

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

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## 1 Introduction

This package implements the house style of Universiteit Antwerpen (version 2021) for letters, course texts, master/PhD theses and slides (beamer). 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.

Unfortunately, this version is a transitional package, because the house style renewal is introduced gradually. This means that the letter class and slide theme have been renewed, while the course texts and theses have not. Why are the latter not ready? Because the house style makeover team has not yet come up with a specification. This puts the message of the next paragraph against the correct background.

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 or theme file, or (3) there's a bug in this package, 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`, `bamathesis` 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 provides a title page that is compliant to the UAntwerpen house style, and they also typeset the rest of your document appropriately.

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<sup>\*</sup>This document corresponds to `uantwerpendocs` 3.2, dated 2021/03/23.

<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

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

The **exam** class is derived from the standard L<sup>A</sup>T<sub>E</sub>X **article** class and is for efficiency reasons not fully UAntwerpen house style compliant.

The slides come under the form of a custom beamer theme.

The documentation of the class files for letters, course texts theses, and exams can be found in this document.  
The documentation for the beamer theme is embedded in the demo/user-guide presentation **beamerthemeuantwerpenuserguide.pdf**.  
Template files for all of the formats can be found below in section 4.1.

Using this package, requires the following packages:

- the **adjustbox** package
- the **atbegshi** package
- the **auto-pst-pdf** package
- the **babel** package
- the **background** package
- the **color** package
- the **environ** package
- the **eso-pic** package
- the **etooblox** package
- the **fancyhdr** package
- the **geometry** package
- the **graphicx** package
- the **hyperref** package
- the **iftex** 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 L<sup>A</sup>T<sub>E</sub>X 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 (TeX $\text{\TeX}$ , TexLive, MikTeX). If you experience problems, please inform the author.

## 4 Usage

### 4.1 Basic Usage

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

Especially in the beamer theme some features require to run  $\text{\LaTeX}$  twice in order to get the position of some elements correct.

#### 4.1.1 `uantwerpencoursetext` class

Use the following harness for your  $\text{\LaTeX}$  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 uantwerpenbamathesis class

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

```
\documentclass[a4paper]{uantwerpenbamathesis}

\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>}

```

```

\jurymemberi{<put member's name here>}{<affiliation goes here>}
\jurymemberii{<put member's name here>}{<affiliation goes here>}
\jurymemberiii{<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}

```

#### 4.1.5 uantwerpenbeamer theme

```

\documentclass[aspectratio=1610]{beamer}
% options that select the proper faculty in the beamertheme:
% be, fbd, ggw, lw, ow, re, sw, ti, we, iob (no option = mother
% theme)
\usetheme[ti]{uantwerpen}
\usepackage[dutch]{babel}

\title{This is your title}
\subtitle{This is your subtitle - omit if you don't need this}
\date{This is the date - will be today if omitted}
\author{This is your name - omit if you don't need this}

\begin{document}

\begin{frame}[negativefill]
\maketitle
\end{frame}

\begin{frame}
{Advice}
{\ldots is cheap}

```

```

        Search for the \texttt{beamerthemeuantwerpenuserguide.pdf} for
        more info (or the corresponding \texttt{.tex} file!
    \end{frame}

\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 examiner 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.
<b>filled</b>	[letter / coursetext / bamathesis / 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 <code>\raggedright</code> cannot be undone. The <b>filled</b> option prevents the <code>\raggedright</code> from being issued. However, if you care about the typographic readability of your text, you shouldn't use this option.
<b>titlepagenoartwork</b>	[coursetext / bamathesis / 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;
<b>titlepagetableonly</b>	[coursetext / bamathesis / 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.
<b>qr</b>	[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 <code>pstricks</code> is loaded. It will not work with <code>pdfL<sup>A</sup>T<sub>E</sub>X</code> unless you enable shell escape. Read your <code>pdfL<sup>A</sup>T<sub>E</sub>X</code> -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 / bamathesis / 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
LW	Faculteit Letteren en Wijsbegeerte
OW	Faculteit Ontwerpwetenschappen
SW	Faculteit Sociale Wetenschappen
RE	Faculteit Rechten
BE	Faculteit Bedrijfswetenschappen en Economie
TI	Faculteit Toegepaste Ingenieurswetenschappen
WE	Faculteit Wetenschappen

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

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

`\author` [coursetext / bamathesis / 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.

`\courseversion` [coursetext] (optional)  
 This macro indicates which version of the course this is.

`\defensedate` [bamathesis / phdthesis] (mandatory)  
 Date of the bamathesis defense in Dutch, in the form 'month year', e.g. "juni 2012". In case of a PhD thesis, only the year should be mentioned.

`\defenselocation` [bamathesis / phdthesis] (optional)  
 Location of the defense. Defaults to "Antwerpen".

`\diploma` [bamathesis] (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 Ingenieurwetenschappen	
BA-IW-BK	Bachelor of Science in de industriële wetenschappen: bouwkunde
BA-IW-BCH	Bachelor of Science in de industriële wetenschappen: biochemie
BA-IW-CH	Bachelor of Science in de industriële wetenschappen: chemie
BA-IW-EI	Bachelor of Science in de industriële wetenschappen: elektronica-ICT
BA-IW-EM	Bachelor of Science in de industriële wetenschappen: elektromechanica
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	Master of Science in de industriële wetenschappen: elektromechanica
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-BE-HI	Master of Science handelsingenieur
MA-BE-HIBI	Master of Science handelsingenieur in de beleidsinformatica
MA-BE-EB	Master of Science in de toegepaste economische wetenschappen: economisch beleid
MA-BE-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`.

<code>\phddegree</code>	[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>	[bamathesis / 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 / bamathesis / phdthesis] (mandatory) This macro sets the title of the document. It also sets the <b>pdftitle</b> 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 or your faculty/institute 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`.

`\returnaddress` [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.

**\sender** [letter] (mandatory)  
Description of the person writing the letter.

- first argument: name of the person writing the letter
- second argument: title / role of the person

Newlines are not allowed in the arguments.

**\signature** [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.

**\subject** [letter] (mandatory)  
Short descriptive subject that describes the contents of the letter.

**\to** [letter] (mandatory)  
Name of the addressee. Newlines are allowed. Preferably name and role are split over two lines.

**\toaddress** [letter] (mandatory)  
Address of the addressee. Newlines are allowed. The address should fit on max. 3 lines.

**\toorganization** [letter] (optional)  
Name of the organization that employs the addressee.

**\unit** [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

**\author** [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)'.

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

**\course** [exam] (mandatory)  
see description of **\course** macro on page 9.

**\examdate** 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.

**\examgroupnumber** [exam]  
mentions the group number (may be empty)

**\examlength** specifies the length of the exam in a unit of time, e.g. '4h'

**\exampart** [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').

- `\extrainfo` 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. You can specify an optional first argument 'firstpage', such that your extra info starts on the first page, below the title block. In that case the extra info will also not be terminated with a clearpage (as we assume you want to conserve space).
- `\programme` [exam] (mandatory)  
see description of `\programme` macro on page 11.
- `\rooms` 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.
- `\studentnr` 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 on the front page.
- `\tend` specifies the end time of the exam in a format identical to the one chosen for `\tstart`.
- `\tstart` 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}
\qrtitle{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{2023FTIZZZ}{5-Zoekmachines in een zaagperspectief}
\courseii{2045FTIIII}{6-Zaagmachines in \'e\'en zuchtperspectief}
\qrcourseii{6-Zaagmachines in één zuchtperspectief}

\academicyear{2015-2016}

\publisher{Universitas Cursusdienst\\
  Prinsesstraat 16\\
  2000 Antwerpen\\
  T +32 3 233 23 73\\
  E info@cursusdienst.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 uantwerpenbamathesis

```

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

\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-EM}
\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}
</bmt-example>

```

#### 4.4.3 uantwerpenphdthesis

##### Dutch

```

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

You may want to use common fonts
\usepackage{mathptmx}
\iftutex
\usepackage{fontspec}
\setsansfont{Calibri}
\else
\usepackage{cmbright}
\fi

```

```

\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
}

\supervisor{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{Images/uantwerpen-keyboard.jpg}

\isbn{987-90-57285-34-7} % don't specify this if you don't want one
\depot{D/2018/12.293/03} % idem

\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
}

\supervisor{i}{Prof. dr. W. Vlaams}{University of Antwerp, Belgium}
\supervisor{ii}{Prof. dr. J. Stekker}{University of Antwerp, Belgium}

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

\jurymember{i}{Prof. dr. J. Dezerooder}{University of Antwerp, Belgium}
\jurymember{ii}{Prof. dr. P. De Tollenaere}{Flanders Make, Belgium}
\jurymember{iii}{Prof. dr. M. Byr}{IMEC, The Netherlands}

\facultyacronym{TI}
\phddegree{doctor in applied engineering}
\defenselocation{Antwerpen}
\defensedate{2018}
\titlepageimage{Images/uantwerpen-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 in any other case.
\iftutex
\usepackage{fontspec}
\setmainfont{Calibri}
\else
\usepackage{cmbright}
\fi

\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
\iftutex
\usepackage{fontspec}
\setmainfont{Calibri}
\else
\usepackage{cmbright}
\fi

\sender{Prof. Walter Daems}{Senior Lecturer}
\facultyacronym{TI} TEMP
\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  $\text{\LaTeX}$  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[firstpage]{
  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 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:
  }
  {
    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:
  }
  \engdut{
    \begin{itemize}
    \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.
    \end{itemize}
  }
  {
    \begin{itemize}
    \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.
    \end{itemize}
  }
  \engdut{
    \begin{itemize}
    \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.
    \end{itemize}
  }
  {
    \begin{itemize}
    \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.
    \end{itemize}
}
\engdut{
    \begin{itemize}
    \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.
    \end{itemize}
}
{
    \begin{itemize}
    \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.
    \end{itemize}
}
\engdut{
    \begin{itemize}
    \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.
    \end{itemize}
}
{
    \begin{itemize}
    \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.
    \end{itemize}
}
\engdut{
    \begin{itemize}
    \item Hand in \emph{all} papers to the staff member on duty, at the
        end of the examination.
    \end{itemize}
    Success!
}
{
    \begin{itemize}
    \item Op het einde van het examen geef je \emph{alle} bladen weer af
        aan de aanwezige docent.
    \end{itemize}
    Succes!
}
\clearpage
}

\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 ingredi\''enten 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 of the classes

### 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 | bmt | pt>
8 \newif\if@titlepagenoartwork
9 \DeclareOption{titlepagenoartwork}{\@titlepagenoartworktrue}
10 \newif\if@titlepagetableonly
11 \DeclareOption{titlepagetableonly}{\@titlepagetableonlytrue}
12 </ct | bmt | pt>
13 <*ct | bmt | pt | le>
14 \newif\if@filled
15 \DeclareOption{filled}{\@filledtrue}
16 </ct | bmt | 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 | bmt | pt>
22 \ExecuteOptions{a4paper,11pt,final,oneside,openright}
23 \ProcessOptions\relax
24 \LoadClassWithOptions{book}
25 </ct | bmt | 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 | bmt | pt | le | ex>
40 \setlength{\parindent}{0pt}
41 \addtolength{\parskip}{0.75\baselineskip}
42 \setcounter{secnumdepth}{3}
43 </\ct | bmt | 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 | bmt | pt | ex>
45 \RequirePackage[top=1in, bottom=1in, left=1in, right=1in]{geometry}
46 </\ct | bmt | 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 | bmt | pt | le>
53 % no more font code
54 </ct | bmt | pt | le>

```

### 5.3.3 Boilerplate packages

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

```

55 <*ct | bmt | pt | le | ex>
56 \RequirePackage{iftex}
57 \RequirePackage{xstring}
58 \RequirePackage{etoolbox}
59 \RequirePackage{ifthen}
60 \IfFileExists{shellesc.sty}{\RequirePackage{shellesc}}{}
61 \newcommand{\@emptymacro}{}
62 </ct | bmt | 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 bamathesis:

```

63 <*ct | bmt | pt | le | ex>
64 \RequirePackage{graphicx}
65 \RequirePackage{color}
66 \RequirePackage{tikz}
67 \usetikzlibrary{positioning}
68 \RequirePackage{eso-pic}
69 </ct | bmt | pt | le | ex>
70 <*ct>
71 \if@copyright
72 \RequirePackage[firstpage=false,contents={Copyright University of
73 Antwerp, All Rights Reserved},color=lightgray,scale=3]{background}
74 \fi
75 </ct>
76 <*pt>
77 \usepackage{ean13isbn}
78 </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!

