
663   \renewcommand{\@qrcourseii}{#1}
664 }
665 \newcommand{\courseiii}[2]{
666   \renewcommand{\@coursecodeiii}{#1}
667   \renewcommand{\@courseiii}{#2}
668   \ifx\@qrcourseiii\emptymacro
669     \renewcommand{\@qrcourseiii}{#2}
670   \fi
671 }
672 \newcommand{\qrcourseiii}[1]{
673   \renewcommand{\@qrcourseiii}{#1}
674 }
675 \newcommand{\courseiv}[2]{
676   \renewcommand{\@coursecodeiv}{#1}
677   \renewcommand{\@courseiv}{#2}
678   \ifx\@qrcourseiv\emptymacro
679     \renewcommand{\@qrcourseiv}{#2}
680   \fi
681 }
682 \newcommand{\qrcourseiv}[1]{
683   \renewcommand{\@qrcourseiv}{#1}
684 }
685 </ct>
686 %   \end{macrocode}
687 %   For the |exam| class (assuming that an exam only holds for a
688 %   single course), the situation is simple and we assume only a
689 %   single coursecode and course name. We also don't need any of the
690 %   QR stamp stuff.
691 %   \begin{macrocode}
692 <*ex>
693 \newcommand{\@coursecodei}{}
694 \newcommand{\@coursei}{}
695 \newcommand{\course}[2]{
696   \renewcommand{\@coursecodei}{#1}
697   \renewcommand{\@coursei}{#2}
698 }
699 </ex>

```

`\diploma` This macro sets the `\@diploma` tags that later will be used on the title page.

```

700 <*mt | pt>
701 \newcommand{\@diploma}{ERROR}
702 \newcommand{\diploma}[1]{
703   \newcommand{\MoSIW}{Master of Science in de industri\"ele wetenschappen}
704   \newcommand{\MoSTEW}{Master of Science in de toegepaste economische wetenschappen}
705   \renewcommand{\@diploma}{
706     \ifthenelse{\equal{#1}{MA-IW-BK}}{
707       {\MoSIW: bouwkunde}{
708       \ifthenelse{\equal{#1}{MA-IW-BCH}}{
709         {\MoSIW: biochemie}{
710       \ifthenelse{\equal{#1}{MA-IW-CH}}{
711         {\MoSIW: chemie}{
712       \ifthenelse{\equal{#1}{MA-IW-EI}}{
713         {\MoSIW: elektronica-ICT}{
714       \ifthenelse{\equal{#1}{MA-IW-EI-AE}}{
715         {\MoSIW:\\elektronica-ICT, afstudeerrichting automotive engineering}{
716       \ifthenelse{\equal{#1}{MA-IW-EI-ICT}}{
717         {\MoSIW:\\elektronica-ICT, afstudeerrichting ICT}{
718       \ifthenelse{\equal{#1}{MA-IW-EM-AE}}{
719         {\MoSIW:\\elektromechanica, afstudeerrichting automotive engineering}{
720       \ifthenelse{\equal{#1}{MA-IW-EM-AU}}{
721         {\MoSIW:\\elektromechanica, afstudeerrichting automatisering}{
722       \ifthenelse{\equal{#1}{MA-IW-EM-EM}}{
723         {\MoSIW:\\elektromechanica, afstudeerrichting elektromechanica}{
724       \ifthenelse{\equal{#1}{MA-IW-EM-EN}}{
725         {\MoSIW:\\elektromechanica, afstudeerrichting energie}{
726       \ifthenelse{\equal{#1}{MA-TEW-HI}}{
727         {\MoSTEW: handelsingenieur}{
728       \ifthenelse{\equal{#1}{MA-TEW-HIBI}}{
729         {\MoSTEW:\\handelsingenieur in de beleidsinformatica}{
730       \ifthenelse{\equal{#1}{MA-TEW-EB}}{
731         {\MoSTEW: economisch beleid}{
732       \ifthenelse{\equal{#1}{MA-TEW-BK}}{
733         {\MoSTEW: bedrijfskunde}
734       {\errmessage{Error in argument to macro diploma: must be one of
735         MA-IW-XXX with XXX one of BCH, CH, EI, EI-AE, EI-ICT, EM-AE,
736         EM-AU, EM-EM, EM-EN, MA-TEW-YYY with YYY one of HI, HIBI, EB, BK! <<}}}}}}}}}}}}}}}}
737 }
738 }
739 </mt | pt>

```

`\defensedate` This macro sets the `\@defensedate` tags that later will be used on the title page.

```

740 <*mt | pt>
741 \newcommand{\@defensedate}{ERROR}
742 \newcommand{\defensedate}[1]{\renewcommand{\@defensedate}{#1}}
743 </mt | pt>

```

`\defenselocation` This macro sets the `\@defenselocation` tags that later will be used on the title page.

```
744 <*mt | pt>
745 \newcommand\@defenselocation{Antwerpen}
746 \newcommand{\defenselocation}[1]{\renewcommand\@defenselocation{#1}}
747 </mt | pt>
```

`\titeplageimage` This macro sets the `\@titlepageimage` tags that later will be used on the title page, to include the graphics.

```
748 <*pt>
749 \newcommand\@titlepageimage{}
750 \newcommand\titepageimage[1]{\renewcommand\@titlepageimage{#1}}
751 </pt>
```

`\isbn` This macro sets the `\@isbn` tags that later will be used on the data page.

```
752 <*pt>
753 \newcommand{\@isbn}{\errmessage{Please, specify an ISBN number using
754     the \textbackslash{}isbn command in your preamble.}}
755 \newcommand{\isbn}[1]{\renewcommand{\@isbn}{#1}}
756 </pt>
```

`\depot` This macro sets the `\@depot` tags that later will be used on the data page.

```
757 <*pt>
758 \newcommand{\@depot}{\errmessage{Please, specify a depot number using
759     the \textbackslash{}depot command in your preamble.}}
760 \newcommand{\depot}[1]{\renewcommand{\@depot}{#1}}
761 </pt>
```

`\academicyear` This macro sets the `\@academicyear` tag that later will be used on the title page.

```
762 <*ct | mt | ex>
763 \newcommand{\@academicyear}{XXX-YYYY}
764 \newcommand{\academicyear}[1]{\renewcommand{\@academicyear}{#1}}
765 </ct | mt | ex>
```

`\copyrightnotices` This macro sets the `\@copyrightnotices` tag that later will be used on the back of the title page.

```
766 <*ct>
767 \newcommand{\@copyrightnotices}{}
768 \newcommand{\copyrightnotices}[1]{\renewcommand{\@copyrightnotices}{#1}}
769 </ct>
```



`\sender` This macro sets the `\@sender` and `\@senderrole` tags that will be used in the letter's heading text.

```
770 < *le>
771 \newcommand{\@sender}{< Specify sender using
772   \textbackslash{}sender\{name\}\{role\} >}
773 \newcommand{\@senderrole}{~}
774 \newcommand{\sender}[2]{\renewcommand{\@sender}{#1}\renewcommand{\@senderrole}{#2}}
775 </le>
```

`\logo` This macro sets the `\@logo` tag that will be used to load a graphics file with that name.

```
776 < *le | ex>
777 \newcommand{\@logo}{\logoname}
778 \newcommand{\logo}[1]{\renewcommand{\@unit}{#1}}
779 </le | ex>
```

`\unit` This macro sets the `\@unit` tag that will be used in the letter's heading text.

```
780 < *le>
781 \newcommand{\@unit}{}
782 \newcommand{\unit}[1]{\renewcommand{\@unit}{#1}}
783 </le>
```

`\email` This macro sets the `\@emailuser` and `\@emaildomain` tags that will be used in the letter's heading text. This split construction was used to overcome problems with the @ sign.

```
784 < *le>
785 \newcommand{\@emailuser}{}
786 \newcommand{\@emaildomain}{}
787 \newcommand{\email}[2]{\renewcommand{\@emailuser}{#1}\renewcommand{\@emaildomain}{#2}}
788 </le>
```

`\phone` This macro sets the `\@phone` tag that will be used in the letter's heading text.

```
789 < *le>
790 \newcommand{\@phone}{}
791 \newcommand{\phone}[1]{\renewcommand{\@phone}{#1}}
792 </le>
```

`\fax` This macro sets the `\@fax` tag that will be used in the letter's heading text.

```
793 < *le>
794 \newcommand{\@fax}{}
795 \newcommand{\fax}[1]{\renewcommand{\@fax}{#1}}
796 </le>
```

`\mobile` This macro sets the `\@mobile` tag that will be used in the letter's heading text.

```
797 <*\e>
798 \newcommand{\@mobile}{}
799 \newcommand{\mobile}[1]{\renewcommand{\@mobile}{#1}}
800 </\e>
```

`\returnaddress` This macro sets the `\@returnaddress` tag that will be used in the letter's heading text (in the area of the envelope's window).

```
801 <*\e>
802 \newcommand{\@returnaddress}{<specify return-address using \textbackslash{single-
    line-return-address}>}
803 \renewcommand{\returnaddress}[1]{\renewcommand{\@returnaddress}{#1}}
804 </\e>
```

`\to` This macro sets the `\@to` tag that will be used in the letter's heading text (in the area of the envelope's window).

```
805 <*\e>
806 \newcommand{\@to}{<Specify addressee using \textbackslash{}to\{name\}>}
807 \renewcommand{\to}[1]{\renewcommand{\@to}{#1}}
808 </\e>
```

`\toorganization` This macro sets the `\@toorganization` tag that will be used in the letter's heading text (in the area of the envelope's window).

```
809 <*\e>
810 \newcommand{\@toorganization}{<Specify organization using
811   \textbackslash{}toorganization\{\}>}
812 \newcommand{\toorganization}[1]{\renewcommand{\@toorganization}{#1}}
813 </\e>
```

`\toaddress` This macro sets the `\@toaddress` tag that will be used in the letter's heading text (in the area of the envelope's window).

```
814 <*\e>
815 \newcommand{\@toaddress}{<Specify (multiline) destination address\\using \textbackslash{}toaddr
816 \newcommand{\toaddress}[1]{\renewcommand{\@toaddress}{#1}}
817 </\e>
```

`\subject` This macro sets the `\@subject` tag that will be used in the letter's heading text.

```
818 <*\e>
819 \newcommand{\@subject}{-}
820 \newcommand*{\subject}[1]{\renewcommand{\@subject}{#1}}
821 </\e>
```

`\opening` This macro is much a do about nothing, but I prefer to do it this way for historic reasons.

```
822 <*le>
823 \renewcommand*\opening}[1]{#1}
824 </le>
```

`\closing` This macro sets the `\@closing` tag that will be used to finish the letter.

```
825 <*le>
826 \newcommand{\@closing}{<specify a closing formula using \textbackslash{}closing\{\}>}
827 \renewcommand*\closing[1]{\renewcommand{\@closing}{#1}}
828 </le>
```

`\signature` This macro sets the `\@signature` tag that will be used to finish the letter. By default this corresponds to a decent amount of vertical white space

```
829 <*le>
830 \newcommand{\@signature}{\vspace*{8ex}}
831 \renewcommand*\signature[1]{\renewcommand{\@signature}{#1}}
832 </le>
```

`\carboncopy` This macro will set the `\@carboncopy` tag that will be used in the trailer of the letter.

```
833 <*le>
834 \newcommand{\@carboncopy}{}
835 \newcommand{\carboncopy}[1]{\renewcommand{\@carboncopy}{#1}}
836 </le>
```

`\enclosed` This macro will set the `\@enclosed` tag that will be used in the trailer of the letter.

```
837 <*le>
838 \newcommand{\@enclosed}{}
839 \newcommand{\enclosed}[1]{\renewcommand{\@enclosed}{#1}}
840 </le>
```

`\address` This macro will set the `\@address` tag that will be used in the letter's heading text (in the area of the envelope's window).

```
841 <*pt | le>
842 \newcommand{\@address}{\errmessage{Please, set your multi-line address
843   and contact details using the \textbackslash{}address\{\} command
844   in the preamble of your document}}
845 </pt | le>
846 <le>\renewcommand{\address}[1]{\renewcommand{\@address}{#1}}
847 <pt>\newcommand{\address}[1]{\renewcommand{\@address}{#1}}
```

```

848 % \end{\macrocode}
849 % \end{macro}
850 %
851 % \begin{macro}{\exampart}
852 % This macro will set the |\@examgropunumber| tag that will be used on
853 % the exam title page.
854 % \begin{macrocode}
855 <*ex>
856 \newcommand{\@exampart}{}
857 \newcommand{\exampart}[1]{\renewcommand{\@exampart}{#1}}
858 </ex>

\examgroupnumber This macro will set the \@examgroupnumber tag that will be used on the exam
title page.