```

79 <*ct>
80 \if@qr
81 \RequirePackage{auto-pst-pdf}
82 \RequirePackage{pst-barcode}
83 \fi
84 </ct>

```

### 5.3.5 Header/Footer

The de-facto standard for headers and footers:

```
85 <*ct | bmt | pt | le | ex>
86 \RequirePackage{fancyhdr}
87 </ct | bmt | pt | le | ex>
```

### 5.4 Colors

```
88 <*ct | bmt | pt | le | ex>
89 \definecolor{uacorpbord}{cmyk}{0.00,1.00,0.60,0.37}
90 \definecolor{uacorpblue}{cmyk}{1.00,0.25,0.00,0.50}
91 \definecolor{uacorplightblue}{cmyk}{1.00,0.00,0.08,0.13}
92 \definecolor{uacorporange}{cmyk}{0.00,0.32,1.00,0.09}
93 \definecolor{uaftifresh}{cmyk}{0.34,1.00,0.00,0.00}
94 \definecolor{uaftisober}{cmyk}{0.10,1.00,0.00,0.49}
95 \definecolor{lightgray}{cmyk}{0.00,0.00,0.00,0.05}
96 \definecolor{darkgray}{cmyk}{0.00,0.00,0.00,0.80}
97 \definecolor{watermark}{cmyk}{0.00,0.00,0.00,0.05}
98 </ct | bmt | pt | le | ex>
```

### 5.5 Babel provisions

```
99 <*ct | bmt | pt | le | ex>
100 \newcommand\uname{University of Antwerp}
101 \newcommand\arrname{All rights reserved}
102 \newcommand\orname{of}
103 \newcommand\domainname{uantwerp.be}
104 \newcommand\datename{Date}
105 \newcommand\subjectname{Subject}
106 \newcommand\academicyearname{Academic year}
107 \newcommand\masterthesisname{Master's thesis}
108 \newcommand\bachelorthesisname{Bachelor's thesis}
109 \newcommand\supervisorsname{Supervisors}
110 \newcommand\juryname{Jury}
111 \newcommand\jurymembersname{Members}
112 \newcommand\jurychairmannname{Chairman}
113 \newcommand\bmthesisname{Thesis to obtain the degree of}
114 \newcommand\pthesisnamei{Thesis submitted in fulfilment of the
115 requirements for the degree of}
116 \newcommand\pthesisnameii{at University of Antwerp}
117 \newcommand\@faculty{~}
118 \newcommand\@logo{Logos/logo-uantwerpen-ua-en-cmyk-pos}
119 \newcommand\facpg{
120 \renewcommand\@faculty{Centre Pieter Gillis}
121 \renewcommand\@logo{Logos/logo-uantwerpen-ua-en-cmyk-pos}}
122 \newcommand\facfb{
123 \renewcommand\@faculty{Faculty of Pharmaceutical, Biomedical and
124 Veterinary Sciences}
125 \renewcommand\@logo{Logos/logo-uantwerpen-fbd-en-cmyk-pos}}
126 \newcommand\facgw{
127 \renewcommand\@faculty{Faculty of Medicine and Health Sciences}
```



```

128 \renewcommand\@logo{Logos/logo-uantwerpen-ggw-en-cmyk-pos}}
129 \newcommand\insiob{
130 \renewcommand\@faculty{Insitute of Development Policy}
131 \renewcommand\@logo{Logos/logo-uantwerpen-iob-en-cmyk-pos}}
132 \newcommand\asoe{
133 \renewcommand\@faculty{Antwerp School of Education}
134 \renewcommand\@logo{Logos/logo-uantwerpen-ua-en-cmyk-pos}}
135 \newcommand\faclw{
136 \renewcommand\@faculty{Faculty of Arts}
137 \renewcommand\@logo{Logos/logo-uantwerpen-lw-en-cmyk-pos}}
138 \newcommand\facow{
139 \renewcommand\@faculty{Faculty of Design Sciences}
140 \renewcommand\@logo{Logos/logo-uantwerpen-ow-en-cmyk-pos}}
141 \newcommand\facsw{
142 \renewcommand\@faculty{Faculty of Social Sciences}
143 \renewcommand\@logo{Logos/logo-uantwerpen-sw-en-cmyk-pos}}
144 \newcommand\facre{
145 \renewcommand\@faculty{Faculty of Law}
146 \renewcommand\@logo{Logos/logo-uantwerpen-re-en-cmyk-pos}}
147 \newcommand\facbe{
148 \renewcommand\@faculty{Faculty of Business and Economics}
149 \renewcommand\@logo{Logos/logo-uantwerpen-be-en-cmyk-pos}}
150 \newcommand\facti{
151 \renewcommand\@faculty{Faculty of Applied Engineering}
152 \renewcommand\@logo{Logos/logo-uantwerpen-ti-en-cmyk-pos}}
153 \newcommand\facwe{
154 \renewcommand\@faculty{Faculty of Science}
155 \renewcommand\@logo{Logos/logo-uantwerpen-we-en-cmyk-pos}}
156 \newcommand\weightname{Weight}
157 \AtBeginDocument{
158 \@ifpackageloaded{babel}{
159 \addto\captionsdutch{%
160 \renewcommand\uname{Universiteit Antwerpen}
161 \renewcommand\arname{Alle rechten voorbehouden}
162 \renewcommand\orname{van}
163 \renewcommand\domainname{uantwerpen.be}
164 \renewcommand\subjectname{Onderwerp}%
165 \renewcommand\datename{Datum}%
166 \renewcommand\academicyearname{Academiejaar}
167 \renewcommand\masterthesisname{Masterproef}
168 \renewcommand\bachelorthesisname{Bachelorproef}
169 \renewcommand\supervisorsname{Promotoren}
170 \renewcommand\juryname{Jury}
171 \renewcommand\jurymembersname{Leden}
172 \renewcommand\jurychairmanname{Voorzitter}
173 \renewcommand\bmthesisname{Proefschrift tot het behalen van de
174 graad van}
175 \renewcommand\pthesisnamei{Proefschrift voorgelegd tot het
176 behalen van de graad van}
177 \renewcommand\pthesisnameii{aan de \uname{} te
178 verdedigen door}
179 \renewcommand\facpg{
180 \renewcommand\@faculty{Centrum Pieter Gillis}
181 \renewcommand\@logo{Logos/logo-uantwerpen-ua-nl-cmyk-pos}}

```

```

182 \renewcommand\facfbd{
183 \renewcommand\@faculty{
184 Faculteit Farmaceutische, Biomedische en Diergeneeskundige
185 Wetenschappen}
186 \renewcommand\@logo{Logos/logo-uantwerpen-fbd-nl-cmyk-pos}}
187 \renewcommand\facggw{
188 \renewcommand\@faculty{Faculteit Geneeskunde en
189 Gezondheidswetenschappen}
190 \renewcommand\@logo{Logos/logo-uantwerpen-ggw-nl-cmyk-pos}}
191 \renewcommand\insiob{
192 \renewcommand\@faculty{Instituut voor Ontwikkelingsbeleid- en
193 beheer}
194 \renewcommand\@logo{Logos/logo-uantwerpen-iob-nl-cmyk-pos}}
195 \renewcommand\asoe{
196 \renewcommand\@faculty{Antwerp School of Education}
197 \renewcommand\@logo{Logos/logo-uantwerpen-ua-nl-cmyk-pos}}
198 \renewcommand\faclw{\renewcommand\@faculty{Faculteit
199 Letteren en Wijsbegeerte}
200 \renewcommand\@logo{Logos/logo-uantwerpen-lw-nl-cmyk-pos}}
201 \renewcommand\facow{
202 \renewcommand\@faculty{Faculteit Ontwerpwetenschappen}
203 \renewcommand\@logo{Logos/logo-uantwerpen-ow-nl-cmyk-pos}}
204 \renewcommand\facsw{
205 \renewcommand\@faculty{Faculteit Sociale Wetenschappen}
206 \renewcommand\@logo{Logos/logo-uantwerpen-sw-nl-cmyk-pos}}
207 \renewcommand\facre{
208 \renewcommand\@faculty{Faculteit Rechten}
209 \renewcommand\@logo{Logos/logo-uantwerpen-re-nl-cmyk-pos}}
210 \renewcommand\facbe{
211 \renewcommand\@faculty{Faculteit Bedrijfswetenschappen en Economie}
212 \renewcommand\@logo{Logos/logo-uantwerpen-be-nl-cmyk-pos}}
213 \renewcommand\facti{
214 \renewcommand\@faculty{Faculteit Toegepaste
215 Ingenieurswetenschappen}
216 \renewcommand\@logo{Logos/logo-uantwerpen-ti-nl-cmyk-pos}}
217 \renewcommand\facwe{
218 \renewcommand\@faculty{Faculteit Wetenschappen}
219 \renewcommand\@logo{Logos/logo-uantwerpen-we-nl-cmyk-pos}}
220 \renewcommand\weightname{Gewicht}
221 }
222 }
223 {}
224 }
225 </ct | bmt | 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.

```

226 <*ct | bmt | pt | le | ex>
227 \newcommand{\@facultyacronym}{~}
228 \newcommand{\facultyacronym}[1]{

```

```

229 \renewcommand{\@facultyacronym}{#1}
230 \AtBeginDocument{
231   \ifthenelse{\equal{#1}{CPG}}{\faccpg}{
232     \ifthenelse{\equal{#1}{FBD}}{\facfbd}{
233       \ifthenelse{\equal{#1}{GGW}}{\facggw}{
234         \ifthenelse{\equal{#1}{IOB}}{\insiob}{
235           \ifthenelse{\equal{#1}{ASoE}}{\asoe}{
236             \ifthenelse{\equal{#1}{LW}}{\faclw}{
237               \ifthenelse{\equal{#1}{OW}}{\facow}{
238                 \ifthenelse{\equal{#1}{SW}}{\facsw}{
239                   \ifthenelse{\equal{#1}{RE}}{\facre}{
240                     \ifthenelse{\equal{#1}{BE}}{\facebe}{
241                       \ifthenelse{\equal{#1}{TI}}{\facti}{
242                         \ifthenelse{\equal{#1}{WE}}{\facwe}{
243                           \errmessage{Error: wrong faculty acronym; choose one of CPG, FBD, GGW,
244                             IOB, ASoE, LW, OW, SW, RE, BE, TI, WE}}}}}}}}}}}}}}
245 }
246 </ct | bmt | pt | le | ex>

```

**\title** The title tag is native to L<sup>A</sup>T<sub>E</sub>X. 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 L<sup>A</sup>T<sub>E</sub>X accented characters.)

```

247 <*ct>
248 \newcommand{\@qrtitle}{}
249 \renewcommand{\title}[1]{%
250   \renewcommand{\@title}{#1}
251   \ifx\@qrtitle\@emptymacro
252     \renewcommand{\@qrtitle}{#1}
253   \fi
254 }
255 \newcommand{\qrtitle}[1]{%
256   \renewcommand{\@qrtitle}{#1}
257 }
258 </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.

```

259 <*bmt>
260 \newcommand{\@subtitle}{Master's thesis}
261 </bmt>
262 <*ct | pt>
263 \newcommand{\@subtitle}{~}
264 \newcommand{\@qrsubtitle}{}
265 \newcommand{\subtitle}[1]{%
266   \renewcommand{\@subtitle}{#1}
267   \ifx\@qrsubtitle\@emptymacro
268     \renewcommand{\@qrsubtitle}{#1}
269   \fi
270 }
271 \newcommand{\qrsubtitle}[1]{%

```

```

272 \renewcommand\@qrs subtitle{#1}
273 }
274 </ct | pt>

```

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

```

275 <*ex>
276 \newcommand{\@shorttitle}{}
277 \newcommand{\shorttitle}[1]{%
278 \renewcommand\@shorttitle{#1}
279 }
280 </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 `uantwerpen coursetext` 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.)

```

281 <*ct>
282 \newcommand{\@qrauthor}{}
283 \renewcommand{\author}[1]{%
284 \renewcommand\@author{#1}
285 \ifx\@qrauthor\@emptymacro
286 \renewcommand\@qrauthor{#1}
287 \fi
288 }
289 \newcommand{\qrauthor}[1]{%
290 \renewcommand\@qrauthor{#1}
291 }
292 </ct>

```

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

```

293 <*ct>
294 \newcommand{\@courseversion}{}
295 \newcommand{\courseversion}[1]{\renewcommand{\@courseversion}{#1}}
296 </ct>

```

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

```

297 <*ct>
298 \newcommand{\@versionyear}{}
299 \newcommand{\versionyear}[1]{\renewcommand{\@versionyear}{#1}}
300 </ct>

```

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

```

301 <*ct>

```

```

302 \newcommand{\@publisher}{Universitas Cursusdienst\\
303   Prinsesstraat 16\\
304   2000 Antwerpen\\
305   T +32 3 233 23 73\\
306   E info@cursusdienst.be}
307 \newcommand{\publisher}[1]{\renewcommand{\@publisher}{#1}}
308 \</ct>

```

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

```

309 \< *ct>
310 \newcommand{\@publishercode}{}
311 \newcommand{\publishercode}[1]{\renewcommand{\@publishercode}{#1}}
312 \< /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  $\LaTeX$  accented characters.)

```

313 \< *ct>
314 \newcommand{\@lectureri}{}
315 \newcommand{\@lecturerii}{}
316 \newcommand{\@lectureriii}{}
317 \newcommand{\@lectureriv}{}
318 \newcommand{\@qrlectureri}{}
319 \newcommand{\@qrlecturerii}{}
320 \newcommand{\@qrlectureriii}{}
321 \newcommand{\@qrlectureriv}{}
322 \newcommand{\lecturer}[1]{
323   \renewcommand{\@lectureri}{#1}
324   \ifx\@qrlectureri\@emptymacro
325     \renewcommand{\@qrlectureri}{#1}
326   \fi
327 }
328 \newcommand{\qrlecturer}[1]{
329   \renewcommand{\@qrlectureri}{#1}
330 }
331 \newcommand{\lectureri}[1]{
332   \renewcommand{\@lectureri}{#1}
333   \ifx\@qrlectureri\@emptymacro
334     \renewcommand{\@qrlectureri}{#1}
335   \fi
336 }
337 \newcommand{\qrlectureri}[1]{
338   \renewcommand{\@qrlectureri}{#1}
339 }
340 \newcommand{\lecturerii}[1]{
341   \renewcommand{\@lecturerii}{#1}
342   \ifx\@qrlecturerii\@emptymacro
343     \renewcommand{\@qrlecturerii}{#1}
344   \fi

```

```

345 }
346 \newcommand{\qrlecturerii}[1]{
347   \renewcommand\@qrlecturerii{#1}
348 }
349 \newcommand{\lectureriii}[1]{
350   \renewcommand{\@lectureriii}{#1}
351   \ifx\@qrlectureriii\@emptymacro
352     \renewcommand\@qrlectureriii{#1}
353   \fi
354 }
355 \newcommand{\qrlectureriii}[1]{
356   \renewcommand\@qrlectureriii{#1}
357 }
358 \newcommand{\lectureriv}[1]{
359   \renewcommand{\@lectureriv}{#1}
360   \ifx\@qrlectureriv\@emptymacro
361     \renewcommand\@qrlectureriv{#1}
362   \fi
363 }
364 \newcommand{\qrlectureriv}[1]{
365   \renewcommand\@qrlectureriv{#1}
366 }
367 \end{ct}

```

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

```

368 (*pt)
369 \newcommand\@affiliation{\errmessage{Please, define the affiliation of
370   the author using the \textbackslash{}affiliation command in the
371   preamble of your document.}}
372 \newcommand\affiliation[1]{\renewcommand\@affiliation{#1}}
373 \end{pt}

```

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

```

374 (*bmt | pt)
375 \newcommand\@supervisor{\errmessage{Please define a supervisor of
376   your thesiswork using the \textbackslash{}supervisor to iv
377   commands} in the preamble of your document.}
378 \newcommand\@supervisoriaff{}
379 \newcommand\@supervisorii{}
380 \newcommand\@supervisoriaff{}
381 \newcommand\@supervisoriii{}
382 \newcommand\@supervisoriiiaff{}
383 \newcommand\@supervisoriv{}
384 \newcommand\@supervisorivaff{}
385 \newcommand{\supervisor}[2]{
386   \renewcommand\@supervisor{#1}\renewcommand\@supervisoriaff{#2}}
387 \newcommand{\supervisorii}[2]{
388   \renewcommand\@supervisorii{#1}\renewcommand\@supervisoriaff{#2}}
389 \newcommand{\supervisoriii}[2]{
390   \renewcommand\@supervisoriii{#1}\renewcommand\@supervisoriiiaff{#2}}
391 \newcommand{\supervisoriv}[2]{

```

```

392 \renewcommand\@supervisoriv{#1}\renewcommand\@supervisorivaff{#2}}
393 </bmt | pt>

```

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

```

394 <*pt>
395 \newcommand{\@jurychairman}{\errmessage{Please define a chairman of the jurya
396 using the \textbackslash{}jurychairman command in the preamble of
397 your document.}}
398 \newcommand{\@jurychairmanaff}{}
399 \newcommand{\jurychairman}[2]{
400 \renewcommand{\@jurychairman}{#1}\renewcommand{\@jurychairmanaff}{#2}}
401 </pt>

```

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

```

402 <*pt>
403 \newcommand{\@jurymemberi}{\errmessage{Please define jury members
404 using the \textbackslash{}jurymemberi to vi commands in the
405 preamble of your document.}}
406 \newcommand\@jurymemberiaff{}
407 \newcommand\@jurymemberii{}
408 \newcommand\@jurymemberiiaff{}
409 \newcommand\@jurymemberiii{}
410 \newcommand\@jurymemberiiiaff{}
411 \newcommand\@jurymemberiv{}
412 \newcommand\@jurymemberivaff{}
413 \newcommand\@jurymemberv{}
414 \newcommand\@jurymembervaff{}
415 \newcommand\@jurymembervi{}
416 \newcommand\@jurymemberviaff{}
417 \newcommand{\jurymemberi}[2]{
418 \renewcommand\@jurymemberi{#1}\renewcommand\@jurymemberiaff{#2}}
419 \newcommand{\jurymemberii}[2]{
420 \renewcommand\@jurymemberii{#1}\renewcommand\@jurymemberiiaff{#2}}
421 \newcommand{\jurymemberiii}[2]{
422 \renewcommand\@jurymemberiii{#1}\renewcommand\@jurymemberiiiaff{#2}}
423 \newcommand{\jurymemberiv}[2]{
424 \renewcommand\@jurymemberiv{#1}\renewcommand\@jurymemberivaff{#2}}
425 \newcommand{\jurymemberv}[2]{
426 \renewcommand\@jurymemberv{#1}\renewcommand\@jurymembervaff{#2}}
427 \newcommand{\jurymembervi}[2]{
428 \renewcommand\@jurymembervi{#1}\renewcommand\@jurymemberviaff{#2}}
429 </pt>

```

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

```

430 <*pt>
431 \newcommand\@phddegree{\errmessage{Please, specify the official PhD
432 degree description using the \textbackslash{}phddegree macro in
433 the preamble of your document.}}
434 \newcommand\phddegree[1]{\renewcommand\@phddegree{#1}}
435 </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.

```

436 (*ct | pt | ex)
437 \newcommand{\@programmet}{} % type
438 \newcommand{\@programmec}{} % class
439 \newcommand{\@programmecqr}{} % class for qr code
440 \newcommand{\@programmes}{} % class
441 \newcommand{\@programmeq}{} % qualifier
442 \newcommand{\programme}[3]{%
443   \ifthenelse{\equal{#1}{BA}}{%
444     {\renewcommand{\@programmet}{Bachelor of Science in de }}{%
445       \ifthenelse{\equal{#1}{MA}}{%
446         {\renewcommand{\@programmet}{Master of Science in de }}{%
447           \ifthenelse{\equal{#1}{PHD}}{%
448             {\renewcommand{\@programmet}{Doctor in de }}{%
449               \ifthenelse{\equal{#1}{VP}}{%
450                 {\renewcommand{\@programmet}{Vorbereidingsprogramma in de }}{%
451                   \ifthenelse{\equal{#1}{SP}}{%
452                     {\renewcommand{\@programmet}{Schakelprogramma in de }}{%
453                       \ifthenelse{\equal{#1}{FREE}}{%
454                         {}{
455                           \errmessage{Error in 1st arg of macro programme[3]: invalid
456                             programme type!}}}}}}}%
457                         %
458                         \ifthenelse{\equal{#2}{IW}}{%
459                           {\renewcommand{\@programmec}{industri\`ele wetenschappen}
460                             \renewcommand{\@programmecqr}{industriële wetenschappen}}{
461                             \ifthenelse{\equal{#2}{}}{%
462                               {}{
463                                 \errmessage{{Error in 2nd arg of macro programme[3]: invalid
464                                   programme class! }}}}%
465                               %
466                               \ifthenelse{\equal{#3}{BK}}{%
467                                 {\renewcommand{\@programmeq}{Bouwkunde}}{%
468                                   \ifthenelse{\equal{#3}{CH}}{%
469                                     {\renewcommand{\@programmeq}{Chemie}}{%
470                                       \ifthenelse{\equal{#3}{BCH}}{%
471                                         {\renewcommand{\@programmeq}{Biochemie}}{%
472                                           \ifthenelse{\equal{#3}{EM}}{%
473                                             {\renewcommand{\@programmeq}{Elektromechanica}}{%
474                                               \ifthenelse{\equal{#3}{EI}}{%
475                                                 {\renewcommand{\@programmeq}{Elektronica-ICT}}{%
476                                                   \ifthenelse{\equal{#3}{}}{%
477                                                     {}{%
478                                                       \ifthenelse{\equal{#1}{FREE}}
479                                                       {\renewcommand{\@programmeq}{#3}}{
480                                                       \errmessage{Error in 3rd arg to macro programme[3]: invalid
481                                                         programme qualifier}}}}}}}}}%
482                                                     %
483                                                     \ifthenelse{\equal{#2}{IW}\and\not\equal{#3}{}}
484                                                     {\renewcommand{\@programmes}{: }}{
485 }