859 <*ex>
860 \newcommand{\@examgroupnumber}{}
861 \newcommand{\examgroupnumber}[1]{\renewcommand{\@examgroupnumber}{#1}}
862 </ex>

\examdate This macro will set the \@examdate tag that will be used on the exam title page.

863 <*ex>
864 \newcommand{\@examdate}{TBD}
865 \newcommand{\examdate}[1]{\renewcommand{\@examdate}{#1}}
866 </ex>

\examlength This macro will set the \@examlength tag that will be used on the exam title
page.

867 <*ex>
868 \newcommand{\@examlength}{TBD}
869 \newcommand{\examlength}[1]{\renewcommand{\@examlength}{#1}}
870 </ex>

\tstart This macro will set the \@tstart tag that will be used on the exam title page.

871 <*ex>
872 \newcommand{\@tstart}{TBD}
873 \newcommand{\tstart}[1]{\renewcommand{\@tstart}{#1}}
874 </ex>

\tend This macro will set the \@tend tag that will be used on the exam title page.

875 <*ex>
876 \newcommand{\@tend}{TBD}
877 \newcommand{\tend}[1]{\renewcommand{\@tend}{#1}}
878 </ex>

```

`\rooms` This macro will set the `\@rooms` tag that will be used on the exam title page.

```
879 <*ex>
880 \newcommand{\@rooms}{TBD}
881 \newcommand{\rooms}[1]{\renewcommand{\@rooms}{#1}}
882 </ex>
```

`\extrainfo` This macro will set the `\@extrainfo` tag that will be used on the back of the exam title page.

```
883 <*ex>
884 \newcommand{\@extrainfo}{}
885 \newcommand{\extrainfo}[1]{\renewcommand{\@extrainfo}{#1}}
886 </ex>
```

`\studentnr` This macro will set the `\@studentnr` tag that will be used in the header of the pages.

```
887 <*ex>
888 \newcommand{\@studentnr}{0}
889 \newcommand{\studentnr}[1]{\renewcommand{\@studentnr}{#1}}
890 </ex>
```

## 5.7 Header and Footer

The `fancyhdr` package is used to make a decent header and footer. The header and footer of the `uantwerpencoursetext` class are defined to be:

```
891 <*ct>
892 \if@twoside
893 \lhead[\thepage]{\slshape\rightmark}
894 \chead[]{}
895 \rhead[\slshape\leftmark]{\thepage}
896 \lfoot[\uaname{} -- \@facultyacronym]{\@courseversion}
897 \cfoot[]{}
898 \rfoot[]{\@title{}\ifdefinedvoid{\@subtitle}{}{ --- \@subtitle}}
899 \else
900 \lhead[]{\leftmark}
901 \chead[]{}
902 \rhead[]{\thepage}
903 \lfoot[]{\@courseversion}
904 \cfoot[]{\UAntwerpen--\@facultyacronym}
905 \rfoot[]{\@title{}}
906 \fi
907 </ct>
```

The header and footer of the `uantwerpenmasterthesis` class are defined to be:

```

908 <*mt | pt>
909 \if@twoside
910   \lhead[\thepage]{\slshape\rightmark}
911   \chead[]{}
912   \rhead[\slshape\leftmark]{\thepage}
913   \lfoot[]{}
914   \cfoot[]{}
915   \rfoot[]{}
916 \else
917   \lhead[]{\leftmark}
918   \chead[]{}
919   \rhead[]{\thepage}
920   \lfoot[]{}
921   \cfoot[]{}
922   \rfoot[]{}
923 \fi
924 </mt | pt>

```

The header and footer of the `uantwerpenletter` class are defined to be:

```

925 <*le>
926 \lhead[]{}
927 \chead[]{}
928 \rhead[]{}
929 \lfoot[\small\textcolor{gray}{\@date}]{\textcolor{gray}{\@date}}
930 \cfoot[]{}
931 \rfoot[\small\textcolor{gray}{\pagename~\thepage~\orname~\pageref{lastpage}}]{\small\textcolor{gray}{\@date}}
932 </le>

```

The header and footer of the `uantwerpenexam` class are defined to be:

```

933 <*ex>
934 \lhead[]{}
935 \chead[]{}
936 \if@examiner
937 \rhead[\small EXAMINER VERSION]{\small EXAMINER VERSION}
938 \AddToShipoutPicture{
939   \put(60,40){\rotatebox{60}{\textcolor{watermark}{
940     \fontfamily{phv}\fontsize{105}{130}\fontseries{m}\fontshape{n}\selectfont Examiner Vers
941   \else
942     \rhead[\small Student nr. \@studentnr]{\small Student nr. \@studentnr}
943   \fi
944   \lfoot[\small \@shorttitle]{\small \@shorttitle}
945   \cfoot[\small \thepage/\pageref{lastpage}]{\small \thepage/\pageref{lastpage}}
946   \rfoot[\small Groep \@examgroupnumber{} ---
947     \@academicyear]{\small Groep \@examgroupnumber{} --- \@academicyear}
948 </ex>

```

Some common code remains:

```

949 <*ct>

```

```

950 \setlength{\headheight}{13.7pt}
951 \renewcommand{\headrulewidth}{1pt}
952 \renewcommand{\footrulewidth}{1pt}
953 \pagenumbering{arabic}
954 \</ct>
955 \<*mt | pt | le>
956 \renewcommand{\headrulewidth}{0pt}
957 \renewcommand{\footrulewidth}{0pt}
958 \</mt | pt | le>
959 \<*ex>
960 \renewcommand{\headrulewidth}{0pt}
961 \renewcommand{\footrulewidth}{1pt}
962 \</ex>

```

Remains to take care of filling

```

963 \<*ct | mt | pt | le>
964 \if@filled\else
965   \raggedright
966 \fi
967 \raggedbottom
968 \onecolumn
969 \</ct | mt | pt | le>

```

## 5.8 Copyright notice

`\@crnotice` This is the standard text that will be used for the `\@crnotice` tag.

```

970 \<*ct>
971 \newcommand{\@crnotice}{
972   This document has been typeset using \LaTeX{} and the
973   \texttt{uantwerpencoursetext} class.\@
974   \@copyrightnotices
975
976   \@courseversion
977
978   CONFIDENTIAL AND PROPRIETARY.
979
980   \copyright{} \@versionyear{} University of Antwerp, \arrname.
981 }
982 \</ct>

```

## 5.9 Fancy chapter headers for the phdthesis class

```

983 \<*pt>
984 \def\@makechapterhead#1{%
985   \vspace*{1ex}%
986   \begin{flushright}

```

```

987 \makebox[0pt][l]{\rule[-0.4em]{10cm}{1.8em}}\textcolor{white}{\bf\LARGE~\chaptername~\raise
2ex}{\baselineskip}[0pt]{
988 \textcolor{uacorpblue}{\fontsize{72}{12}\selectfont\thechapter}}\,,}
989 \par\nobreak
990 \vskip 12\p@
991 \interlinepenalty\@M
992 \bf\huge\textcolor{darkgray}{\rule[-0.5ex]{0em}{2.6ex}~\#1~}
993 \par\nobreak
994 \end{flushright}
995 \rule{\textwidth}{1pt}
996 \vspace{5\p@}\par\nobreak
997 }
998 \def\@schapter#1{%
999 \@makeschapterhead{#1}%
1000 \@afterheading
1001 }
1002 \def\@makeschapterhead#1{%
1003 \vspace*{1ex}%
1004 \begin{flushright}
1005 \bf\LARGE\textcolor{darkgray}{\rule[-0.5ex]{0em}{2.6ex}~\#1~}
1006 \end{flushright}
1007 \rule{\textwidth}{1pt}
1008 \vspace{5\p@}\par
1009 }
1010 % overwrite appendix
1011 \def\appendix{
1012 \setcounter{chapter}{0}
1013 \renewcommand*{\thechapter}{\Alph{chapter}}
1014 \renewcommand\chaptername\appendixname
1015 }
1016 </pt>

```

## 5.10 Title page for the masterthesis and coursetext clases

The title page is generated using the `\maketitle` command. As the book class from which we inherit already defines this command, we need to renew it.

The UAntwerpen house style works with large-radius circles. We need some math in order to calculate center points and radiuses

**Header circle:** the blue header-circle on top of the page. We calculate the center point and the radius based on:

- the fact that the center point is above the page's left edge;
- the distance of the intersection points at the left and right edge of the page with respect to the top of the page,  $X$  and  $Y$  respectively;
- the width of the page  $W$ .



Some simple trigonometry leads to the elevation of the center point above the top of the page  $Q$  and the radius  $R$ :

$$R = \frac{W^2 + (X - Y)^2}{2(X - Y)} \quad (1)$$

$$Q = R - X \quad (2)$$

We labeled the variables in the code below with a prefix `ua@` and a suffix `h` (from 'header'). We also took the `paperheight` into account (the page's coordinate system origins at the left bottom). Therefore:

```

1017 <*ct | mt>
1018 \pgfmathsetmacro{\ua@Wh}{\paperwidth}
1019 \pgfmathsetmacro{\ua@Xh}{0.2\paperheight}
1020 \pgfmathsetmacro{\ua@Yh}{0.125\paperheight}
1021 \pgfmathsetmacro{\ua@XMyh}{\ua@Xh-\ua@Yh}
1022 \pgfmathsetmacro{\ua@Rh}{0.5*\ua@Wh/\ua@XMyh*\ua@Wh+0.5*\ua@XMyh}
1023 \pgfmathsetmacro{\ua@Qh}{\ua@Rh-\ua@Xh+\paperheight}
1024 </ct | mt>

```

**Bottom circle A:** the bottom circle with the largest radius. We calculate the center point and the radius based on:

- the fact that the center point is at a distance of  $3/5$  page width from the right page edge. We denote that distance by  $W$ ;
- the fact that the horizontal bottom tangent line of the circle is at a specific height above the bottom page edge, labeled  $S$ ;
- the distance of the intersection points at the right edge of the page with respect to the horizontal bottom tangent line of the circle, denoted as  $X - Y$ .

Given these definitions, almost the same equations as for the header circle hold:

$$R = \frac{W^2 + (X - Y)^2}{2(X - Y)} \quad (3)$$

$$Q = R + S \quad (4)$$

with  $R$  the circle's radius, and  $Q$  the elevation of the center point above the page's bottom.

We labeled the variables in the code below with a prefix `ua@` and a suffix `ba` (from 'bottom a'). Therefore:

```

1025 <*ct | mt>
1026 \pgfmathsetmacro{\ua@Wba}{0.4*\paperwidth}
1027 \pgfmathsetmacro{\ua@Sba}{0.125*\paperheight}
1028 \pgfmathsetmacro{\ua@XMyba}{0.02\paperheight}
1029 \pgfmathsetmacro{\ua@Rba}{0.5*\ua@Wba/\ua@XMyba*\ua@Wba+0.5*\ua@XMyba}
1030 \pgfmathsetmacro{\ua@Qba}{\ua@Rba+\ua@Sba}
1031 </ct | mt>

```

**Bottom circle B:** the bottom circle with the smallest radius. The same reasoning leads to:

```

1032 <*ct | mt>
1033 \pgfmithsetmacro{\ua@Wbb}{0.65*\paperwidth}
1034 \pgfmithsetmacro{\ua@Sbb}{0.14*\paperheight}
1035 \pgfmithsetmacro{\ua@XMYbb}{0.06*\paperheight}
1036 \pgfmithsetmacro{\ua@Rbb}{0.5*\ua@Wbb/\ua@XMYbb*\ua@Wbb+0.5*\ua@XMYbb}
1037 \pgfmithsetmacro{\ua@Qbb}{\ua@Rbb+\ua@Sbb}
1038 </ct | mt>

```

**Text alignment:** The text is aligned around an imaginary vertical line around 2/5 page width distance from the left edge.

```

1039 <*ct | mt>
1040 \pgfmithsetmacro{\ua@ll}{0.15*\paperwidth}
1041 \pgfmithsetmacro{\ua@l}{0.4*\paperwidth}
1042 \pgfmithsetmacro{\ua@d}{0.1in}
1043 \pgfmithsetmacro{\ua@rr}{0.85*\paperwidth}
1044 </ct | mt>

```

Below, one can find the code for the title page of the `uantwerpencoursetext` class. We start with setting up some things for the (optional) QR mark.