```



486  $\langle /ct | pt | ex \rangle$

`\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.

```
487 (*ct)
488 \newcommand{\@coursecodei}{}
489 \newcommand{\@coursecodeii}{}
490 \newcommand{\@coursecodeiii}{}
491 \newcommand{\@coursecodeiv}{}
492 \newcommand{\@coursei}{}
493 \newcommand{\@courseii}{}
494 \newcommand{\@courseiii}{}
495 \newcommand{\@courseiv}{}
496 \newcommand{\@qrcoursei}{}
497 \newcommand{\@qrcourseii}{}
498 \newcommand{\@qrcourseiii}{}
499 \newcommand{\@qrcourseiv}{}
500 \newcommand{\course}[2]{
501   \renewcommand{\@coursecodei}{#1}
502   \renewcommand{\@coursei}{#2}
503   \ifx\@qrcoursei\emptymacro
504     \renewcommand{\@qrcoursei}{#2}
505   \fi
506 }
507 \newcommand{\qrcourse}[1]{
508   \renewcommand{\@qrcoursei}{#1}
509 }
510 \newcommand{\coursei}[2]{
511   \renewcommand{\@coursecodei}{#1}
512   \renewcommand{\@coursei}{#2}
513   \ifx\@qrcoursei\emptymacro
514     \renewcommand{\@qrcoursei}{#2}
515   \fi
516 }
517 \newcommand{\qrcoursei}[1]{
518   \renewcommand{\@qrcoursei}{#1}
519 }
520 \newcommand{\courseii}[2]{
521   \renewcommand{\@coursecodeii}{#1}
522   \renewcommand{\@courseii}{#2}
523   \ifx\@qrcourseii\emptymacro
524     \renewcommand{\@qrcourseii}{#2}
525   \fi
526 }
527 \newcommand{\qrcourseii}[1]{
528   \renewcommand{\@qrcourseii}{#1}
529 }
530 \newcommand{\courseiii}[2]{
531   \renewcommand{\@coursecodeiii}{#1}
532   \renewcommand{\@courseiii}{#2}
533   \ifx\@qrcourseiii\emptymacro
534     \renewcommand{\@qrcourseiii}{#2}
535   \fi
536 }
```

```

535 \fi
536 }
537 \newcommand{\qrcourseiii}[1]{
538 \renewcommand{\@qrcourseiii}{#1}
539 }
540 \newcommand{\courseiv}[2]{
541 \renewcommand{\@coursecodeiv}{#1}
542 \renewcommand{\@courseiv}{#2}
543 \ifx\@qrcourseiv\emptymacro
544 \renewcommand{\@qrcourseiv}{#2}
545 \fi
546 }
547 \newcommand{\qrcourseiv}[1]{
548 \renewcommand{\@qrcourseiv}{#1}
549 }
550 </ct>
551 % \end{macrocode}
552 % For the |exam| class (assuming that an exam only holds for a
553 % single course), the situation is simple and we assume only a
554 % single coursecode and course name. We also don't need any of the
555 % QR stamp stuff.
556 % \begin{macrocode}
557 <*ex>
558 \newcommand{\@coursecodei}{}
559 \newcommand{\@coursei}{}
560 \newcommand{\course}[2]{
561 \renewcommand{\@coursecodei}{#1}
562 \renewcommand{\@coursei}{#2}
563 }
564 </ex>

```

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

```

565 <*bmt | pt>
566 \newcommand{\@diplomalevel}{ERROR}
567 \newcommand{\@diploma}{ERROR}
568 \newcommand{\diploma}[1]{
569 \newcommand{\MoS}{Master of Science}
570 \newcommand{\MoSIW}{Master of Science in de industri\ "ele wetenschappen}
571 \newcommand{\BoSIW}{Bachelor of Science in de industri\ "ele wetenschappen}
572 \newcommand{\MoSTEW}{Master of Science in de toegepaste economische wetenschappen}
573 \renewcommand{\@diploma}{
574 \ifthenelse{\equal{#1}{BA-IW-BK}}{
575 \BoSIW: bouwkunde}{
576 \ifthenelse{\equal{#1}{BA-IW-BCH}}{
577 \BoSIW: biochemie}{
578 \ifthenelse{\equal{#1}{BA-IW-CH}}{
579 \BoSIW: chemie}{
580 \ifthenelse{\equal{#1}{BA-IW-EI}}{
581 \BoSIW: elektronica-ICT}{
582 \ifthenelse{\equal{#1}{BA-IW-EM}}{
583 \BoSIW: elektromechanica}{
584 \ifthenelse{\equal{#1}{MA-IW-BK}}{

```

```

585             {\MoSIW: bouwkunde}{
586 \ifthenelse{\equal{#1}{MA-IW-BCH}}
587             {\MoSIW: biochemie}{
588 \ifthenelse{\equal{#1}{MA-IW-CH}}
589             {\MoSIW: chemie}{
590 \ifthenelse{\equal{#1}{MA-IW-EI}}
591             {\MoSIW: elektronica-ICT}{
592 \ifthenelse{\equal{#1}{MA-IW-EI-CPS}}
593             {\MoSIW:\\elektronica-ICT, optie
594             Cyber-Physical Systems}{
595 \ifthenelse{\equal{#1}{MA-IW-EI-IOT}}
596             {\MoSIW:\\elektronica-IOT, optie Internet of
597             Things}{
598 \ifthenelse{\equal{#1}{MA-IW-EI-DAI}}
599             {\MoSIW:\\elektronica-IOT, optie Distributed
600             Artificial Intelligence}{
601 \ifthenelse{\equal{#1}{MA-IW-EM-OE}}
602             {\MoSIW:\\elektromechanica, optie Offshore
603             Engineering}{
604 \ifthenelse{\equal{#1}{MA-IW-EM-EN}}
605             {\MoSIW:\\elektromechanica, optie Energie}{
606 \ifthenelse{\equal{#1}{MA-IW-EM-OP}}
607             {\MoSIW:\\elektromechanica, optie Ontwerp en
608             Productie}{
609 \ifthenelse{\equal{#1}{MA-IW-EM-AU}}
610             {\MoSIW:\\elektromechanica, optie Automatisering}{
611 \ifthenelse{\equal{#1}{MA-IW-EM}}
612             {\MoSIW:\\elektromechanica}{
613 \ifthenelse{\equal{#1}{MA-BE-HI}}
614             {\MoS handelsingenieur}{
615 \ifthenelse{\equal{#1}{MA-BE-HIBI}}
616             {\MoS handelsingenieur in de beleidsinformatica}{
617 \ifthenelse{\equal{#1}{MA-BE-EB}}
618             {\MoSTEW: economisch beleid}{
619 \ifthenelse{\equal{#1}{MA-BE-BK}}
620             {\MoSTEW: bedrijfskunde}
621 {\errmessage{Error in argument to macro diploma: must be one of
622             BA-IW-XXX with XXX one of BK, BCH, CH, EI or EM, or MA-IW-XXX
623             with XXX one of BK, BCH, CH, EI, EI-CPS, EI-IOT, EI-DAI,
624             EM-OE, EM-AU, EM-OP, EM-EN, MA-BE-YYY with YYY one of HI,
625             HIBI, EB, BK! <<}}}}}}}}}}}}}}}}}}}}}}
626 }
627 \newcommand\thesisname{ERROR}
628 \IfSubStr{#1}{MA-}{\renewcommand\thesisname{\masterthesisname}}{}
629 \IfSubStr{#1}{BA-}{\renewcommand\thesisname{\bachelorthesisname}}{}
630 }
631 \bmt | pt)

```

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

```

632 (*bmt | pt)
633 \newcommand\@defensedate{ERROR}
634 \newcommand{\defensedate}[1]{\renewcommand\@defensedate{#1}}
635 \bmt | pt)

```

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

```
636 (*bmt | pt)
637 \newcommand\@defenselocation{Antwerpen}
638 \newcommand{\defenselocation}[1]{\renewcommand\@defenselocation{#1}}
639 \end{bmt | pt}
```

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

```
640 (*pt)
641 \newcommand\@titlepageimage{}
642 \newcommand\titeplageimage[1]{\renewcommand\@titlepageimage{#1}}
643 \end{pt}
```

`\isbn` This macro sets the `\@isbn` tags that later will be used on the data page. If you don't have an ISBN number, just don't specify one (i.e. don't use this macro).

```
644 (*pt)
645 \newcommand{\@isbn}{}
646 \newcommand{\isbn}[1]{\renewcommand{\@isbn}{#1}}
647 \end{pt}
```

`\depot` This macro sets the `\@depot` tags that later will be used on the data page. If you don't have a depot number, just don't specify one (i.e. don't use this macro).

```
648 (*pt)
649 \newcommand{\@depot}{}
650 \newcommand{\depot}[1]{\renewcommand{\@depot}{#1}}
651 \end{pt}
```

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

```
652 (*ct | bmt | ex)
653 \newcommand{\@academicyear}{XXX-YYYY}
654 \newcommand{\academicyear}[1]{\renewcommand{\@academicyear}{#1}}
655 \end{ct | bmt | ex}
```

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

```
656 (*ct)
657 \newcommand{\@copyrightnotices}{}
658 \newcommand{\copyrightnotices}[1]{\renewcommand{\@copyrightnotices}{#1}}
659 \end{ct}
```

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

```
660 (*le)
661 \newcommand{\@sender}{< Specify sender using
```

```

662 \textbackslash{sender}\{name\}\{role\} >}
663 \newcommand{\@senderrole}{~}
664 \newcommand{sender}[2]{\renewcommand{\@sender}{#1}\renewcommand{\@senderrole}{#2}}
665 \le

```

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

```

666 \le | ex
667 \newcommand{logo}[1]{\renewcommand{\@logo}{#1}}
668 \le | ex

```

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

```

669 \le
670 \newcommand{\@unit}{}
671 \newcommand{unit}[1]{\renewcommand{\@unit}{#1}}
672 \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.

```

673 \le
674 \newcommand{\@emailuser}{}
675 \newcommand{\@emaildomain}{}
676 \newcommand{email}[2]{\renewcommand{\@emailuser}{#1}\renewcommand{\@emaildomain}{#2}}
677 \le

```

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

```

678 \le
679 \newcommand{\@phone}{}
680 \newcommand{phone}[1]{\renewcommand{\@phone}{#1}}
681 \le

```

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

```

682 \le
683 \newcommand{\@fax}{}
684 \newcommand{fax}[1]{\renewcommand{\@fax}{#1}}
685 \le

```

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

```

686 \le
687 \newcommand{\@mobile}{}
688 \newcommand{mobile}[1]{\renewcommand{\@mobile}{#1}}
689 \le

```

**\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).

```

690 (*le)
691 \newcommand{\@returnaddress}{<specify return-address using \textbackslash\{single-
    line-return-address\}>}
692 \renewcommand{\returnaddress}[1]{\renewcommand{\@returnaddress}{#1}}
693 (/le)

```

**\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).

```

694 (*le)
695 \newcommand{\@to}{<Specify addressee using \textbackslash{}to\{name\}>}
696 \renewcommand{\to}[1]{\renewcommand{\@to}{#1}}
697 (/le)

```

**\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).

```

698 (*le)
699 \newcommand{\@toorganization}{<Specify organization using
    \textbackslash{}toorganization\{\}>}
700 \renewcommand{\toorganization}[1]{\renewcommand{\@toorganization}{#1}}
701 \newcommand{\toorganization}[1]{\renewcommand{\@toorganization}{#1}}
702 (/le)

```

**\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).

```

703 (*le)
704 \newcommand{\@toaddress}{<Specify (multiline) destination
    address\\using \textbackslash{}toaddress\{\}>}
705 \renewcommand{\toaddress}[1]{\renewcommand{\@toaddress}{#1}}
706 \newcommand{\toaddress}[1]{\renewcommand{\@toaddress}{#1}}
707 (/le)

```

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

```

708 (*le)
709 \newcommand{\@subject}{-}
710 \newcommand*\subject[1]{\renewcommand{\@subject}{#1}}
711 (/le)

```

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

```

712 (*le)
713 \renewcommand*\opening[1]{#1}
714 (/le)

```

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

```

715 (*le)
716 \newcommand{\@closing}{<specify a closing formula using
    \textbackslash{}closing\{\}>}
717 \renewcommand*\closing[1]{\renewcommand{\@closing}{#1}}
718 \renewcommand*\closing[1]{\renewcommand{\@closing}{#1}}
719 (/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

```
720 <*\le>
721 \newcommand{\@signature}{\vspace*{8ex}}
722 \renewcommand*{\signature}[1]{\renewcommand{\@signature}{#1}}
723 </\le>
```

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

```
724 <*\le>
725 \newcommand{\@carboncopy}{}
726 \newcommand{\carboncopy}[1]{\renewcommand{\@carboncopy}{#1}}
727 </\le>
```

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

```
728 <*\le>
729 \newcommand{\@enclosed}{}
730 \newcommand{\enclosed}[1]{\renewcommand{\@enclosed}{#1}}
731 </\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).

```
732 <*\pt | le>
733 \newcommand{\@address}{\errmessage{Please, set your multi-line address
734   and contact details using the \textbackslash{}address\{\} command
735   in the preamble of your document}}
736 </\pt | le>
737 \le\renewcommand{\address}[1]{\renewcommand{\@address}{#1}}
738 \pt\newcommand{\address}[1]{\renewcommand{\@address}{#1}}
739 % \end{macrocode}
740 % \end{macro}
741 %
742 % \begin{macro}{\exampart}
743 % This macro will set the |\@examgroupnumber| tag that will be used on
744 % the exam title page.
745 % \begin{macrocode}
746 <*\ex>
747 \newcommand{\@exampart}{}
748 \newcommand{\exampart}[1]{\renewcommand{\@exampart}{#1}}
749 </\ex>
```

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

```
750 <*\ex>
751 \newcommand{\@examgroupnumber}{}
752 \newcommand{\examgroupnumber}[1]{\renewcommand{\@examgroupnumber}{#1}}
753 </\ex>
```

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

```
754 <*ex>
755 \newcommand{\@examdate}{TBD}
756 \newcommand{\examdate}[1]{\renewcommand{\@examdate}{#1}}
757 </ex>
```

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

```
758 <*ex>
759 \newcommand{\@examlength}{TBD}
760 \newcommand{\examlength}[1]{\renewcommand{\@examlength}{#1}}
761 </ex>
```

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

```
762 <*ex>
763 \newcommand{\@tstart}{TBD}
764 \newcommand{\tstart}[1]{\renewcommand{\@tstart}{#1}}
765 </ex>
```

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

```
766 <*ex>
767 \newcommand{\@tend}{TBD}
768 \newcommand{\tend}[1]{\renewcommand{\@tend}{#1}}
769 </ex>
```

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

```
770 <*ex>
771 \newcommand{\@rooms}{TBD}
772 \newcommand{\rooms}[1]{\renewcommand{\@rooms}{#1}}
773 </ex>
```

`\extrainfo` This macro will set the `\@extrainfo` tag that will be used on the back of the exam title page. When as (optional) first argument 'firstpage' is given, the extra info will start on the first page below the title block. In that case, we assume that conservation of space is your concern, so the extra info will also not be terminated with a 'clearpage'. If no optional first argument is given (or the default 'separatepage' is given), the extra info will start on a new page and will be terminated by a clearpage.

```
774 <*ex>
775 \newcommand{\@extrainfo}{}
776 \newcommand{\extrainfo}[2][separatepage]{
777   \ifthenelse{\equal{#1}{separatepage}}{
778     % then
779     \renewcommand{\@extrainfo}{\clearpage #2 \clearpage}
780   }
781   {
782     % else
```



```

783 \ifthenelse{\equal{#1}{firstpage}}
784 {
785     \renewcommand{\@extrainfo}{#2}
786 }
787 {
788     \errmessage{Error: '\extrainfo' - first (optional) argument can
789         only be 'separatepage' or 'firstpage'}
790 }
791 }
792 }
793 \end{ex}

```

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

```

794 \end{ex}
795 \newcommand{\@studentnr}{0}
796 \newcommand{\studentnr}[1]{\renewcommand{\@studentnr}{#1}}
797 \end{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:

```

798 \begin{ct}
799 \if@twoside
800 \lhead[\thepage]{\slshape\rightmark}
801 \chead[]{}
802 \rhead[\slshape\leftmark]{\thepage}
803 \lfoot[\uaname{} -- \@facultyacronym]{\@courseversion}
804 \cfoot[]{}
805 \rfoot[]{\@title{}\ifdefvoid{\@subtitle}{}{ --- \@subtitle}}
806 \else
807 \lhead[]{\leftmark}
808 \chead[]{}
809 \rhead[]{\thepage}
810 \lfoot[]{\@courseversion}
811 \cfoot[]{\UAntwerpen--\@facultyacronym}
812 \rfoot[]{\@title{}}
813 \fi
814 \end{ct}

```

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

```

815 \begin{bmt | pt}
816 \if@twoside
817 \lhead[\thepage]{\slshape\rightmark}
818 \chead[]{}
819 \rhead[\slshape\leftmark]{\thepage}
820 \lfoot[]{}
821 \cfoot[]{}
822 \rfoot[]{}

```

```

823 \else
824   \lhead[]{\leftmark}
825   \chead[]{}
826   \rhead[]{\thepage}
827   \lfoot[]{}
828   \cfoot[]{}
829   \rfoot[]{}
830 \fi
831 </bmt | pt>

```

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

```

832 < *le>
833 \lhead[]{}
834 \chead[]{}
835 \rhead[]{}
836 \lfoot[\small\textcolor{gray}{\@date}]{\textcolor{gray}{\@date}}
837 \cfoot[]{}
838 \rfoot[\small\textcolor{gray}{\pagename~\thepage~\orname~\pageref{lastpage}}]{\small\textcolor{gray}{\pagename~\thepage~\orname~\pageref{lastpage}}}
839 { \small\textcolor{gray}{\pagename~\thepage~\orname~\pageref{lastpage}}}
840 </le>

```

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

```

841 < *ex>
842 \lhead[]{}
843 \chead[]{}
844 \if@examiner
845 \rhead[\small EXAMINER VERSION]{\small EXAMINER VERSION}
846 \AddToShipoutPicture{
847   \put(60,40){\rotatebox{60}{\textcolor{watermark}{
848     \fontfamily{phv}\fontsize{105}{130}\fontseries{m}\fontshape{n}%
849     \selectfont Examiner Version}}}}
850 \else
851 \rhead[\small Student nr. \@studentnr]{\small Student nr. \@studentnr}
852 \fi
853 \lfoot[\small \@shorttitle]{\small \@shorttitle}
854 \cfoot[\small \thepage/\pageref{lastpage}]{\small \thepage/\pageref{lastpage}}
855 \rfoot[\small Groep \@examgroupnumber{} ---
856 \@academicyear]{\small Groep \@examgroupnumber{} --- \@academicyear}
857 </ex>

```

Some common code remains:

```

858 < *ct>
859 \setlength{\headheight}{13.7pt}
860 \renewcommand{\headrulewidth}{1pt}
861 \renewcommand{\footrulewidth}{1pt}
862 \pagenumbering{arabic}
863 </ct>
864 < *mt | pt | le>
865 \renewcommand{\headrulewidth}{0pt}
866 \renewcommand{\footrulewidth}{0pt}
867 </mt | pt | le>
868 < *ex>

```

```

869 \renewcommand{\headrulewidth}{0pt}
870 \renewcommand{\footrulewidth}{1pt}
871 \end{document}

```

Remains to take care of filling

```

872 \setlength{\textwidth}{\textwidth}
873 \if@filled\else
874   \raggedright
875 \fi
876 \raggedbottom
877 \onecolumn
878 \end{document}

```

## 5.8 Copyright notice

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

```

879 \setlength{\textwidth}{\textwidth}
880 \newcommand{\@crnotice}{
881   This document has been typeset using \LaTeX{} and the
882   \texttt{uantwerpencoursetext} class.\\
883   \@copyrightnotices
884
885   \@courseversion
886
887   CONFIDENTIAL AND PROPRIETARY.
888
889   \copyright{} \@versionyear{} University of Antwerp, \arrname.
890 }
891 \end{document}

```

## 5.9 Fancy chapter headers for the phdthesis class

```

892 \setlength{\textwidth}{\textwidth}
893 \def\@makechapterhead#1{%
894   \vspace*{1ex}%
895   \begin{flushright}
896     \makebox[0pt][l]{\rule[-0.4em]{10cm}{1.8em}}\textcolor{white}{
897       {\bf\LARGE~\chaptername~}
898       \raisebox{-24pt}{
899         \begin{tikzpicture}
900           \foreach \theta in {0,5,...,355} {
901             \node[color=white] at (\theta:0.025)
902               {\bf\fontsize{72}{12}\selectfont\thechapter};
903           }
904           \node[color=uacorpblue] at (0,0)
905             {\bf\fontsize{72}{12}\selectfont\thechapter};
906         \end{tikzpicture}
907       }\hspace*{-8pt}
908     \par\nobreak
909     \interlinepenalty\@M

```

```

910     \bf\huge\textcolor{darkgray}{\rule[-0.5ex]{0em}{2.6ex}~#1}
911     \par\nobreak
912 \end{flushright}
913 \rule{\textwidth}{1pt}
914 \vspace{5\p@}\par\nobreak
915 }
916 \def\@schapter#1{%
917   \@makeschapterhead{#1}%
918   \@afterheading
919 }
920 \def\@makeschapterhead#1{%
921   \vspace*{1ex}%
922   \begin{flushright}
923     \bf\LARGE\textcolor{darkgray}{\rule[-0.5ex]{0em}{2.6ex}~#1}
924   \end{flushright}
925   \rule{\textwidth}{1pt}
926   \vspace{5\p@}\par
927 }
928 % overwrite appendix
929 \def\appendix{
930   \setcounter{chapter}{0}
931   \renewcommand*{\thechapter}{\Alph{chapter}}
932   \renewcommand\chaptername\appendixname
933 }
934 </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 radii.

**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:

```

935 \setlength{\bmt}{0.2\paperwidth}
936 \pgfmathsetmacro{\ua@Wh}{\paperwidth}
937 \pgfmathsetmacro{\ua@Xh}{0.2\paperheight}
938 \pgfmathsetmacro{\ua@Yh}{0.125\paperheight}
939 \pgfmathsetmacro{\ua@XMYh}{\ua@Xh-\ua@Yh}
940 \pgfmathsetmacro{\ua@Rh}{0.5*\ua@Wh/\ua@XMYh*\ua@Wh+0.5*\ua@XMYh}
941 \pgfmathsetmacro{\ua@Qh}{\ua@Rh-\ua@Xh+\paperheight}
942 \setlength{\bmt}{\ua@Qh}

```

**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:

```

943 \setlength{\bmt}{0.4\paperwidth}
944 \pgfmathsetmacro{\ua@Wba}{0.4*\paperwidth}
945 \pgfmathsetmacro{\ua@Sba}{0.125*\paperheight}
946 \pgfmathsetmacro{\ua@XMYba}{0.02\paperheight}
947 \pgfmathsetmacro{\ua@Rba}{0.5*\ua@Wba/\ua@XMYba*\ua@Wba+0.5*\ua@XMYba}
948 \pgfmathsetmacro{\ua@Qba}{\ua@Rba+\ua@Sba}
949 \setlength{\bmt}{\ua@Qba}

```

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

```

950 \setlength{\bmt}{0.65\paperwidth}
951 \pgfmathsetmacro{\ua@Wbb}{0.65*\paperwidth}

```

```

952 \pgfmithsetmacro{\ua@Sbb}{0.14*\paperheight}
953 \pgfmithsetmacro{\ua@XMYbb}{0.06*\paperheight}
954 \pgfmithsetmacro{\ua@Rbb}{0.5*\ua@Wbb/\ua@XMYbb*\ua@Wbb+0.5*\ua@XMYbb}
955 \pgfmithsetmacro{\ua@Qbb}{\ua@Rbb+\ua@Sbb}
956 \</ct>| bmt)

```

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

```

957 \<|*ct>| bmt)
958 \pgfmithsetmacro{\ua@ll}{0.15*\paperwidth}
959 \pgfmithsetmacro{\ua@l}{0.4*\paperwidth}
960 \pgfmithsetmacro{\ua@d}{0.1in}
961 \pgfmithsetmacro{\ua@rr}{0.85*\paperwidth}
962 \</ct>| bmt)

```

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.