```

1045 <*ct>
1046 \newcommand\sprtr{ / }
1047 \newcommand\myqrdata{
1048 I: Universiteit Antwerpen\string\n
1049 F: \@faculty\string\n
1050 P: \@programmet\ \@programmecqr\ \@programmeq\string\n
1051 C: \@coursecodei\ \@qrcoursei
1052 \sprtr
1053 \@coursecodeii\ \@qrcourseii
1054 \sprtr
1055 \@coursecodeiii\ \@qrcourseiii
1056 \sprtr
1057 \@coursecodeiv\ \@qrcourseiv
1058 \string\n
1059 Y: \@academicyear\string\n
1060 T: \@qrtitle\string\n
1061 S: \@qrsubtitle\string\n
1062 A: \@qrauthor\string\n
1063 L: \@qrlectureri
1064 \sprtr
1065 \@qrlecturerii
1066 \sprtr
1067 \@qrlectureriii
1068 \sprtr
1069 \@qrlectureriv}

```

```

1070 \newsavebox{\myqrcode}
1071 \</ct>

```

`\maketitle` And finally, here is the `\maketitle` macro:

```

1072 \<ct>
1073 \renewcommand\maketitle{%
1074   \pagestyle{empty}
1075   \if@qr
1076     \savebox{\myqrcode}[2.7in][t]{
1077       \begin{pspicture}(2.7in,2.7in)
1078         \psbarcode{\myqrdata}{width=1.0 height=1.0 encoding=byte eclevel=M}{qrcode}
1079       \end{pspicture}
1080     }
1081   \fi
1082   \begin{titlepage}
1083     \if@titlepagetableonly
1084       Dit is een cursustekst van Universiteit Antwerpen.\<
1085       Het titelblad dient opgemaakt te worden met de volgende gegevens:
1086       \begin{center}
1087         \begin{tabular}{|l|l|l|}
1088           \hline
1089           \bfseries I & Universiteit Antwerpen & \\\hline
1090           \bfseries F & \@faculty & \\\hline
1091           \bfseries P & \parbox[t]{14cm}{\@programmet
1092             \@programmec\@programmes \@programmeq} & \\\hline
1093           \bfseries C & \parbox[t]{14cm}{
1094             \texttt{\@coursecodei} \@coursei\<
1095             \texttt{\@coursecodeii} \@courseii\<
1096             \texttt{\@coursecodeiii} \@courseiii\<
1097             \texttt{\@coursecodeiv} \@courseiv} & \\\hline
1098           \bfseries Y & \@academicyear & \\\hline
1099           \bfseries T & \parbox[t]{14cm}{\@title} & \\\hline
1100           \bfseries S & \parbox[t]{14cm}{\@subtitle} & \\\hline
1101           \bfseries A & \parbox[t]{14cm}{\@author} & \\\hline
1102           \bfseries L & \parbox[t]{14cm}{\@lectureri\<
1103             \@lecturerii\<
1104             \@lectureriii\<
1105             \@lectureriv} & \\\hline
1106         \end{tabular}
1107       \end{center}
1108       ~\<
1109       Waarbij: I = instelleng, F = faculteit, P = programma, C =
1110       cursusmodule, T = titel, S = subtitel, A = auteur(s), L =
1111       lesgever(s)\<~\<
1112     \if@qr
1113       Deze informatie is ook gecodeerd in de onderstaande QR-code.\<
1114       \vspace*{1cm}
1115       \usebox{\myqrcode}
1116     \fi

```

```

1117 \else
1118 \begin{tikzpicture}[remember picture,overlay]
1119 \node at (current page.center) {
1120 \begin{tikzpicture}[inner sep=0pt]
1121 \clip (0,0) rectangle(\paperwidth,\paperheight);
1122 \if@titlepagenoartwork\else
1123 \filldraw [uacorpbord] (0.55\paperwidth,\ua@Qba pt) circle (\ua@Rba pt);
1124 \filldraw [white] (0.35\paperwidth,\ua@Qbb pt) circle (\ua@Rbb pt);
1125 \filldraw [uacorpblue] (0,\ua@Qh pt) circle (\ua@Rh pt);
1126 \path
1127 (0.95\paperwidth,0.1\paperheight)
1128 node [anchor=north east] {
1129 \includegraphics[width=0.25\paperwidth]{\logoname}};
1130 \fi
1131 \path
1132 (\ua@l pt -\ua@d pt,0.77\paperheight)
1133 node [anchor=north east, text width=0.35\paperwidth] {
1134 \begin{flushright}
1135 \uppercase\expandafter{\uaname}\\~\\
1136 \academicyearname{} \@academicyear
1137 \end{flushright}}
1138 (\ua@l pt +\ua@d pt,0.65\paperheight)
1139 node [anchor = north west, text width = 0.55\paperwidth] {
1140 {\large \@faculty{}}\\[0.05\paperheight]
1141 {\huge \bf \@title{}}\\[2ex]
1142 {\Large \bf \@subtitle{}}\\[3ex]
1143 {\Large \bf \@author{}}}
1144 (\ua@l pt +\ua@d pt,0.45\paperheight)
1145 node [anchor = north west, text width = 0.55\paperwidth] {
1146 \@lectureri~\\
1147 \@lecturerii~\\
1148 \@lectureriii~\\
1149 \@lectureriv}
1150 (\ua@l pt +\ua@d pt,0.35\paperheight)
1151 node [anchor = north west, text width = 0.55\paperwidth] {
1152 {\bf \@programmet \ \ \@programmec\@programmes \@programmeq}}
1153 (\ua@l pt +\ua@d pt,0.30\paperheight)
1154 node [anchor = north west, text width = 0.55\paperwidth] {
1155 \texttt{\@publishercode}~\\~\\
1156 \texttt{\@coursecodei{}} \@coursei~\\
1157 \texttt{\@coursecodeii{}} \@courseii~\\
1158 \texttt{\@coursecodeiii{}} \@courseiii~\\
1159 \texttt{\@coursecodeiv{}} \@courseiv}
1160 (\ua@l pt - 2\ua@d pt, 0.368\paperheight)
1161 node [anchor = north east, text width = 0.35\paperwidth] {
1162 {\normalsize\begin{flushright}
1163 \@publisher{
1164 \end{flushright}}};
1165 \end{tikzpicture}
1166 };

```

```

1167 \end{tikzpicture}
1168 \fi
1169 \end{titlepage}%
1170 \clearpage
1171 \vspace*{\stretch{1}}
1172 \@crnotice
1173 \clearpage
1174 \setcounter{footnote}{0}%
1175 \global\let\thanks\relax
1176 \global\let\maketitle\relax
1177 \global\let\@thanks\@empty
1178 \global\let\title\relax
1179 \global\let\author\relax
1180 \global\let\date\relax
1181 \global\let\and\relax
1182 \pagestyle{fancy}
1183 \thispagestyle{empty}
1184 }
1185 </ct>

```

`\makefinalpage` Below, one can find the code for the final page of the `uantwerpencoursetext` class:

```

1186 <*ct>
1187 \newcommand\makefinalpage{
1188 \if@titlepagetableonly
1189 \else
1190 \cleardoublepage
1191 \thispagestyle{empty}
1192 ~% intentionally blank page
1193 \clearpage
1194 \thispagestyle{empty}
1195 \begin{tikzpicture}[remember picture,overlay]
1196 \node at (current page.center) {
1197 \begin{tikzpicture}[inner sep=0pt]
1198 \clip (0,0) rectangle(\paperwidth,\paperheight);
1199 \if@titlepagenoartwork\else
1200 \filldraw [uacorpblue] (\paperwidth,\ua@Qh pt) circle (\ua@Rh pt);
1201 \fi
1202 \path
1203 (0.1\paperwidth,0.1\paperheight)
1204 node [anchor = south west, text width = 0.6\paperwidth] {
1205 CONFIDENTIAL AND PROPRIETARY\\~\\
1206
1207 \copyright{} \@versionyear{} \uaname,
1208 \arname.}
1209 (0.9\paperwidth,0.1\paperwidth)
1210 node [anchor = south east] {
1211 \usebox{\myqrcode}
1212 };

```

```

1213     \end{tikzpicture}
1214 };
1215 \end{tikzpicture}
1216 \fi
1217 }
1218 </ct>

```

\maketitle And next, the code for the title page of the uantwerpenmasterthesis class:

```

1219 <*mt>
1220 \renewcommand\maketitle{%
1221   \pagestyle{empty}
1222   \begin{titlepage}
1223     \begin{tikzpicture}[remember picture,overlay]
1224       \node at (current page.center) {
1225         \begin{tikzpicture}[inner sep=0pt]
1226           \clip (0,0) rectangle(\paperwidth,\paperheight);
1227           \if@titlepagenoartwork\else
1228             \filldraw [lightgray] (0.55\paperwidth,\ua@Qba pt) circle (\ua@Rba pt);
1229             \filldraw [white] (0.35\paperwidth,\ua@Qbb pt) circle (\ua@Rbb pt);
1230             \filldraw [lightgray] (0,\ua@Qh pt) circle (\ua@Rh pt);
1231             \path
1232               (0.95\paperwidth,0.1\paperheight)
1233               node [anchor=north east] {
1234                 \includegraphics[width=0.25\paperwidth]{\logoname}};
1235             \fi
1236             \path
1237               (\ua@ll pt,0.77\paperheight)
1238               node [anchor=north west, text width=0.7\paperwidth] {
1239                 \uppercase\expandafter{\uaname}\\~\\
1240                 \academicyearname{} \@academicyear\\~\\
1241                 {\large \@faculty{}}\\~\\
1242                 \masterthesisname{}}\[0.05\paperheight]
1243                 {\Large \bf \@title{}}
1244               (\ua@ll pt,0.55\paperheight)
1245               node [anchor = north west, text width = 0.7\paperwidth] {
1246                 {\large \bf \@author{}}\\~\\~\\
1247                 \begin{tabular}{@{}p{2.7cm}p{10.8cm}}
1248                   \textbf{\supervisorsname{}}:
1249                   & \@supervisor i \\
1250                   & \@supervisor ii \\
1251                   & \@supervisor iii \\
1252                   & \@supervisor iv
1253                 \end{tabular}
1254               }
1255               (\ua@ll pt,0.3\paperheight) node [anchor=north west, text width = 0.7\paperwidth]{%
1256                 \mthesisname\\
1257                 \@diploma\\
1258                 \@defenselocation, \@defensedate
1259               };

```

```

1260         \end{tikzpicture}
1261     };
1262     \end{tikzpicture}
1263 \end{titlepage}%
1264 \clearpage
1265 \setcounter{footnote}{0}%
1266 \global\let\thanks\relax
1267 \global\let\maketitle\relax
1268 \global\let\@thanks\@empty
1269 \global\let\title\relax
1270 \global\let\author\relax
1271 \global\let\date\relax
1272 \global\let\and\relax
1273 \pagestyle{fancy}
1274 \thispagestyle{empty}
1275 }
1276 </mt>

```

`\makefinalpage` Below, one can find the code for the final page of the `uantwerpenmasterthesis` class:

```

1277 <*mt>
1278 \newcommand\makefinalpage{
1279     \cleardoublepage
1280     \thispagestyle{empty}
1281     \begin{tikzpicture}[remember picture,overlay]
1282         \node at (current page.center) {
1283             \begin{tikzpicture}[inner sep=0pt]
1284                 \clip (0,0) rectangle(\paperwidth,\paperheight);
1285                 \if@titlepagenoartwork\else
1286                     \filldraw [lightgray] (\paperwidth,\ua@Qh pt) circle (\ua@Rh pt);
1287                 \fi
1288             \end{tikzpicture}
1289         };
1290     \end{tikzpicture}
1291 }
1292 </mt>

```

## 5.11 Title page for the phdthesis clases

The title page is generated using the `\maketitle` command. As the book class from which we inherit already defines this command, we need to renew it.

The UAntwerpen house style works with large-radius circles. We need some math in order to calculate center points and radii.

The width and height of the page are labeled  $X$  and  $Y$  in the house style. The radius of the circles equals 6 times  $X$ . Therefore:

```

1293 <*pt>
1294 \pgfmathsetmacro{\ua@X}{\paperwidth}
1295 \pgfmathsetmacro{\ua@Y}{\paperheight}
1296 \pgfmathsetmacro{\ua@R}{6*\paperwidth}
1297 \pgfmathsetmacro{\ua@B}{(\ua@X+\ua@Y)/15}
1298 \pgfmathsetmacro{\ua@L}{0.25*\ua@X}
1299 \pgfmathsetmacro{\ua@Z}{0.1*\ua@L}
1300 \pgfmathsetmacro{\ua@H}{0.3*\ua@L}
1301 \pgfmathsetmacro{\ua@h}{0.5*(\ua@B-\ua@H)}
1302 </pt>

```

\maketitle Below, one can find the code for the title page of the uantwerpenphdthesis class:

```

1303 <*pt>
1304 \renewcommand\maketitle{%
1305   \pagestyle{empty}
1306   \begin{titlepage}
1307     \if@titlepagetableonly
1308       Dit is een doctoraatsthesis van Universiteit Antwerpen.
1309     \else
1310       \begin{tikzpicture}[remember picture,overlay]
1311         \node at (current page.center) {
1312           \begin{tikzpicture}[inner sep=0pt]
1313             \clip (0,0) rectangle(\paperwidth,\paperheight);
1314
1315             \filldraw[uacorpblue]
1316               (0.5*\ua@X pt,\ua@B+\ua@R pt) circle (\ua@R pt)
1317               (\ua@X pt, 0.25*\ua@Y+\ua@R pt) circle (\ua@R pt);
1318
1319             \node[anchor=south east] at (\ua@X-3*\ua@Z pt,\ua@h pt)
1320               {\includegraphics[width=\ua@L pt]{\logoname}};
1321
1322             \begin{scope}
1323               \clip
1324                 (\ua@X pt, 0.25*\ua@Y+\ua@R pt) circle (\ua@R pt)
1325                 (0.375*\ua@X pt,\ua@R+0.666*\ua@Y pt) circle (\ua@R pt);
1326
1327               \node[anchor=south] at (0.5*\ua@X pt, 2.1*\ua@B pt)
1328                 {\includegraphics[width=\ua@X pt]{\@titlepageimage}};
1329             \end{scope}
1330
1331             \filldraw[uacorpbord]
1332               (0.375*\ua@X pt,\ua@R+0.666*\ua@Y pt) circle (\ua@R pt);
1333
1334             \filldraw[white]
1335               (0.1*\ua@X pt,\ua@R+0.666*\ua@Y pt) circle (\ua@R pt);
1336
1337             \node[anchor=north west,align=left,font=\large]
1338               at (3*\ua@Z pt, \ua@B - \ua@h pt)

```



```

1339 { \textcolor{uacorpblue}{\textsf{\@defenselocation,
1340 \@defensedate}}} };
1341
1342 \node[anchor=south west,text width=\textwidth,align=left,font=\large]
1343 at (3*\ua@Z pt, 1.4*\ua@B pt)
1344 { \textcolor{white}{\textsf{\@affiliation}}} };
1345
1346 \node[anchor=south east,text width=\textwidth,align=right,font=\large]
1347 at (\ua@X - 3*\ua@Z pt, 1.4*\ua@B pt)
1348 { \textcolor{white}{\textsf{
1349 \supervisorsname\
1350 \@supervisor\
1351 \ifdefvoid{\@supervisorii}{\@supervisorii}%
1352 \ifdefvoid{\@supervisoriii}{\@supervisoriii}%
1353 \ifdefvoid{\@supervisoriv}{\@supervisoriv}}}
1354 };
1355
1356 \node[anchor=north west,text
1357 width=\ua@X-6*\ua@Z,align=left,font=\Huge]
1358 (title)
1359 at (3*\ua@Z pt,\ua@Y-4*\ua@Z pt)
1360 { \textsf{\textbf{\@title}}} };
1361
1362 \node[anchor=north west,below=2.5ex of title,text width=\ua@X-6*\ua@Z,align=left,font=
1363 { \textsf{\textbf{\@subtitle}}} };
1364
1365 \node[anchor=north west,text width=\ua@X-6*\ua@Z,align=left]
1366 at (3*\ua@Z pt,\ua@Y - 12.5*\ua@Z pt)
1367 { \textsf{\pthesisnamei{} \@phddegree{} \pthesisnameii{}}} };
1368
1369 \node[anchor=north west, text width=\textwidth,align=left,font=\LARGE]
1370 at (3*\ua@Z pt, \ua@Y-15.5*\ua@Z pt)
1371 { \textsf{\textbf{\@author}}} };
1372 \end{tikzpicture}
1373 };
1374 \end{tikzpicture}
1375 \fi
1376 \end{titlepage}%
1377 \cleardoublepage
1378 \begin{center}
1379 \includegraphics[width=\ua@L pt]{\logoname}
1380 \vfill
1381 \@faculty\
1382 \@programmeq\par
1383 \vfill
1384 \Huge\textsf{\@title}\par
1385 \large\textsf{\@subtitle}\par
1386 \vfill
1387 \normalsize\pthesisnamei\
1388 \@phddegree\

```

```

1389 \pthesisnameii\\
1390 \medskip
1391 \textbf{\@author}
1392 \vfill
1393 \begin{minipage}[b]{0.4\textwidth}
1394 \@defenselocation, \@defensedate
1395 \end{minipage}
1396 \hfill
1397 \begin{minipage}[b]{0.4\textwidth}
1398 \flushright
1399 \supervisorsname\\
1400 \@supervisor%
1401 \ifdefvoid{\@supervisorii}{\@supervisorii}%
1402 \ifdefvoid{\@supervisoriii}{\@supervisoriii}%
1403 \ifdefvoid{\@supervisoriv}{\@supervisoriv}
1404 \end{minipage}
1405 \end{center}
1406 \clearpage
1407 \textbf{\juryname}\hfill\par
1408 \textbf{\jurychairmanname}\hfill\break
1409 \@jurychairman{\ifdefvoid{\@jurychairmanaff}{}, \@jurychairmanaff}\\
1410 \hfill\break
1411 \textbf{\supervisorsname}\hfill\break
1412 \ifdefvoid{\@supervisor}{\@supervisor}
1413 \ifdefvoid{\@supervisoriaff}{}, \@supervisoriaff\\
1414 \ifdefvoid{\@supervisorii}{\@supervisorii}
1415 \ifdefvoid{\@supervisoriaff}{}, \@supervisoriaff\\
1416 \ifdefvoid{\@supervisoriii}{\@supervisoriii}
1417 \ifdefvoid{\@supervisoriaff}{}, \@supervisoriaff\\
1418 \ifdefvoid{\@supervisoriv}{\@supervisoriv}
1419 \ifdefvoid{\@supervisorivaff}{}, \@supervisorivaff\\
1420 \hfill\break
1421 \textbf{\jurymembersname}\hfill\break
1422 \ifdefvoid{\@jurymember}{\@jurymember}
1423 \ifdefvoid{\@jurymemberiaff}{}, \@jurymemberiaff\\
1424 \ifdefvoid{\@jurymemberii}{\@jurymemberii}
1425 \ifdefvoid{\@jurymemberiaff}{}, \@jurymemberiaff\\
1426 \ifdefvoid{\@jurymemberiii}{\@jurymemberiii}
1427 \ifdefvoid{\@jurymemberiaff}{}, \@jurymemberiaff\\
1428 \ifdefvoid{\@jurymemberiv}{\@jurymemberiv}
1429 \ifdefvoid{\@jurymemberivaff}{}, \@jurymemberivaff\\
1430 \ifdefvoid{\@jurymemberv}{\@jurymemberv}
1431 \ifdefvoid{\@jurymembervaff}{}, \@jurymembervaff\\
1432 \ifdefvoid{\@jurymembervi}{\@jurymembervi}
1433 \ifdefvoid{\@jurymemberviaff}{}, \@jurymemberviaff\\
1434 \hfill\break
1435 \vfill
1436 \textbf{Contact}\\
1437 \smallskip
1438 \@author\\

```

```

1439 \@affiliation\\
1440 \@address\\
1441 \vfill
1442 \copyright{} \@defensedate{} \@author\\
1443 \arrname.
1444 \vfill
1445 \begin{minipage}[b]{.5\linewidth}
1446     ISBN \@isbn\\
1447     Wettelijk depot \@depot
1448 \end{minipage}
1449 \hfill
1450 \begin{minipage}[b]{.5\linewidth}
1451     \expandafter\EAN \@isbn
1452 \end{minipage}
1453 \setcounter{footnote}{0}%
1454 \global\let\thanks\relax
1455 \global\let\maketitle\relax
1456 \global\let\@thanks\@empty
1457 \global\let\title\relax
1458 \global\let\author\relax
1459 \global\let\date\relax
1460 \global\let\and\relax
1461 \pagestyle{fancy}
1462 \thispagestyle{empty}
1463 \
1464 }
1465 </pt>

```

`\makefinalpage` Below, one can find the code for the final page of the `uantwerpenphdthesis` class:

```

1466 <*pt>
1467 \newcommand\makefinalpage{
1468     \if@titlepagetableonly
1469     \else
1470     \cleardoublepage
1471     \thispagestyle{empty}
1472     ~% intentionally blank page
1473     \clearpage
1474     \thispagestyle{empty}
1475     \begin{tikzpicture}[remember picture,overlay]
1476         \node at (current page.center) {
1477             \begin{tikzpicture}[inner sep=0pt]
1478                 \clip (0,0) rectangle(\paperwidth,\paperheight);
1479                 \fill[uacorpblue] (0,0) rectangle(\ua@X pt,\ua@Y pt);
1480                 \filldraw [white] (1.2*\ua@X pt,\ua@R+0.125*\ua@Y pt) circle (\ua@R pt);
1481                 \filldraw [uacorpbord] (1.375*\ua@X pt,\ua@R+0.666*\ua@Y pt) circle (\ua@R pt);
1482             \end{tikzpicture}
1483         };
1484     \end{tikzpicture}

```

```

1485 \fi
1486 }
1487 </pt>

```

## 5.12 Title page for the letter class

### 5.12.1 Bottom cords

The graphical footer of the page is provided through PDF/PS includes in a Dutch and a non-dutch version.

### 5.12.2 Title Page

`\maketitle` The top of the letter is generated using the `\maketitle` command.

```

1488 <*le>
1489 \newcommand\maketitle{%
1490 \pagestyle{fancy}
1491 \thispagestyle{empty}
1492 \begin{tikzpicture}[overlay,remember picture]
1493 \path (current page.north west) +(1.8cm,-1.2cm)
1494 node[anchor=north west] {
1495 \includegraphics[height=1.1cm]{\@logo}
1496 };
1497 \draw (current page.north west)
1498 +(1cm,-98mm) -- +(1.5cm,-98mm);
1499 % 90 x 45
1500 % pos: 20mm van kant, 15mm van onderkant
1501 \path (current page.north east) +(-100mm,-65mm)
1502 node[anchor=west,text width=80mm,align=left] {
1503 \scriptsize\textcolor{gray}{\uline{\@returnaddress}}\\*
1504 \normalsize\@to\\*
1505 \@toorganization\\*
1506 \@toaddress
1507 };
1508 \end{tikzpicture}
1509 \begin{tikzpicture}[overlay,remember picture]
1510 \path (current page.south west) +(0,-0.7cm)
1511 node[anchor=south west,inner sep=0pt, outer sep=0pt]
1512 {\includegraphics{\footernamename}};
1513 \end{tikzpicture}
1514 ~\\[3ex]
1515 \textcolor{uacorpblue}{\bf \@sender}
1516 \ifx\@senderrole\@emptymacro\\[1.75ex]\else \\\@senderrole\\[1.75ex]\fi
1517 \@faculty
1518 \ifx\@unit\@emptymacro\else\\* \@unit\fi~\\[1.75ex]
1519 \@address\\[1.75ex]

```

```

1520 \ifx\@email\@emptymacro\else E \@emailuser\tat{}\@emaildomain\\\fi
1521 \ifx\@phone\@emptymacro\else T \@phone\\\fi
1522 \ifx\@fax\@emptymacro\else F \@fax\\\fi
1523 \ifx\@mobile\@emptymacro\else M \@mobile\\\fi
1524 ~\\[4ex]
1525 \begin{tikzpicture}[anchor=north west,align=left,outer sep=0,inner sep=0]
1526   \path
1527     (0,0) node { \scriptsize \strut
1528       \textcolor{gray}{\uppercase\expandafter{\datename} } }
1529     (4cm,0) node { \scriptsize \strut
1530       \textcolor{gray}{\uppercase\expandafter{\subjectname} } }
1531     (0,-2.5ex) node { \strut \@date }
1532     (4cm,-2.5ex) node[align=left] { \strut \@subject };
1533 \end{tikzpicture}~\\[4ex]
1534 }
1535 </le>

```

The trailer of the page is automatically generated at the end of the document:

```

1536 <*le>
1537 \AtEndDocument{
1538   \@closing\\*[3ex]\@signature~\\[3ex]
1539   \@sender
1540   \ifx\@senderrole\@emptymacro\\[8ex]\else\\*\@senderrole\\[8ex]\fi
1541   \setlength{\parskip}{0em}
1542   \ifx\@carboncopy\@emptymacro\else CC: \@carboncopy\\[4ex]\fi
1543   \ifx\@enclosed\@emptymacro\else ENCL: \@enclosed\fi
1544   \label{lastpage}
1545 }
1546 </le>

```

### 5.13 Title page for the exam class

`\maketitle` The title page of the exam class is generated using the `\maketitle` command.