```

963 \<|*ct>
964 \newcommand\sprtr{ / }
965 \newcommand\myqrdata{
966 I: Universiteit Antwerpen\string\n
967 F: \@faculty\string\n
968 P: \@programmet\ \@programmecqr\ \@programmeq\string\n
969 C: \@coursecodei\ \@qrcoursei
970 \sprtr
971 \@coursecodeii\ \@qrcourseii
972 \sprtr
973 \@coursecodeiii\ \@qrcourseiii
974 \sprtr
975 \@coursecodeiv\ \@qrcourseiv
976 \string\n
977 Y: \@academicyear\string\n
978 T: \@qrtitle\string\n
979 S: \@qrsubtitle\string\n
980 A: \@qrauthor\string\n
981 L: \@qrlectureri
982 \sprtr
983 \@qrlecturerii
984 \sprtr
985 \@qrlectureriii
986 \sprtr
987 \@qrlectureriv}
988 \newsavebox{\myqrcode}
989 \</ct>

```

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

```

990 \<|*ct>
991 \renewcommand\maketitle{%
992 \pagestyle{empty}
993 \if@qr

```

```

994 \savebox{\myqrcode}[2.7in][t]{
995   \begin{pspicture}(2.7in,2.7in)
996     \psbarcode{\myqrcode}
997       {width=1.0 height=1.0 encoding=byte eclevel=M}
998     {qrcode}
999   \end{pspicture}
1000 }
1001 \fi
1002 \begin{titlepage}
1003   \if@titlepagetableonly
1004     Dit is een cursustekst van Universiteit Antwerpen.\
1005     Het titelblad dient opgemaakt te worden met de volgende gegevens:
1006     \begin{center}
1007       \begin{tabular}{|l|l|}
1008         \hline
1009         \bfseries I & Universiteit Antwerpen \\\hline
1010         \bfseries F & \@faculty \\\hline
1011         \bfseries P & \parbox[t]{14cm}{\@programmet
1012           \@programme\@programmes \@programme} \\\hline
1013         \bfseries C & \parbox[t]{14cm}{
1014           \texttt{\@coursecodei} \@coursei\
1015           \texttt{\@coursecodeii} \@courseii\
1016           \texttt{\@coursecodeiii} \@courseiii\
1017           \texttt{\@coursecodeiv} \@courseiv} \\\hline
1018         \bfseries Y & \@academicyear \\\hline
1019         \bfseries T & \parbox[t]{14cm}{\@title} \\\hline
1020         \bfseries S & \parbox[t]{14cm}{\@subtitle} \\\hline
1021         \bfseries A & \parbox[t]{14cm}{\@author} \\\hline
1022         \bfseries L & \parbox[t]{14cm}{\@lectureri\
1023           \@lecturerii\
1024           \@lectureriii\
1025           \@lectureriv} \\\hline
1026       \end{tabular}
1027     \end{center}
1028     ~\
1029     Waarbij: I = instelleng, F = faculteit, P = programma, C =
1030     cursusmodule, T = titel, S = subtitel, A = auteur(s), L =
1031     lesgever(s)\~\
1032     \if@qr
1033       Deze informatie is ook gecodeerd in de onderstaande QR-code.\
1034       \vspace*{1cm}
1035       \usebox{\myqrcode}
1036     \fi
1037   \else
1038     \begin{tikzpicture}[remember picture,overlay]
1039       \node at (current page.center) {
1040         \begin{tikzpicture}[inner sep=0pt]
1041           \clip (0,0) rectangle(\paperwidth,\paperheight);
1042           \if@titlepagenoartwork\else
1043             \filldraw [uacorpbord] (0.55\paperwidth,\ua@Qba pt) circle (\ua@Rba pt);
1044             \filldraw [white] (0.35\paperwidth,\ua@Qbb pt) circle (\ua@Rbb pt);
1045             \filldraw [uacorpblue] (0,\ua@Qh pt) circle (\ua@Rh pt);
1046           \path
1047             (0.95\paperwidth,0.1\paperheight)

```

```

1048     node [anchor=north east] {
1049         \includegraphics[width=0.25\paperwidth]{\@logo}};
1050     \fi
1051     \path
1052     (\ua@l pt -\ua@d pt,0.77\paperheight)
1053     node [anchor=north east, text width=0.35\paperwidth] {
1054         \begin{flushright}
1055             \uppercase\expandafter{\ua@name}\~\~\~
1056             \academicyearname{} \@academicyear
1057         \end{flushright}}
1058     (\ua@l pt +\ua@d pt,0.65\paperheight)
1059     node [anchor = north west, text width = 0.55\paperwidth] {
1060         {\large \@faculty{}}\~\~[0.05\paperheight]
1061         {\huge \bf \@title{}}\~\~[2ex]
1062         {\Large \bf \@subtitle{}}\~\~[3ex]
1063         {\Large \bf \@author{}}}
1064     (\ua@l pt +\ua@d pt,0.45\paperheight)
1065     node [anchor = north west, text width = 0.55\paperwidth] {
1066         \@lectureri~\~
1067         \@lecturerii~\~
1068         \@lectureriii~\~
1069         \@lectureriv}
1070     (\ua@l pt +\ua@d pt,0.35\paperheight)
1071     node [anchor = north west, text width = 0.55\paperwidth] {
1072         {\bf \@programmet \~ \~ \@programmec\@programmes \@programmeq}}
1073     (\ua@l pt +\ua@d pt,0.30\paperheight)
1074     node [anchor = north west, text width = 0.55\paperwidth] {
1075         \texttt{\@publishercode}\~\~\~\~
1076         \texttt{\@coursecodei{}} \@coursei~\~
1077         \texttt{\@coursecodeii{}} \@courseii~\~
1078         \texttt{\@coursecodeiii{}} \@courseiii~\~
1079         \texttt{\@coursecodeiv{}} \@courseiv}
1080     (\ua@l pt - 2\ua@d pt, 0.368\paperheight)
1081     node [anchor = north east, text width = 0.35\paperwidth] {
1082         {\normalsize\begin{flushright}
1083             \@publisher{}}
1084         \end{flushright}}};
1085     \end{tikzpicture}
1086 };
1087 \end{tikzpicture}
1088 \fi
1089 \end{titlepage}%
1090 \clearpage
1091 \vspace*{\stretch{1}}
1092 \@crnotice
1093 \clearpage
1094 \setcounter{footnote}{0}%
1095 \global\let\thanks\relax
1096 \global\let\maketitle\relax
1097 \global\let\@thanks\@empty
1098 \global\let\title\relax
1099 \global\let\author\relax
1100 \global\let\date\relax
1101 \global\let\and\relax

```



```

1102 \pagestyle{fancy}
1103 \thispagestyle{empty}
1104 }
1105 </ct>

```

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

```

1106 <*ct>
1107 \newcommand\makefinalpage{
1108   \if@titlepagetableonly
1109   \else
1110     \cleardoublepage
1111     \thispagestyle{empty}
1112     ~% intentionally blank page
1113     \clearpage
1114     \thispagestyle{empty}
1115     \begin{tikzpicture}[remember picture,overlay]
1116       \node at (current page.center) {
1117         \begin{tikzpicture}[inner sep=0pt]
1118           \clip (0,0) rectangle(\paperwidth,\paperheight);
1119           \if@titlepagenoartwork\else
1120             \filldraw [uacorpblue] (\paperwidth,\ua@Qh pt) circle (\ua@Rh pt);
1121           \fi
1122           \path
1123             (0.1\paperwidth,0.1\paperheight)
1124             node [anchor = south west, text width = 0.6\paperwidth] {
1125               CONFIDENTIAL AND PROPRIETARY\\~\\
1126             }
1127             \copyright{} \@versionyear{} \uaname,
1128             \arrname.}
1129             (0.9\paperwidth,0.1\paperwidth)
1130             node [anchor = south east] {
1131               \usebox{\myqrcode}
1132             };
1133         \end{tikzpicture}
1134       };
1135     \end{tikzpicture}
1136   \fi
1137 }
1138 </ct>

```

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

```

1139 <*bmt>
1140 \renewcommand\maketitle{%
1141   \pagestyle{empty}
1142   \begin{titlepage}
1143     \begin{tikzpicture}[remember picture,overlay]
1144       \node at (current page.center) {
1145         \begin{tikzpicture}[inner sep=0pt]
1146           \clip (0,0) rectangle(\paperwidth,\paperheight);
1147           \if@titlepagenoartwork\else
1148             \filldraw [lightgray]

```

```

1149      (0.55\paperwidth,\ua@Qba pt) circle (\ua@Rba pt);
1150      \filldraw [white] (0.35\paperwidth,\ua@Qbb pt) circle (\ua@Rbb pt);
1151      \filldraw [lightgray] (0,\ua@Qh pt) circle (\ua@Rh pt);
1152      \path
1153      (0.95\paperwidth,0.1\paperheight)
1154      node [anchor=north east] {
1155          \includegraphics[width=0.25\paperwidth]{\@logo}};
1156      \fi
1157      \path
1158      (\ua@ll pt,0.77\paperheight)
1159      node [anchor=north west, text width=0.7\paperwidth] {
1160          \uppercase\expandafter{\uaname}\~-\\
1161          \academicyearname{} \@academicyear\\~\\
1162          {\large \@faculty{}}\~-\\
1163          \thesisname{}\|[0.05\paperheight]
1164          {\Large \bf \@title{}}}
1165      (\ua@ll pt,0.55\paperheight)
1166      node [anchor = north west, text width = 0.7\paperwidth] {
1167          {\large \bf \@author{}}\~-\\~\\
1168          \begin{tabular}{@{}p{2.7cm}p{10.8cm}}
1169              \textbf{\supervisorsname{}}:}
1170              & \@supervisor i \\
1171              & \@supervisor ii \\
1172              & \@supervisor iii \\
1173              & \@supervisor iv
1174          \end{tabular}
1175      }
1176      (\ua@ll pt,0.3\paperheight)
1177      node [anchor=north west, text width = 0.7\paperwidth]{%
1178          \bmthesisname\\
1179          \@diploma\\
1180          \@defenselocation, \@defensedate
1181      };
1182      \end{tikzpicture}
1183      };
1184      \end{tikzpicture}
1185      \end{titlepage}%
1186      \clearpage
1187      \setcounter{footnote}{0}%
1188      \global\let\thanks\relax
1189      \global\let\maketitle\relax
1190      \global\let\@thanks\@empty
1191      \global\let\title\relax
1192      \global\let\author\relax
1193      \global\let\date\relax
1194      \global\let\and\relax
1195      \pagestyle{fancy}
1196      \thispagestyle{empty}
1197      }
1198      \</bmt>

```

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

```

1199 <*bmt>
1200 \newcommand\makefinalpage{
1201   \cleardoublepage
1202   \thispagestyle{empty}
1203   \begin{tikzpicture}[remember picture,overlay]
1204     \node at (current page.center) {
1205       \begin{tikzpicture}[inner sep=0pt]
1206         \clip (0,0) rectangle(\paperwidth,\paperheight);
1207         \if@titlepagenoartwork\else
1208           \filldraw [lightgray] (\paperwidth,\ua@Qh pt) circle (\ua@Rh pt);
1209         \fi
1210       \end{tikzpicture}
1211     };
1212   \end{tikzpicture}
1213 }
1214 </bmt>

```

## 5.11 Title page for the phdthesis classes

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.

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:

```

1215 <*pt>
1216 \pgfmathsetmacro{\ua@X}{\paperwidth}
1217 \pgfmathsetmacro{\ua@Y}{\paperheight}
1218 \pgfmathsetmacro{\ua@R}{6*\paperwidth}
1219 \pgfmathsetmacro{\ua@B}{(\ua@X+\ua@Y)/15}
1220 \pgfmathsetmacro{\ua@L}{0.25*\ua@X}
1221 \pgfmathsetmacro{\ua@Z}{0.1*\ua@L}
1222 \pgfmathsetmacro{\ua@H}{0.3*\ua@L}
1223 \pgfmathsetmacro{\ua@h}{0.5*(\ua@B-\ua@H)}
1224 </pt>

```

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

```

1225 <*pt>
1226 \renewcommand\maketitle{%
1227   \pagestyle{empty}
1228   \begin{titlepage}
1229     \if@titlepagetableonly
1230       Dit is een doctoraatsthesis van Universiteit Antwerpen.
1231     \else
1232       \begin{tikzpicture}[remember picture,overlay]
1233         \node at (current page.center) {
1234           \begin{tikzpicture}[inner sep=0pt]
1235             \clip (0,0) rectangle(\paperwidth,\paperheight);

```

```

1236
1237 \filldraw[uacorpblue]
1238 (0.5*\ua@X pt,\ua@B+\ua@R pt) circle (\ua@R pt)
1239 (\ua@X pt, 0.25*\ua@Y+\ua@R pt) circle (\ua@R pt);
1240
1241 \node[anchor=south east] at (\ua@X-3*\ua@Z pt,\ua@h pt)
1242 {\includegraphics[width=\ua@L pt]{\@logo}};
1243
1244 \begin{scope}
1245 \clip
1246 (\ua@X pt, 0.25*\ua@Y+\ua@R pt) circle (\ua@R pt)
1247 (0.375*\ua@X pt,\ua@R+0.666*\ua@Y pt) circle (\ua@R pt);
1248
1249 \node[anchor=south] at (0.5*\ua@X pt, 2.1*\ua@B pt)
1250 {\includegraphics[width=\ua@X pt]{\@titlepageimage}};
1251 \end{scope}
1252
1253 \filldraw[uacorpbord]
1254 (0.375*\ua@X pt,\ua@R+0.666*\ua@Y pt) circle (\ua@R pt);
1255
1256 \filldraw[white]
1257 (0.1*\ua@X pt,\ua@R+0.666*\ua@Y pt) circle (\ua@R pt);
1258
1259 \node[anchor=north west,align=left,font=\large]
1260 at (3*\ua@Z pt, \ua@B - \ua@h pt)
1261 { \textcolor{uacorpblue}{\textsf{\@defenselocation,
1262 \@defensedate}}} };
1263
1264 \node[anchor=south west,text width=\textwidth,align=left,font=\large]
1265 at (3*\ua@Z pt, 1.4*\ua@B pt)
1266 { \textcolor{white}{\textsf{\@affiliation}}} };
1267
1268 \node[anchor=south east,text width=\textwidth,align=right,font=\large]
1269 at (\ua@X - 3*\ua@Z pt, 1.4*\ua@B pt)
1270 { \textcolor{white}{\textsf{
1271 \supervisorsname\\
1272 \@supervisorii%
1273 \ifvoid{\@supervisorii}{\@supervisorii}%
1274 \ifvoid{\@supervisoriii}{\@supervisoriii}%
1275 \ifvoid{\@supervisoriv}{\@supervisoriv}}}
1276 };
1277
1278 \node[anchor=north west,text
1279 width=\ua@X-6*\ua@Z,align=left,font=\Huge]
1280 (title)
1281 at (3*\ua@Z pt,\ua@Y-4*\ua@Z pt)
1282 { \textsf{\textbf{\@title}}} };
1283
1284 \node[anchor=north west,below=2.5ex of title,
1285 text width=\ua@X-6*\ua@Z,align=left,font=\large]
1286 { \textsf{\textbf{\@subtitle}}} };
1287
1288 \node[anchor=north west,text width=\ua@X-6*\ua@Z,align=left]
1289 at (3*\ua@Z pt,\ua@Y - 12.5*\ua@Z pt)

```

```

1290         { \textsf{\pthesisnamei{} \@phddegree{} \pthesisnameii{}} };
1291
1292         \node[anchor=north west, text width=\textwidth,align=left,font=\LARGE]
1293         at (3*\ua@Z pt, \ua@Y-15.5*\ua@Z pt)
1294         { \textsf{\textbf{\@author}} };
1295     \end{tikzpicture}
1296 };
1297 \end{tikzpicture}
1298 \fi
1299 \end{titlepage}%
1300 \cleardoublepage
1301 \begin{center}
1302     \includegraphics[width=\ua@L pt]{\@logo}
1303     \vfill
1304     \@faculty\\
1305     \@programmeq\par
1306     \vfill
1307     \Huge\textsf{\@title}\par
1308     \large\textsf{\@subtitle}\par
1309     \vfill
1310     \normalsize\pthesisnamei\\
1311     \@phddegree\\
1312     \pthesisnameii\\
1313     \medskip
1314     \textbf{\@author}
1315     \vfill
1316     \begin{minipage}[b]{0.4\textwidth}
1317         \@defenselocation, \@defensedate
1318     \end{minipage}
1319     \hfill
1320     \begin{minipage}[b]{0.4\textwidth}
1321         \flushright
1322         \supervisorsname\\
1323         \@supervisor%
1324         \ifdefvoid{\@supervisorii}{\@supervisorii}%
1325         \ifdefvoid{\@supervisoriii}{\@supervisoriii}%
1326         \ifdefvoid{\@supervisoriv}{\@supervisoriv}
1327     \end{minipage}
1328 \end{center}
1329 \clearpage
1330 \textbf{\juryname}\hfill\par
1331 \textbf{\jurychairmanname}\hfill\break
1332 \@jurychairman{\ifdefvoid{\@jurychairmanaff}{}, \@jurychairmanaff}\\
1333 \hfill\break
1334 \textbf{\supervisorsname}\hfill\break
1335 \ifdefvoid{\@supervisor}{\@supervisor
1336     \ifdefvoid{\@supervisoriaff}{}, \@supervisoriaff}\\
1337 \ifdefvoid{\@supervisorii}{\@supervisorii
1338     \ifdefvoid{\@supervisoriaff}{}, \@supervisoriaff}\\
1339 \ifdefvoid{\@supervisoriii}{\@supervisoriii
1340     \ifdefvoid{\@supervisoriaff}{}, \@supervisoriaff}\\
1341 \ifdefvoid{\@supervisoriv}{\@supervisoriv
1342     \ifdefvoid{\@supervisorivaff}{}, \@supervisorivaff}\\
1343 \hfill\break

```

```

1344 \textbf{\jurymembersname}\hfill\break
1345 \ifdefvoid{\@jurymemberi}{\@jurymemberi
1346 \ifdefvoid{\@jurymemberiaff}{\@jurymemberiaff\\}}
1347 \ifdefvoid{\@jurymemberii}{\@jurymemberii
1348 \ifdefvoid{\@jurymemberiaff}{\@jurymemberiaff\\}}
1349 \ifdefvoid{\@jurymemberiii}{\@jurymemberiii
1350 \ifdefvoid{\@jurymemberiaff}{\@jurymemberiaff\\}}
1351 \ifdefvoid{\@jurymemberiv}{\@jurymemberiv
1352 \ifdefvoid{\@jurymemberiaff}{\@jurymemberiaff\\}}
1353 \ifdefvoid{\@jurymemberv}{\@jurymemberv
1354 \ifdefvoid{\@jurymemberviaff}{\@jurymemberviaff\\}}
1355 \ifdefvoid{\@jurymembervi}{\@jurymembervi
1356 \ifdefvoid{\@jurymemberviaff}{\@jurymemberviaff\\}}
1357 \hfill\break
1358 \vfill
1359 \textbf{Contact}\\
1360 \smallskip
1361 \@author\\
1362 \@affiliation\\
1363 \@address\\
1364 \vfill
1365 \copyright{} \@defensedate{} \@author\\
1366 \arrname.
1367 \vfill
1368 \begin{minipage}[b]{.5\linewidth}
1369 \ifdefempty{\@isbn}{\ISBN \@isbn}~\\
1370 \ifdefempty{\@depot}{\Wettelijk depot \@depot}~\\
1371 \end{minipage}
1372 \hfill
1373 \ifdefempty{\@isbn}{\@
1374 \begin{minipage}[b]{.5\linewidth}
1375 \expandafter\EAN \@isbn
1376 \end{minipage}
1377 }
1378 \setcounter{footnote}{0}%
1379 \global\let\thanks\relax
1380 \global\let\maketitle\relax
1381 \global\let\@thanks\@empty
1382 \global\let\title\relax
1383 \global\let\author\relax
1384 \global\let\date\relax
1385 \global\let\and\relax
1386 \pagestyle{fancy}
1387 \thispagestyle{empty}
1388 \
1389 }
1390 </pt>

```

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

```

1391 < *pt>
1392 \newcommand\makefinalpage{
1393 \if@titlepagetableonly

```

```

1394 \else
1395 \cleardoublepage
1396 \thispagestyle{empty}
1397 ~% intentionally blank page
1398 \clearpage
1399 \thispagestyle{empty}
1400 \begin{tikzpicture}[remember picture,overlay]
1401   \node at (current page.center) {
1402     \begin{tikzpicture}[inner sep=0pt]
1403       \clip (0,0) rectangle(\paperwidth,\paperheight);
1404       \fill[uacorpblue] (0,0) rectangle(\ua@X pt,\ua@Y pt);
1405       \filldraw [white] (1.2*\ua@X pt,\ua@R+0.125*\ua@Y pt) circle (\ua@R pt);
1406       \filldraw [uacorpbord] (1.375*\ua@X pt,\ua@R+0.666*\ua@Y pt)
1407         circle (\ua@R pt);
1408     \end{tikzpicture}
1409   };
1410 \end{tikzpicture}
1411 \fi
1412 }
1413 \</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.

```

1414 \<le>
1415 \newcommand\maketitle{%
1416   \pagestyle{fancy}
1417   \thispagestyle{empty}
1418   \begin{tikzpicture}[overlay,remember picture]
1419     \path (current page.north west) +(1.8cm,-1.2cm)
1420     node[anchor=north west] {
1421       \includegraphics[height=1.1cm]{\@logo}
1422     };
1423     \draw (current page.north west)
1424       +(1cm,-98mm) -- +(1.5cm,-98mm);
1425     % 90 x 45
1426     % pos: 20mm van kant, 15mm van onderkant
1427     \path (current page.north east) +(-100mm,-65mm)
1428     node[anchor=west,text width=80mm,align=left] {
1429       \scriptsize\textcolor{gray}{\uline{\@returnaddress}}\\*
1430       \normalsize\@to\\*
1431       \@toorganization\\*
1432       \@toaddress

```

```

1433     };
1434 \end{tikzpicture}
1435 ~\\[3ex]
1436 \textcolor{uacorpblue}{\bf \@sender}
1437 \ifx\@senderrole\@emptymacro\\[1.75ex]\else \\*\@senderrole\\[1.75ex]\fi
1438 \@faculty
1439 \ifx\@unit\@emptymacro\else\\* \@unit\fi~\\[1.75ex]
1440 \@address\\[1.75ex]
1441 \ifx\@email\@emptymacro\else E \@emailuser\tat{}\@emaildomain\\fi
1442 \ifx\@phone\@emptymacro\else T \@phone\\fi
1443 \ifx\@fax\@emptymacro\else F \@fax\\fi
1444 \ifx\@mobile\@emptymacro\else M \@mobile\\fi
1445 ~\\[4ex]
1446 \begin{tikzpicture}[anchor=north west,align=left,outer sep=0,inner sep=0]
1447   \path
1448     (0,0) node { \scriptsize \strut
1449       \textcolor{gray}{\uppercase\expandafter{\datename} } }
1450     (4cm,0) node { \scriptsize \strut
1451       \textcolor{gray}{\uppercase\expandafter{\subjectname} } }
1452     (0,-2.5ex) node { \strut \@date }
1453     (4cm,-2.5ex) node[align=left] { \strut \@subject };
1454 \end{tikzpicture}~\\[4ex]
1455 }
1456 \le