```

1547 <*ex>
1548 \renewcommand\maketitle{%
1549   \pagestyle{fancy}
1550   \AddToShipoutPicture*{%
1551     \put(0,0){%
1552       \begin{tikzpicture}[remember picture,overlay]
1553         \node at (current page.center) {
1554           \begin{tikzpicture}
1555             \clip (0,0) rectangle (21,29.7);
1556             \draw
1557               ( 3,9.7) -- ( 3,23.7)
1558               ( 0,23.7) -- (21,23.7)
1559               ( 3,19.7) -- (21,19.7)

```

```

1560      ( 3,17.7) -- (21,17.7)
1561      ( 3,15.7) -- (21,15.7)
1562      (14,11.7) -- (14,15.7)
1563      ( 3,13.7) -- (21,13.7)
1564      ( 3,11.7) -- (21,11.7)
1565      ( 0,9.7) -- (21,9.7);
1566
1567      \draw[ultra thick]
1568      ( 3,15.7) +(0,-0.5) -- +(0,0) -- +(0.5,0)
1569      ( 3,13.7) +(0,+0.5) -- +(0,0) -- +(0.5,0)
1570      (14,15.7) +(-0.5,0) -- +(0,0) +(0,-0.5) -- +(0,0) -- +(0.5,0)
1571      (14,13.7) +(-0.5,0) -- +(0,0) +(0,+0.5) -- +(0,0) -- +(0.5,0)
1572      (21,15.7) +(0,-0.5) -- +(0,0) -- +(-0.5,0)
1573      (21,13.7) +(0,+0.5) -- +(0,0) -- +(-0.5,0);
1574
1575      \path
1576      (3,25.2) node[anchor=north west] {
1577          \parbox{14cm}{
1578              \fontfamily{phv}\fontsize{12}{15}\fontseries{b}\selectfont
1579              \@faculty\\
1580              \fontfamily{phv}\fontsize{11}{14}\fontseries{m}\selectfont
1581              \@programmet \@programmec\
1582              \ifx\@programmeq\@emptymacro\else--- \@programmeq\fi
1583          }
1584      }
1585      (3.3,23.0) node[anchor=north west] {
1586          \parbox{14cm}{
1587              \fontfamily{phv}\fontsize{12}{15}\selectfont
1588          }
1589      }
1590      (3.3,21.9) node[anchor=north west] {
1591          \parbox{16cm}{
1592              \fontfamily{phv}\fontsize{18}{22}\fontseries{b}\fontshape{n}\selectfont
1593              \raggedright \@coursei{} --- \@exampart
1594              \fontfamily{phv}\fontsize{12}{18}\fontseries{m}\fontshape{n}\selectfont\\
1595              Groep \@examgroupnumber{} \hfill \@examdate{} }
1596      }
1597      (3.3,19) node[anchor=north west] {
1598          \parbox{14cm}{
1599              \fontfamily{phv}\fontsize{12}{15}\fontseries{m}\selectfont
1600              \@coursecodei
1601          }
1602      }
1603      (3.3,17.5) node[anchor=north west] {
1604          \parbox{14cm}{
1605              \fontfamily{phv}\fontsize{12}{18}\fontseries{m}\fontshape{n}\selectfont
1606              \raggedright \ifdef{\dateenglish}{Professor(s) --- }{}Titularis(sen):\\
1607              \fontfamily{phv}\fontsize{14}{20}\fontseries{m}\fontshape{n}\selectfont
1608              \raggedright \@author{}
1609          }

```

```

1610     }
1611     (3.3,15.5) node[anchor=north west] {
1612         \parbox{10cm}{
1613             \fontfamily{phv}\fontsize{12}{15}\fontseries{m}\fontshape{n}\selectfont
1614             \raggedright \ifdef{\dateenglish}{Last name/First name
1615                 --- }{}
1616             Naam/Voornaam:}
1617     }
1618     (14.3,15.5) node[anchor=north west] {
1619         \parbox{5cm}{
1620             \fontfamily{phv}\fontsize{12}{15}\fontseries{m}\fontshape{n}\selectfont
1621             \raggedright \ifdef{\dateenglish}{Registration No. --- }{}Rolnr.:}
1622     }
1623     (3.3,13.5) node[anchor=north west] {
1624         \parbox{14cm}{
1625             \fontfamily{phv}\fontsize{12}{21}\fontseries{m}\fontshape{n}\selectfont
1626             \raggedright \ifdef{\dateenglish}{Exam duration --- }{}Duur van het examen: \@e
1627         }
1628     }
1629     (14.3,13.5) node[anchor=north west] {
1630         \parbox{5cm}{
1631             \fontfamily{phv}\fontsize{12}{15}\fontseries{m}\fontshape{n}\selectfont
1632             \raggedright \ifdef{\dateenglish}{Start --- }{}Begin: \@tstart \\[1ex]
1633             \raggedright \ifdef{\dateenglish}{End --- }{}Einde~: \@tend
1634         }
1635     }
1636     (3.3,11.5) node[anchor=north west] {
1637         \parbox{14cm}{
1638             \fontfamily{phv}\fontsize{12}{21}\fontseries{m}\fontshape{n}\selectfont
1639             \raggedright \ifdef{\dateenglish}{Room --- }{}Lokaal: \@rooms
1640         }
1641     }
1642 }
1643 (2,9.5) node[anchor=north west] {
1644     \parbox{19cm}{
1645         \fontfamily{phv}\fontsize{10}{13}\fontseries{m}\fontshape{n}\selectfont
1646         \ifdef{\dateenglish}{\raggedright Extra information: read the back of this page
1647         \raggedright Extra informatie: zie achterkant
1648     }
1649 }
1650 (3,27.7) node[anchor=north west] {
1651     \includegraphics[width=7cm]{\@logo}
1652 };
1653 \end{tikzpicture}
1654 };
1655 \end{tikzpicture}
1656 }
1657 }
1658 \vspace*{15cm}
1659 \clearpage

```

```

1660 \ifx\@qrrtitle\@emptymacro
1661 \else
1662 \@extrainfo
1663 \clearpage
1664 \fi
1665 }
1666 \ex>

```

## 5.14 Auxiliary functions to typeset exams

`\question` Add a small box with the weight of the question on the current line (right aligned).

```

1667 \ex>
1668 \newcounter{question}
1669 \setcounter{question}{0}
1670 \renewcommand\thequestion{\@arabic\c@question}
1671 \newcommand\question[1]{
1672   \stepcounter{question}
1673   \thequestion.~#1%
1674 }
1675 \ex>

```

`\questionweight` Add a small box with the weight of the question on the current line (right aligned).

```

1676 \ex>
1677 \newcommand\questionweight[1]{%
1678   \hspace{\fill}
1679   \begin{tabular}{|c|}
1680     \hline
1681     \small \weightname: #1\\
1682     \hline
1683   \end{tabular}\\
1684 }
1685 \ex>

```

`\engdut` typesets the question in two columns, the left column taking the English variant of the question and the right column taking the Dutch variant.

```

1686 \ex>
1687 \newcommand\engdut[2]{%
1688   \begin{tabular}{ccc}%
1689     \selectlanguage{english}%
1690     \begin{minipage}[t]{0.45\textwidth}%
1691       #1
1692     \end{minipage}%
1693     &~~~&
1694     \selectlanguage{dutch}%
1695     \begin{minipage}[t]{0.45\textwidth}%

```



```

1696      #2
1697      \end{minipage}%
1698      \end{tabular}
1699      \selectlanguage{english}%
1700 }
1701 </ex>

```

`\setmcsymbol` sets the symbol to be used as multiple choice mark (by default a square).

```

1702 <*ex>
1703 \newcommand\@mcsymbol{\square}
1704 \newcommand\setmcsymbol[1]{\renewcommand\@mcsymbol{#1}}
1705 </ex>

```

`\mc` typesets a multiple choice answer candidate (monolingual, i.e. in a single column).

```

1706 <*ex>
1707 \newcommand\mc[1]{%
1708   \hfill\break\quad\begin{tabular}{cc}
1709     $\@mcsymbol$
1710     &
1711     \begin{minipage}[t]{0.9\textwidth}%
1712       #1
1713     \end{minipage}%
1714   \end{tabular}
1715 }
1716 </ex>

```

`\engdutm` typesets a multiple choice answer candidate in two columns, the left column taking the English variant of the question and the right column taking the Dutch variant.

```

1717 <*ex>
1718 \newcommand\engdutm[2]{%
1719   \hfill\break\begin{tabular}{cccc}
1720     $\@mcsymbol$
1721     &
1722     \selectlanguage{english}%
1723     \begin{minipage}[t]{0.42\textwidth}%
1724       #1
1725     \end{minipage}%
1726     &---&
1727     \selectlanguage{dutch}%
1728     \begin{minipage}[t]{0.42\textwidth}%
1729       #2
1730     \end{minipage}%
1731   \end{tabular}
1732   \selectlanguage{english}%

```

```

1733 }
1734 </ex>

```

`\insertsolutionspagepartial` fills the remainder of the page with 'fill-out' squares. as observing/controlling the current line position in L<sup>A</sup>T<sub>E</sub>X is not easy, one has to provide the number of centimeters below the bottom of the page, one wants to start the fill-out squares.

```

1735 <*ex>
1736 \newcommand\insertsolutionspagepartial[1]{
1737   \AddToShipoutPicture*{%
1738     \put(0,0){%
1739       \begin{tikzpicture}
1740         \clip (0,0) rectangle (21,#1);
1741         \draw[densely dotted, step=0.5cm,black!20] (0.999,0.990) grid (20,1.5);
1742         \draw[densely dotted, step=0.5cm,black!20] (0.999,1.499) grid (2,2.5);
1743         \draw[densely dotted, step=0.5cm,black!20] (18.999,1.499) grid (20,2.5);
1744
1745         \draw[densely dotted, step=0.5cm,black!20] (0.999,2.499) grid (20,27);
1746         \draw[densely dotted, step=0.5cm,black!20] (0.999,27) grid (16,28);
1747         \draw[densely dotted, step=0.5cm,black!20] (19.499,27) grid (20,28);
1748         \draw[densely dotted, step=0.5cm,black!20] (0.99,27.999) grid
1749           (20,28.5);
1750         \draw[ultra thick] (1,#1) -- (20,#1);
1751       \end{tikzpicture}
1752     }
1753   }%
1754   \clearpage
1755   \relax
1756 }
1757 </ex>

```

`\insertsolutionspage` inserts a full solutions page, i.e. flushes the current page and inserts a full page with 'fill-out' squares. The argument allows for specifying a watermark text (e.g. 'Scrap paper').

```

1758 <*ex>
1759 \newcommand\insertsolutionspage[1]{
1760   \clearpage
1761   \AddToShipoutPicture*{%
1762     \put(0,0){%
1763       \begin{tikzpicture}
1764         \clip (0,0) rectangle (21,29.5);
1765         \draw[densely dotted, step=0.5cm,black!20] (0.999,1.499) grid (2,2.5);
1766         \draw[densely dotted, step=0.5cm,black!20] (18.999,1.499) grid (20,2.5);
1767
1768         \draw[densely dotted, step=0.5cm,black!20] (0.999,2.499) grid (20,28);
1769         \draw[densely dotted, step=0.5cm,black!20] (0.999,28) grid (16,28.5);
1770         \draw[densely dotted, step=0.5cm,black!20] (19.499,28) grid (20,28.5);
1771       \end{tikzpicture}

```

```

1772     }
1773     \put(120,150){\rotatebox{60}{\textcolor{watermark}{
1774         \fontfamily{phv}\fontsize{105}{130}\fontseries{m}\fontshape{n}\selectfont
1775         #1}
1776     }
1777 }
1778 }%
1779 ~\relax
1780 }
1781 </ex>

```

We add a lastpage label to the final page

```

1782 <*ex>
1783 \AtEndDocument{
1784     \label{lastpage}
1785 }
1786 </ex>
1787 %     \end{macrocode
1788 %
1789 % \subsection{References}
1790 %     \begin{macrocode}
1791 <*ct | mt | pt>
1792 \IfFileExists{varioref.sty}{\RequirePackage{varioref}}{}
1793 </ct | mt | pt>
1794 %
1795 <*ct>
1796 \IfFileExists{hyperref.sty}{
1797     \RequirePackage{hyperref}
1798     \hypersetup{
1799         backref=true,
1800         breaklinks=true,
1801         colorlinks=true,
1802         citecolor=black,
1803         filecolor=black,
1804         hyperindex=true,
1805         linkcolor=black,
1806         pageanchor=true,
1807         pagebackref=true,
1808         pagecolor=black,
1809         pdfpagemode=UseOutlines,
1810         urlcolor=black
1811     }
1812     \AtBeginDocument{
1813         \hypersetup{
1814             pdftitle={\@title},
1815             pdfsubject={\@subtitle},
1816             pdfauthor={\@author}
1817         }
1818     }

```

```

1819 }{}
1820 </ct>
1821 %
1822 %
1823 <*mt | pt>
1824 \IfFileExists{hyperref.sty}{
1825     \RequirePackage{hyperref}
1826     \hypersetup{
1827         backref=true,
1828         breaklinks=true,
1829         colorlinks=true,
1830         citecolor=black,
1831         filecolor=black,
1832         hyperindex=true,
1833         linkcolor=black,
1834         pageanchor=true,
1835         pagebackref=true,
1836         pagecolor=black,
1837         pdfpagemode=UseOutlines,
1838         urlcolor=black
1839     }
1840     \AtBeginDocument{
1841         \hypersetup{
1842             pdftitle={\@title},
1843             pdfsubject={\@subtitle},
1844             pdfauthor={\@author}
1845         }
1846     }
1847 }{}
1848 </mt | pt>

```

## Change History

v1.0	General: Consolidated uacoursetext class and uamasterthesis class . . . . . 1 Added option qr . . . . . 29 Added option titlepagenoartwork . . . . . 29 Added option titlepagetableonly 29	v1.5	<code>\maketitle</code> : Implemented new footer . . . . . 68 General: Replaced bottom arcs in footer of letter by official PDF versions . . . . . 1 Removed documentation . . . . . 68
v1.1	<code>\diploma</code> : Fixed typo on programme's name (e-umlaut) 47 General: Small bugfixes and 'filled' option . . . . . 1 Added option user documentation . . . . . 6 Made raggedright conditional on option 'filled', because it can't be undone . . . . . 54	v1.6	<code>\diploma</code> : Added diploma codes . 47 General: Added diploma codes for Faculty of Applied Economics . 1 Added diploma code documentation . . . . . 9
v1.2	General: Added lmodern package and increased headheight to 13.7pt to please Fancyhdr . . . . 1 Added lmodern package to please MikTeX . . . . . 31 Increased headheight to please Fancyhdr . . . . . 54	v1.7	<code>\maketitle</code> : Embedded babel translations of keywords into title page . . . . . 59, 62 General: Added babel translations of elements of master's thesis title page . . . . . 1 Added babel tags of elements of master's thesis title page . . . . 33
v1.3	<code>\makefinalpage</code> : Changed eso-pic for tikz . . . . . 61, 63 <code>\maketitle</code> : Changed eso-pic for tikz . . . . . 62 General: Minor bugfixes, abandonment of a few packages, font freedom . . . . . 1 Abandoned use of cmbright - no more font dictatorship for theses and courses . . . . . 31 Added inclusion of background package . . . . . 32 Changed eso-pic for tikz and background . . . . . 58	v1.8	<code>\makefinalpage</code> : Inserted blank one but last page . . . . . 61 <code>\maketitle</code> : Allowed for empty senderrole . . . . . 68 <code>\signature</code> : Added signature . . . 51 General: Corrected minor typographic mistakes, added signature and solved problems with shell escape . . . . . 1 Added missing packages ifmtarg and shellest . . . . . 31 Allowed for empty senderrole . 69
v1.4	General: Implemented uantwerpenletter class . . . . . 1 Implemented letter class . . . . . 29	v1.81	General: Bugfixes for release v1.8 . 1 Apparently shellest is still missing from quite a number of installations, therefore, conditional loading . . . . . 31
		v1.9	General: Added ASoE (Antwerp School of Education) . . . . . 8 Integrated uantwerpenexam class into package . . . . . 1

Added etoolbox for convenience	spacing for engdut . . . . .	72
reasons . . . . . 31	<code>\extrainfo</code> : Changed default to	
Implemented uantwerpenexam	empty . . . . .	53
class . . . . . 29	<code>\maketitle</code> : Corrected information	
v2.0	page (p4) jury spacing . . . . .	64
<code>\makefinalpage</code> : Implemented	<code>\subtitle</code> : Added subtitle to phd	
final page . . . . . 67	text . . . . .	39
<code>\maketitle</code> : Implemented title	Ensured that subtitle is really	
page . . . . . 64	optional by adding default	
General: Implemented	space value . . . . .	39
uantwerpenphdthesis class into	General: Bugfix release after	
package . . . . . 1	promotion event on research	
Implemented	day . . . . .	1
uantwerpenphdthesis class . . . 29	Added appropriate <code>\appendix</code>	
Removed package ifmtarg	command . . . . .	55
because unreliable . . . . . 31	Allow for setting the multiple	
Updated diploma code	choice mark symbol . . . . .	73
documentation to incorporate	Corrected erroneous line	
PhD degrees . . . . . 9	breaking . . . . .	73
v2.1	Corrected spacing in title +	
<code>\engdut</code> : Increased intercolumn	exampart . . . . .	69

# 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		
\"	203, 594, 703	\@courseii ..... 628, 657, 1095, 1157
\'	258, 261, 266, 271, 272, 274, 320, 321, 326, 328	\@courseiii ..... 629, 667, 1096, 1158
\,	988	\@courseiv ..... 630, 677, 1097, 1159
\@M	991	\@courseversion 439, 440, 896, 903, 976
\@academicyear	763, 764, 947, 1059, 1098, 1136, 1240	\@crnotice ... <u>970</u> , 1172
\@address	842, 846, 847, 1440, 1519	\@date ..... 929, 1531
\@affiliation	517, 520, 1344, 1439	\@defensedate ..... 741, 742, 1258, 1340, 1394, 1442
\@afterheading	1000	\@defenselocation . . . . . 745, 746, 1258, 1339, 1394
\@arabic	1670	\@depot .. 758, 760, 1447
\@author	429, 1101, 1143, 1246, 1371, 1391, 1438, 1442, 1608, 1816, 1844	\@diploma 701, 705, 1257
\@carboncopy	834, 835, 1542	\@email ..... 1520
\@closing	826, 827, 1538	\@emaildomain ..... 786, 787, 1520
\@copyrightnotices	767, 768, 974	\@emailuser ..... 785, 787, 1520
\@copyrighttrue	3	\@empty 1177, 1268, 1456
\@coursecodei	623, 636, 646, 693, 696, 1051, 1094, 1156, 1600	\@emptymacro ... 59, 396, 412, 430, 472, 481, 490, 499, 508, 638, 648, 658, 668, 678, 1516, 1518, 1520–1523, 1540, 1542, 1543, 1582, 1660
\@coursecodeii	624, 656, 1053, 1095, 1157	\@enclosed 838, 839, 1543
\@coursecodeiii	625, 666, 1055, 1096, 1158	\@examdate 864, 865, 1595
\@coursecodeiv	626, 676, 1057, 1097, 1159	\@examgropunumber . 852
\@coursei	627, 637, 647, 694, 697, 1094, 1156, 1593	\@examgroupnumber . . . . . 860, 861, 946, 947, 1595
		\@examinertrue ..... 19
		\@examlength ..... 868, 869, 1626
		\@exampart 856, 857, 1593
		\@extrainfo ..... 884, 885, 1662
		\@faculty . 115, 117, 119, 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 168, 170, 174, 177, 180, 183, 184, 187, 189, 191, 193, 196, 199, 223, 225, 229, 232, 235, 238, 239, 242, 244, 246, 248, 251, 254, 277, 279, 283, 286, 289, 292, 293, 296, 298, 300, 302, 305, 308, 332, 334, 338, 341, 344, 347, 348, 351, 353, 355, 357, 360, 363, 1049, 1090, 1140, 1241, 1381, 1517, 1579
		\@facultyacronym . . . 371, 373, 896, 904
		\@fax .... 794, 795, 1522
		\@filledtrue ..... 15
		\@ifpackageloaded . 145
		\@isbn ..... 753, 755, 1446, 1451
		\@jurychairman .... 539, 542, 1409
		\@jurychairmanaff . . . 541, 542, 1409
		\@jurymemberi ..... 545, 558, 1422
		\@jurymemberiaff . . . 547, 558, 1423

\@jurymemberii . . . .	\@programmet . . 572,	1142, 1363,
... 548, 559, 1424	579, 581, 583,	1385, 1815, 1843
\@jurymemberiiaff .	585, 587, 1050,	\@supervisorii . . . .
... 549, 559, 1425	1091, 1152, 1581	523, 533, 1249,
\@jurymemberiii . . .	\@publisher . . . . .	1350, 1400, 1412
... 550, 560, 1426	... 447, 455, 1163	\@supervisoriaff . .
\@jurymemberiiiaff	\@publishercode . . .	... 526, 533, 1413
... 551, 560, 1427	... 458, 459, 1155	\@supervisoriii . . . .
\@jurymemberiv . . . .	\@qrauthor . . . . 427,	527, 534, 1250,
... 552, 561, 1428	430, 431, 435, 1062	1351, 1401, 1414
\@jurymemberivaff .	\@qrcoursei . . . 631,	\@supervisoriaff .
... 553, 561, 1429	638, 639, 643,	... 528, 534, 1415
\@jurymemberv . . . . .	648, 649, 653, 1051	\@supervisoriiii . . .
... 554, 562, 1430	\@qrcourseii . . 632,	529, 535, 1251,
\@jurymembervaff . .	658, 659, 663, 1053	1352, 1402, 1416
... 555, 562, 1431	\@qrcourseiii . . 633,	\@supervisoriiiaff
\@jurymembervi . . . .	668, 669, 673, 1055	... 530, 535, 1417
... 556, 563, 1432	\@qrcourseiv . . 634,	\@supervisoriv . . . .
\@jurymemberviaff .	678, 679, 683, 1057	531, 536, 1252,
... 557, 563, 1433	\@qrlectureri . . 466,	1353, 1403, 1418
\@lectureri . . . 462,	472, 473, 477,	\@supervisorivaff .
471, 480, 1102, 1146	481, 482, 486, 1063	... 532, 536, 1419
\@lecturerii . . . . .	\@qrlecturerii . 467,	\@tend . . . 876, 877, 1633
463, 489, 1103, 1147	490, 491, 495, 1065	\@thanks 1177, 1268, 1456
\@lectureriii . . . . .	\@qrlectureriii 468,	\@title . . . 395, 898,
464, 498, 1104, 1148	499, 500, 504, 1067	905, 1099, 1141,
\@lectureriv . . . . .	\@qrlectureriv . 469,	1243, 1360,
465, 507, 1105, 1149	508, 509, 513, 1069	1384, 1814, 1842
\@logo . . 777, 1495, 1651	\@qrsubtitle . . 409,	\@titlepageimage . .
\@makechapterhead . 984	412, 413, 417, 1061	... 749, 750, 1328
\@makeschapterhead	\@qrtitle . 393, 396,	\@titlepagenoartworktrue
... 999, 1002	397, 401, 1060, 1660	... 9
\@mcsymbol . . . 1703,	\@qrtrue . . . . . 5	\@titlepagetableonlytrue
1704, 1709, 1720	\@returnaddress . . .	... 11
\@mobile . 798, 799, 1523	... 802, 803, 1503	\@to . . . . 806, 807, 1504
\@phddegree . . . . .	\@rooms . . 880, 881, 1639	\@toaddress . . . . .
566, 569, 1367, 1388	\@schapter . . . . . 998	... 815, 816, 1506
\@phone . . 790, 791, 1521	\@sender . . . . .	\@toorganization . .
\@programmec 573, 594,	771, 774, 1515, 1539	... 810, 812, 1505
1092, 1152, 1581	\@senderrole . . . . .	\@tstart . 872, 873, 1632
\@programmecqr . . . .	773, 774, 1516, 1540	\@unit 778, 781, 782, 1518
... 574, 595, 1050	\@shorttitle . . . . .	\@versionyear . . . . .
\@programmeq . . . . .	... 421, 423, 944	443, 444, 980, 1207
. 576, 602, 604,	\@signature . . . . .	\ \ . . . . 447–453, 715,
606, 608, 610,	... 830, 831, 1538	717, 719, 721,
614, 1050, 1092,	\@studentnr 888, 889, 942	723, 725, 729,
1152, 1382, 1582	\@subject 819, 820, 1532	815, 973, 1084,
\@programmes . . . . .	\@subtitle 405, 408,	1089, 1090,
575, 619, 1092, 1152	411, 898, 1100,	1092, 1094–
		1105, 1108,



1111,	1113,	\AddToShipoutPicture	\bfseries	1089–1091,	
1135,	1140–	..... 938,	1093,	1098–1102	
1142,	1146–	1550, 1737, 1761	\break	..... 1408,	
1148,	1152,	\affiliation	..... 516	1410, 1411,	
1155–1158,		\Alph	..... 1013	1420, 1421,	
1205,	1239–	\and	618, 1181, 1272, 1460	1434, 1708, 1719	
1242,	1246,	\appendix	..... 1011		
1249–1251,		\appendixname	.... 1014	<b>C</b>	
1256,	1257,	\arrname	..... 100,	\c@question	..... 1670
1349,	1351–	150, 206, 261,		\captionsdutch	.... 146
1353,	1381,	315, 980, 1208, 1443		\captionsfrench	... 257
1387–1389,		\asoe	..... 127, 182,	\captionsspanish	.. 311
1399,	1401–	237, 291, 346, 380		\carboncopy	..... 833
1403,	1409,	\AtBeginDocument	..	\cfoot	.... 897, 904,
1413,	1415,	144, 374, 1812, 1840		914, 921, 930, 945	
1417,	1419,	\AtEndDocument	....	\chaptername	. 987, 1014
1423,	1425,	..... 1537, 1783		\thead	.... 894, 901,
1427,	1429,	\author	..... 426,	911, 918, 927, 935	
1431,	1433,	1179, 1270, 1458		\cleardoublepage	..
1436,	1438–			..... 1190,	
1440,	1442,	<b>B</b>		1279, 1377, 1470	
1446,	1503–	\baselineskip	.. 41, 987	\clearpage	... 1170,
1505,	1514,	\begin	. 691, 851, 854,	1173, 1193,	
1516,	1518–	986, 1004, 1077,		1264, 1406,	
1524,	1533,	1082, 1086,		1473, 1659,	
1538,	1540,	1087, 1118,		1663, 1754, 1760	
1542,	1579,	1120, 1134,		\clip	1121, 1198, 1226,
1594,	1606,	1162, 1195,		1284, 1313,	
1626,	1632,	1197, 1222,		1323, 1478,	
1646,	1681, 1683	1223, 1225,		1555, 1740, 1764	
\{	115, 772, 802, 806,	1247, 1281,		\closing	..... 825
811, 815, 826, 843		1283, 1306,		\copyright	.....
\}	115, 772, 802, 806,	1310, 1312,		... 980, 1207, 1442	
811, 815, 826, 843		1322, 1378,		\copyrightnotices	. 766
\`	... 267, 272, 273, 275	1393, 1397,		\course	..... 622
\~	..... 320	1445, 1450,		\coursei	..... 645
		1475, 1477,		\courseii	..... 655
\	..... 1050, 1051,	1492, 1509,		\courseiii	..... 665
1053, 1055,		1525, 1552,		\courseiv	..... 675
1057, 1463, 1581		1554, 1679,		\courseversion	.... 438
		1688, 1690,			
<b>A</b>		1695, 1708,	<b>D</b>		
\academicyear	..... 762	1711, 1719,	\date	.. 1180, 1271, 1459	
\academicyearname	.	1723, 1728,	\dateenglish	. 1606,	
. 105, 155, 211,		1739, 1763, 1790	1614, 1621,		
266, 320, 1136, 1240		\bf	..... 987,	1626, 1632,	
\address	..... 841	992, 1005, 1141–		1633, 1639, 1646	
\addto	146, 202, 257, 311	1143, 1152,		\datename	. 103, 154,
\addtolength	..... 41	1243, 1246, 1515		210, 265, 319, 1528	

\DeclareOption . . .	1730, 1731,	\facultyacronym . . .	370
. 3, 5, 9, 11, 15, 19	1751, 1771, 1787	\facwet . . .	141, 198,
\def 984, 998, 1002, 1011	\engdut . . . . .	253, 307, 362, 387	
\defensedate . . . . .	1686	\fax . . . . .	793
\defenselocation . .	1717	\fi . . . . .	71, 80, 398,
\definecolor . . .	375–	414, 432, 474,	
86–94	387, 578, 580,	483, 492, 501,	
\depot . . . . .	582, 584, 586,	510, 640, 650,	
757	588, 593, 596,	660, 670, 680,	
\diploma . . . . .	601, 603, 605,	906, 923, 943,	
700	607, 609, 611,	966, 1081, 1116,	
\domainname . . .	613, 618, 706,	1130, 1168,	
102,	708, 710, 712,	1201, 1216,	
152, 208, 263, 317	714, 716, 718,	1235, 1287,	
\draw 1497, 1556, 1567,	720, 722, 724,	1375, 1485,	
1741–1743,	726, 728, 730, 732	1516, 1518,	
1745–1748,	\errmessage . . . . .	1520–1523,	
1750, 1765,	. 388, 517, 523,	1540, 1542,	
1766, 1768–1770	539, 545, 566,	1543, 1582, 1664	
	590, 598, 615,	\fill . . . . .	1479, 1678
<b>E</b>	734, 753, 758, 842	\filldraw 1123–1125,	
\EAN . . . . .	863	1200, 1228–	
1451	\examdate . . . . .	1230, 1286,	
\else . . 899, 916, 941,	859	1315, 1331,	
964, 1117, 1122,	\examlength . . . . .	1334, 1480, 1481	
1189, 1199,	867	\flushright . . . . .	1398
1227, 1285,	\exampart . . . . .	\fontfamily . . .	940,
1309, 1469,	851, 857	1578, 1580,	
1516, 1518,	\ExecuteOptions . . .	1587, 1592,	
1520–1523,	. . . . . 22, 28, 35	1594, 1599,	
1540, 1542,	\expandafter . . . . .	1605, 1607,	
1543, 1582, 1661	. . . 1135, 1239,	1613, 1620,	
\email . . . . .	1451, 1528, 1530	1625, 1631,	
784	\extrainfo . . . . .	1638, 1645, 1774	
\enclosed . . . . .	883	\fontseries 940, 1578,	
837		1580, 1592,	
\end . . 686, 848, 849,	<b>F</b>	1594, 1599,	
994, 1006, 1079,	\faccpg . . . 116, 167,	1605, 1607,	
1106, 1107,	222, 276, 331, 375	1613, 1620,	
1137, 1164,	\facfbd . . . 118, 169,	1625, 1631,	
1165, 1167,	224, 278, 333, 376	1638, 1645, 1774	
1169, 1213,	\facggw . . . 121, 173,	\fontshape . . . . .	940,
1215, 1253,	228, 282, 337, 377	1592, 1594,	
1260, 1262,	\facldw . . . . . 129, 184,	1605, 1607,	
1263, 1288,	239, 293, 348, 381	1613, 1620,	
1290, 1329,	\facow . . . . . 131, 186,	1625, 1631,	
1372, 1374,	241, 295, 350, 382	1638, 1645, 1774	
1376, 1395,	\facrec . . . 135, 190,	\fontsize . . . . .	940,
1404, 1405,	245, 299, 354, 384	1592, 1594,	
1448, 1452,	\facsw . . . . . 133, 188,	1605, 1607,	
1482, 1484,	243, 297, 352, 383	1613, 1620,	
1508, 1513,	\factew . . . 137, 192,	1625, 1631,	
1533, 1653,	247, 301, 356, 385	1638, 1645, 1774	
1655, 1683,	\facti . . . . . 139, 195,	\fontsize . . . . .	940,
1692, 1697,	250, 304, 359, 386	988, 1578, 1580,	
1698, 1713,		1587, 1592,	
1714, 1725,			

1594,	1599,	1626,	1632,	\jurymemberi . . . . .	558
1605,	1607,	1633,	1639, 1646	\jurymemberii . . . . .	559
1613,	1620,	\ifdefvoid . . . . .		\jurymemberiii . . . . .	560
1625,	1631,	898, 1351–1353,		\jurymemberiv . . . . .	561
1638,	1645, 1774	1401–1403,		\jurymembersname . .	
\footername 99, 149,		1409,	1412–	. . . . . 109, 159,	
205, 260, 314, 1512		1419,	1422–1433	215, 270, 324, 1421	
\footrulewidth . . . .		\IfFileExists . . . . .		\jurymemberv . . . . .	562
. . . . 952, 957, 961		58, 1792, 1796, 1824		\jurymembervi . . . . .	563
		\ifthenelse . . 375–		\juryname . 108, 158,	
<b>G</b>		387, 578, 580,		214, 269, 323, 1407	
\global . . . . . 1175–		582, 584, 586,			
1181,	1266–	588, 593, 596,		<b>L</b>	
1272,	1454–1460	601, 603, 605,		\label . . . . . 1544, 1784	
		607, 609, 611,		\LARGE . . 987, 1005, 1369	
<b>H</b>		613, 618, 706,		\Large . 1142, 1143, 1243	
\headheight . . . . . 950		708, 710, 712,		\large . . . . . 1140,	
\headrulewidth . . . .		714, 716, 718,		1241, 1246,	
. . . . 951, 956, 960		720, 722, 724,		1337, 1342,	
\hfill . . . . . 1396,		726, 728, 730, 732		1346, 1362, 1385	
1407,	1408,	\ifx . . 396, 412, 430,		\LaTeX . . . . . 972	
1410,	1411,	472, 481, 490,		\lecturer . . . . . 461	
1420,	1421,	499, 508, 638,		\lectureri . . . . . 479	
1434,	1449,	648, 658, 668,		\lecturerii . . . . . 488	
1595,	1708, 1719	678, 1516, 1518,		\lectureriii . . . . . 497	
\hline . . . . . 1088–		1520–1523,		\lectureriv . . . . . 506	
1090,	1092,	1540, 1542,		\leftmark . . . . .	
1097–1101,		1543, 1582, 1660		. 895, 900, 912, 917	
1105,	1680, 1682	\includegraphics . .		\let 1175–1181, 1266–	
\hspace . . . . . 1678		. . . . . 1129,		1272, 1454–1460	
\Huge . . . . . 1357, 1384		1234, 1320,		\lfoot . . . . 896, 903,	
\huge . . . . . 992, 1141		1328, 1379,		913, 920, 929, 944	
\hypersetup . . 1798,		1495, 1512, 1651		\lhead . . . . 893, 900,	
1813, 1826, 1841		\insertsolutionspage		910, 917, 926, 934	
		. . . . . 1758		\linewidth . . 1445, 1450	
<b>I</b>		\insertsolutionspagepartial		\LoadClassWithOptions	
\i . . . . . 321		. . . . . 1735		. . . . . 24, 30, 37	
\if@copyright . . . . 2, 69		\insiob . . . 123, 176,		\logo . . . . . 776	
\if@examiner . . 18, 936		231, 285, 340, 378		\logoname . . . . . 98,	
\if@filled . . . . 14, 964		\insoiw . . . 125, 179,		148, 204, 259,	
\if@qr . 4, 77, 1075, 1112		234, 288, 343, 379		313, 777, 1129,	
\if@titlepagenoartwork		\interlinepenalty . 991		1234, 1320, 1379	
. . . . . 8, 1122,		\isbn . . . . . 752			
1199, 1227, 1285				<b>M</b>	
\if@titlepagetableonly		<b>J</b>		\macrocode . . . . . 848	
. . . . . 10, 1083,		\jurychairman . . . . . 538		\makeatletter . . . . . 31	
1188, 1307, 1468		\jurychairmanname .		\makeatother . . . . . 31	
\if@twoside . . 892, 909		. . . . . 110, 160,		\makebox . . . . . 987	
\ifdef . . . . . 1606,		216, 271, 325, 1408		\makefinalpage . . . .	
1614, 1621,		\jurymember . . . . . 544		. . 1186, 1277, 1466	

<code>\maketitle</code> <a href="#">1072</a> , <a href="#">1219</a> , <a href="#">1303</a> , <a href="#">1488</a> , <a href="#">1547</a>	1273, 1305, 1461, 1490, 1549	<code>\pgfmathsetmacro</code> .. ..... 1018–
<code>\masterthesisname</code> . ..... 106, 156, 212, 267, 321, 1242	<code>\paperheight</code> . 1019, 1020, 1023, 1027, 1028, 1034, 1035,	1023, 1026– 1030, 1033– 1037, 1040– 1043, 1294–1301
<code>\mc</code> ..... <a href="#">1706</a>	1121, 1127,	<code>\phddegree</code> ..... <a href="#">565</a>
<code>\medskip</code> ..... <a href="#">1390</a>	1132, 1138,	<code>\phone</code> ..... <a href="#">789</a>
<code>\mobile</code> ..... <a href="#">797</a>	1140, 1144,	<code>\ProcessOptions</code> ... ..... 23, 29, 36
<code>\MoSIW</code> ..... 703, 707, 709, 711, 713, 715, 717, 719, 721, 723, 725	1150, 1153, 1160, 1198, 1203, 1226,	<code>\programme</code> ..... <a href="#">571</a>
<code>\MoSTEW</code> ..... 704, 727, 729, 731, 733	1232, 1237, 1242, 1244,	<code>\psbarcode</code> ..... 1078
<code>\mthesisname</code> 111, 161, 217, 272, 326, 1256	1255, 1284, 1295, 1313, 1478	<code>\pthesisnamei</code> ..... . 112, 163, 219, 273, 328, 1367, 1387
<code>\myqrcode</code> .... 1070, 1076, 1115, 1211	<code>\paperwidth</code> .. 1018, 1026, 1033, 1040, 1041,	<code>\pthesisnameii</code> .... . 114, 165, 221, 275, 330, 1367, 1389
<code>\myqrdata</code> ... 1047, 1078	1043, 1121, 1123, 1124, 1127, 1129, 1133, 1139, 1145, 1151,	<code>\publisher</code> ..... <a href="#">446</a>
<b>N</b>	1154, 1161, 1198, 1200, 1203, 1204, 1209, 1226, 1228, 1229, 1232, 1234, 1238, 1245, 1255, 1284, 1286, 1294, 1296, 1313, 1478	<code>\publishercode</code> .... <a href="#">457</a>
<code>\n</code> 1048–1050, 1058–1062	<code>\par</code> ..... 989, 993, 996, 1008, 1382, 1384, 1385, 1407	<code>\put</code> .... 939, 1551, 1738, 1762, 1773
<code>\newcounter</code> ..... 1668	<code>\parbox</code> . 1091, 1093, 1099–1102, 1577, 1586, 1591, 1598, 1604, 1612, 1619, 1624, 1630, 1637, 1644	<b>Q</b>
<code>\newif</code> . 2, 4, 8, 10, 14, 18	<code>\parindent</code> ..... 40	<code>\qqquad</code> ..... 1708
<code>\newsavebox</code> ..... 1070	<code>\parskip</code> ..... 41, 1541	<code>\qrauthor</code> ..... 434
<code>\nobreak</code> .. 989, 993, 996	<code>\path</code> 1126, 1131, 1202, 1231, 1236, 1493, 1501, 1510, 1526, 1575	<code>\qrcourse</code> ..... 642
<code>\node</code> 1119, 1196, 1224, 1282, 1311, 1319, 1327, 1337, 1342, 1346, 1356, 1362, 1365, 1369, 1476, 1553		<code>\qrcoursei</code> ..... 652
<code>\normalsize</code> ..... .. 1162, 1387, 1504		<code>\qrcourseii</code> ..... 662
<code>\not</code> ..... 618		<code>\qrcourseiii</code> ..... 672
<b>O</b>		<code>\qrcourseiv</code> ..... 682
<code>\onecolumn</code> ..... 968		<code>\qrlecturer</code> ..... 476
<code>\opening</code> ..... <a href="#">822</a>		<code>\qrlectureri</code> ..... 485
<code>\orname</code> ... 101, 151, 207, 262, 316, 931		<code>\qrlecturerii</code> ..... 494
<b>P</b>		<code>\qrlectureriii</code> ..... 503
<code>\p@</code> ..... 990, 996, 1008		<code>\qrlectureriv</code> ..... 512
<code>\pagename</code> ..... 931		<code>\qrsuptitle</code> ..... 416
<code>\pagenumbering</code> .... 953		<code>\qrtitle</code> ..... 400
<code>\pageref</code> ..... 931, 945		<code>\question</code> ..... <a href="#">1667</a>
<code>\pagestyle</code> ... 1074, 1182, 1221,		<code>\questionweight</code> .. <a href="#">1676</a>
		<b>R</b>
		<code>\raggedbottom</code> ..... 967
		<code>\raggedright</code> .. 965, 1593, 1606, 1608, 1614, 1621, 1626, 1632, 1633, 1639, 1646, 1647
		<code>\raisebox</code> ..... 987

<code>\relax</code> . . . . .	1175,	563, 569, 579,	<code>\selectfont</code> . . .	940,
1176, 1178–		581, 583, 585,	988, 1578, 1580,	
1181, 1266,		587, 594, 595,	1587, 1592,	
1267, 1269–		602, 604, 606,	1594, 1599,	
1272, 1454,		608, 610, 614,	1605, 1607,	
1455, 1457–		619, 636, 637,	1613, 1620,	
1460, 1755, 1779		639, 643, 646,	1625, 1631,	
<code>\renewcommand</code> . . . . .		647, 649, 653,	1638, 1645, 1774	
. 117, 119, 122,		656, 657, 659,	<code>\selectlanguage</code> 1689,	
124, 126, 128,		663, 666, 667,	1694, 1699,	
130, 132, 134,		669, 673, 676,	1722, 1727, 1732	
136, 138, 140,		677, 679, 683,	<code>\sender</code> . . . . .	<u>770</u>
142, 147–161,		696, 697, 705,	<code>\setcounter</code> . . . . .	
163, 165, 167–		742, 746, 750,	42, 1012, 1174,	
170, 173, 174,		755, 760, 764,	1265, 1453, 1669	
176, 177, 179,		768, 774, 778,	<code>\setlength</code> 40, 950, 1541	
180, 182–184,		782, 787, 791,	<code>\setmcsymbol</code> . . . .	<u>1702</u>
186–193, 195,		795, 799, 803,	<code>\shorttitle</code> . . . . .	<u>420</u>
196, 198–200,		807, 812, 816,	<code>\signature</code> . . . . .	<u>829</u>
203–217, 219,		820, 823, 827,	<code>\slshape</code> . . . . .	
221–225, 228,		831, 835, 839,	. 893, 895, 910, 912	
229, 231, 232,		846, 847, 857,	<code>\small</code> . 929, 931, 937,	
234, 235, 237–		861, 865, 869,	942, 944–947, 1681	
239, 241–248,		873, 877, 881,	<code>\smallskip</code> . . . . .	<u>1437</u>
250, 251, 253–		885, 889, 951,	<code>\sprtr</code> . . 1046, 1052,	
255, 258–273,		952, 956, 957,	1054, 1056,	
275–279, 282,		960, 961, 1013,	1064, 1066, 1068	
283, 285, 286,		1014, 1073,	<code>\square</code> . . . . .	<u>1703</u>
288, 289, 291–		1220, 1304,	<code>\stepcounter</code> . . . .	<u>1672</u>
293, 295–302,		1548, 1670, 1704	<code>\stretch</code> . . . . .	<u>1171</u>
304, 305, 307–	<code>\RequirePackage</code> . . .		<code>\string</code> . . . . .	<u>1048–</u>
309, 312–326,	. 45, 48–50, 56–		1050, 1058–1062	
328, 330–334,	58, 62–64, 66,		<code>\strut</code> . . . . .	<u>1527,</u>
337, 338, 340,	70, 78, 79, 83,		1529, 1531, 1532	
341, 343, 344,	1792, 1797, 1825		<code>\studentnr</code> . . . . .	<u>887</u>
346–348, 350–	<code>\returnaddress</code> . . . .	<u>801</u>	<code>\subject</code> . . . . .	<u>818</u>
357, 359, 360,	<code>\rfoot</code> . . . . 898, 905,		<code>\subjectname</code> 104, 153,	
362–364, 373,	915, 922, 931, 946		209, 264, 318, 1530	
394, 395, 397,	<code>\rhead</code> . 895, 902, 912,		<code>\subsection</code> . . . . .	<u>1789</u>
401, 411, 413,	919, 928, 937, 942		<code>\subtitle</code> . . . . .	<u>404</u>
417, 423, 428,	<code>\rightmark</code> . . . 893, 910		<code>\supervisor</code> . . . . .	<u>522</u>
429, 431, 435,	<code>\rooms</code> . . . . .	<u>879</u>	<code>\supervisor i</code> . . . . .	<u>533</u>
440, 444, 455,	<code>\rotatebox</code> . . . 939, 1773		<code>\supervisor ii</code> . . . . .	<u>534</u>
459, 471, 473,	<code>\rule</code> . . . . . 987,		<code>\supervisor iii</code> . . . .	<u>535</u>
477, 480, 482,	992, 995, 1005, 1007		<code>\supervisor iv</code> . . . .	<u>536</u>
486, 489, 491,			<code>\supervisorsname</code> . .	
495, 498, 500,	<b>S</b>		. 107, 157, 213,	
504, 507, 509,	<code>\savebox</code> . . . . .	<u>1076</u>	268, 322, 1248,	
513, 520, 533–	<code>\scriptsize</code> . . . . .		1349, 1399, 1411	
536, 542, 558–	. . 1503, 1527, 1529			

<b>T</b>			
<code>\tat</code> . . . . .	31, 1520	<code>\titlepageimage</code> . . .	750
<code>\tend</code> . . . . .	<u>875</u>	<code>\to</code> . . . . .	<u>805</u>
<code>\textbackslash</code> . . . .		<code>\toaddress</code> . . . . .	<u>814</u>
. . . . 115, 518,		<code>\toorganization</code> . . .	<u>809</u>
524, 540, 546,		<code>\tstart</code> . . . . .	<u>871</u>
567, 754, 759,			
772, 802, 806,		<b>U</b>	
811, 815, 826, 843		<code>\ua@B</code> . . . . .	1297, 1301,
<code>\textbf</code> . . . . .	1248,	1316, 1327,	
1360, 1363,		1338, 1343, 1347	
1371, 1391,		<code>\ua@d</code> . . . . .	1042, 1132,
1407, 1408,		1138, 1144,	
1411, 1421, 1436		1150, 1153, 1160	
<code>\textcolor</code> 929, 931,		<code>\ua@H</code> . . . . .	1300, 1301
939, 987, 988,		<code>\ua@h</code> . . . . .	1301, 1319, 1338
992, 1005, 1339,		<code>\ua@L</code> . . . . .	1298–
1344, 1348,		1300, 1320, 1379	
1503, 1515,		<code>\ua@l</code> . . . . .	1041, 1132,
1528, 1530, 1773		1138, 1144,	
<code>\textsf</code> . . . . .	1339, 1344,	1150, 1153, 1160	
1348, 1360,		<code>\ua@ll</code> . . . . .	1040,
1363, 1367,		1237, 1244, 1255	
1371, 1384, 1385		<code>\ua@Qba</code> 1030, 1123, 1228	
<code>\texttt</code> . . . . .	973, 1094–	<code>\ua@Qbb</code> 1037, 1124, 1229	
1097, 1155–1159		<code>\ua@Qh</code> . . . . .	1023, 1125,
<code>\textwidth</code> . . . . .	995,	1200, 1230, 1286	
1007, 1342,		<code>\ua@R</code> . . . . .	1296, 1316,
1346, 1369,		1317, 1324,	
1393, 1397,		1325, 1332,	
1690, 1695,		1335, 1480, 1481	
1711, 1723, 1728		<code>\ua@Rba</code> . . . . .	1029,
<code>\thanks</code> 1175, 1266, 1454		1030, 1123, 1228	
<code>\thechapter</code> . . . . .	988, 1013	<code>\ua@Rbb</code> . . . . .	1036,
<code>\thepage</code> . . . . .	893,	1037, 1124, 1229	
895, 902, 910,		<code>\ua@Rh</code> . . . . .	1022,
912, 919, 931, 945		1023, 1125,	
<code>\thequestion</code> 1670, 1673		1200, 1230, 1286	
<code>\thispagestyle</code> . . . .		<code>\ua@rr</code> . . . . .	1043
. . . 1183, 1191,		<code>\ua@Sba</code> . . . . .	1027, 1030
1194, 1274,		<code>\ua@Sbb</code> . . . . .	1034, 1037
1280, 1462,		<code>\ua@Wba</code> . . . . .	1026, 1029
1471, 1474, 1491		<code>\ua@Wbb</code> . . . . .	1033, 1036
<code>\titeplageimage</code> . . .	<u>748</u>	<code>\ua@Wh</code> . . . . .	1018, 1022
<code>\title</code> . . . . .	<u>392</u> ,	<code>\ua@X</code> 1294, 1297, 1298,	
1178, 1269, 1457		1316, 1317,	
		1319, 1324,	
		1325, 1327,	
		1328, 1332,	
		1335, 1347,	
		1357, 1362,	
		1365, 1479–1481	
		<code>\ua@Xh</code> . . . . .	1019, 1021, 1023
		<code>\ua@XMYba</code> . . . . .	1028, 1029
		<code>\ua@XMYbb</code> . . . . .	1035, 1036
		<code>\ua@XMYh</code> . . . . .	1021, 1022
		<code>\ua@Y</code> 1295, 1297, 1317,	
		1324, 1325,	
		1332, 1335,	
		1359, 1366,	
		1370, 1479–1481	
		<code>\ua@Yh</code> . . . . .	1020, 1021
		<code>\ua@Z</code> . . . . .	1299, 1319,
		1338, 1343,	
		1347, 1357,	
		1359, 1362,	
		1365, 1366, 1370	
		<code>\uaname</code> . . . . .	97, 147,
		165, 203, 221,	
		258, 275, 312,	
		330, 447, 896,	
		1135, 1207, 1239	
		<code>\uline</code> . . . . .	1503
		<code>\unit</code> . . . . .	<u>780</u>
		<code>\uppercase</code> . . . . .	1135,
		1239, 1528, 1530	
		<code>\usebox</code> . . . . .	1115, 1211
		<code>\usepackage</code> . . . . .	74
		<code>\usetikzlibrary</code> . . . .	65
		<b>V</b>	
		<code>\versionyear</code> . . . . .	<u>442</u>
		<code>\vfill</code> . . . . .	1380, 1383,
		1386, 1392,	
		1435, 1441, 1444	
		<code>\vskip</code> . . . . .	990
		<code>\vspace</code> . . . . .	830, 985,
		996, 1003, 1008,	
		1114, 1171, 1658	
		<b>W</b>	
		<code>\weightname</code> 143, 200,	
		255, 309, 364, 1681	