```

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

```

1457 \*le
1458 \AtEndDocument{
1459   \@closing\\*[3ex]\@signature~\\[3ex]
1460   \@sender
1461   \ifx\@senderrole\@emptymacro\\[8ex]\else\\*\@senderrole\\[8ex]\fi
1462   \setlength{\parskip}{0em}
1463   \ifx\@carboncopy\@emptymacro\else CC: \@carboncopy\\[4ex]\fi
1464   \ifx\@enclosed\@emptymacro\else ENCL: \@enclosed\fi
1465   \label{lastpage}
1466 }
1467 \le

```

### 5.13 Title page for the exam class

Now Groep has been replaced by Reeks to be consistent with UAntwerpen PC-room nomenclature

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

```

1468 \*ex
1469 \renewcommand\maketitle{%
1470   \pagestyle{fancy}
1471   \AddToShipoutPicture*{%
1472     \put(0,0){%
1473       \begin{tikzpicture}[remember picture,overlay]

```



```

1474 \node at (current page.center) {
1475   \begin{tikzpicture}
1476     \clip (0,0) rectangle (21,29.7);
1477     \draw
1478       ( 3,9.7) -- ( 3,23.7)
1479       ( 0,23.7) -- +(21,0)
1480       ( 3,20.8) -- +(21,0)
1481       ( 3,18.8) -- +(21,0)
1482       ( 3,16.8) -- +(21,0)
1483       (14,9.7) -- (14,13.7)
1484       ( 3,13.7) -- +(21,0)
1485       ( 3,11.7) -- +(21,0)
1486       ( 0,9.7) -- +(21,0);
1487
1488     \draw[ultra thick]
1489       ( 3,16.8) +(0,-0.5) -- +(0,0) -- +(0.5,0)
1490       ( 3,13.7) +(0,+0.5) -- +(0,0) -- +(0.5,0)
1491       (21,16.8) +(0,-0.5) -- +(0,0) -- +(-0.5,0)
1492       (21,13.7) +(0,+0.5) -- +(0,0) -- +(-0.5,0);
1493 %   (14,15.7) +(-0.5,0) -- +(0,0) +(0,-0.5) -- +(0,0) -- +(0.5,0)
1494 %   (14,11.7) +(-0.5,0) -- +(0,0) +(0,+0.5) -- +(0,0) -- +(0.5,0)
1495
1496     \foreach \nn in {0,1,...,7} {
1497       \draw (16.5,13.9) ++({0.5*\nn},0) rectangle +(0.5,0.8);
1498     }
1499
1500     \foreach \nn in {0,1,...,33} {
1501       \draw (3.5,15.3) ++({0.5*\nn},0) rectangle +(0.5,0.8);
1502     }
1503     \foreach \nn in {0,1,...,23} {
1504       \draw (3.5,13.9) ++({0.5*\nn},0) rectangle +(0.5,0.8);
1505     }
1506
1507     \path
1508     (3,25.2) node[anchor=north west] {
1509       \parbox{14cm}{
1510         \fontfamily{phv}\fontsize{12}{15}\fontseries{b}\selectfont
1511         \@faculty\\
1512         \fontfamily{phv}\fontsize{11}{14}\fontseries{m}\selectfont
1513         \@programmet \@programmec\
1514         \ifx\@programmeq\@emptymacro\else--- \@programmeq\fi
1515       }
1516     }
1517     (3.3,23) node[anchor=north west] {
1518       \parbox{16cm}{
1519         \fontfamily{phv}\fontsize{18}{22}\fontseries{b}
1520         \fontshape{n}\selectfont
1521         \raggedright \@coursei{}
1522         \ifx\@exampart\@emptymacro
1523         \else --- \@exampart\fi
1524         \fontfamily{phv}\fontsize{12}{18}\fontseries{m}
1525         \fontshape{n}\selectfont\\
1526         Reeks \@examgroupnumber{} \hfill \@examdate{} }
1527     }

```

```

1528 (3.3,20.1) node[anchor=north west] {
1529     \parbox{14cm}{
1530         \fontfamily{phv}\fontsize{12}{15}\fontseries{m}\selectfont
1531         \@coursecodei
1532     }
1533 }
1534 (3.3,18.6) node[anchor=north west] {
1535     \parbox{14cm}{
1536         \fontfamily{phv}\fontsize{12}{18}\fontseries{m}
1537         \fontshape{n}\selectfont
1538         \raggedright \ifdef{\dateenglish}{Professor(s) --- }
1539         {}Titularis(sen):\
1540         \fontfamily{phv}\fontsize{14}{20}\fontseries{m}
1541         \fontshape{n}\selectfont
1542         \raggedright \@author{}
1543     }
1544 }
1545 (3.3,16.7) node[anchor=north west] {
1546     \parbox{10cm}{
1547         \fontfamily{phv}\fontsize{12}{15}\fontseries{m}
1548         \fontshape{n}\selectfont
1549         \raggedright \ifdef{\dateenglish}{Last name
1550         --- }{}
1551         Naam:}
1552 }
1553 (3.3,15.25) node[anchor=north west] {
1554     \parbox{10cm}{
1555         \fontfamily{phv}\fontsize{12}{15}\fontseries{m}
1556         \fontshape{n}\selectfont
1557         \raggedright \ifdef{\dateenglish}{First name
1558         --- }{}
1559         Voornaam:}
1560 }
1561 (16.3,15.25) node[anchor=north west] {
1562     \parbox{5cm}{
1563         \fontfamily{phv}\fontsize{12}{15}\fontseries{m}
1564         \fontshape{n}\selectfont
1565         \raggedright \ifdef{\dateenglish}{Docket No. --- }
1566         {}Rolnr.:}
1567 }
1568
1569 (3.3,11.5) node[anchor=north west] {
1570     \parbox{14cm}{
1571         \fontfamily{phv}\fontsize{12}{21}\fontseries{m}
1572         \fontshape{n}\selectfont
1573         \raggedright \ifdef{\dateenglish}{Exam duration --- }
1574         {}Duur van het examen: \@examlength\
1575     }
1576 }
1577 (14.3,11.5) node[anchor=north west] {
1578     \parbox{5cm}{
1579         \fontfamily{phv}\fontsize{12}{15}\fontseries{m}
1580         \fontshape{n}\selectfont
1581         \raggedright \ifdef{\dateenglish}{Start --- }

```

```

1582         {}Begin: \@tstart \[lex]
1583         \raggedright \ifdef{\dateenglish}{End --- }
1584         {}Einde~: \@tend
1585     }
1586 }
1587 (3.3,13.5) node[anchor=north west] {
1588     \parbox{14cm}{
1589         \fontfamily{phv}\fontsize{12}{21}\fontseries{m}
1590         \fontshape{n}\selectfont
1591         \raggedright \ifdef{\dateenglish}{Room --- }
1592         {}Lokaal: \@rooms
1593     }
1594 }
1595 }
1596 (3,27.7) node[anchor=north west] {
1597     \includegraphics[width=7cm]{\@logo}
1598 };
1599 \end{tikzpicture}
1600 };
1601 \end{tikzpicture}
1602 }
1603 }
1604 \vspace*{17cm}
1605 \ifx\@qrtitle\@emptymacro
1606 \else
1607 \@extrainfo
1608 \fi
1609 }
1610 \</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).

```

1611 \< *ex>
1612 \newcounter{question}
1613 \setcounter{question}{0}
1614 \renewcommand\thequestion{\@arabic\c@question}
1615 \newcommand{\question}[1]{
1616     \stepcounter{question}
1617     \thequestion.~#1%
1618 }
1619 \</ex>

```

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

```

1620 \< *ex>
1621 \newcommand{\questionweight}[1]{%
1622     \hspace{\fill}
1623     \begin{tabular}{|c|}
1624         \hline
1625         \small \weightname: #1\\

```

```

1626 \hline
1627 \end{tabular}\\
1628 }
1629 \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.

```

1630 \ex>
1631 \newcommand{\engdut}[2]{%
1632 \begin{tabular}{ccc}%
1633 \selectlanguage{english}%
1634 \begin{minipage}[t]{0.45\textwidth}%
1635 #1
1636 \end{minipage}%
1637 &~~~&
1638 \selectlanguage{dutch}%
1639 \begin{minipage}[t]{0.45\textwidth}%
1640 #2
1641 \end{minipage}%
1642 \end{tabular}
1643 \selectlanguage{english}%
1644 }
1645 \ex>

```

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

```

1646 \ex>
1647 \newcommand\@mcsymbol{\square}
1648 \newcommand\setmcsymbol[1]{\renewcommand\@mcsymbol{#1}}
1649 \ex>

```

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

```

1650 \ex>
1651 \newcommand\mc[1]{%
1652 \hfill\break\quad\begin{tabular}{cc}
1653 $\@mcsymbol$
1654 &
1655 \begin{minipage}[t]{0.9\textwidth}%
1656 #1
1657 \end{minipage}%
1658 \end{tabular}
1659 }
1660 \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.

```

1661 \ex>
1662 \newcommand{\engdutm}[2]{%

```

```

1663 \hfill\break\begin{tabular}{cccc}
1664   $\@mcsymbol$
1665   &
1666   \selectlanguage{english}%
1667   \begin{minipage}[t]{0.42\textwidth}%
1668     #1
1669   \end{minipage}%
1670   &---&
1671   \selectlanguage{dutch}%
1672   \begin{minipage}[t]{0.42\textwidth}%
1673     #2
1674   \end{minipage}%
1675 \end{tabular}
1676 \selectlanguage{english}%
1677 }
1678 </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.

```

1679 <*ex>
1680 \newcommand\insertsolutionspagepartial[1]{
1681   ~\relax
1682   \AddToShipoutPicture*{%
1683     \put(0,0){%
1684       \begin{tikzpicture}
1685         \clip (0,0) rectangle (21,#1);
1686 %       \draw[densely dotted, step=0.5cm,black!20] (0.999,0.990) grid (20,1.5);
1687       \draw[densely dotted, step=0.5cm,black!20] (0.999,1.499) grid (2,2.5);
1688       \draw[densely dotted, step=0.5cm,black!20] (18.999,1.499) grid (20,2.5);
1689
1690       \draw[densely dotted, step=0.5cm,black!20] (0.999,2.499) grid (20,27);
1691       \draw[densely dotted, step=0.5cm,black!20] (0.999,27) grid (16,28);
1692       \draw[densely dotted, step=0.5cm,black!20] (19.499,27) grid (20,28);
1693       \draw[densely dotted, step=0.5cm,black!20] (0.99,27.999) grid
1694         (20,28.5);
1695       \draw[ultra thick] (1,#1) -- (20,#1);
1696     \end{tikzpicture}
1697   }
1698 }%
1699 \clearpage
1700 \relax
1701 }
1702 </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').

```

1703 <*ex>
1704 \newcommand\insertsolutionspage[1]{
1705   \clearpage

```

```

1706 \AddToShipoutPicture*{%
1707   \put(0,0){%
1708     \begin{tikzpicture}
1709       \clip (0,0) rectangle (21,29.5);
1710       \draw[densely dotted, step=0.5cm,black!20] (0.999,1.499) grid (2,2.5);
1711       \draw[densely dotted, step=0.5cm,black!20] (18.999,1.499) grid (20,2.5);
1712
1713       \draw[densely dotted, step=0.5cm,black!20] (0.999,2.499) grid (20,28);
1714       \draw[densely dotted, step=0.5cm,black!20] (0.999,28) grid (16,28.5);
1715       \draw[densely dotted, step=0.5cm,black!20] (19.499,28) grid (20,28.5);
1716     \end{tikzpicture}
1717   }
1718   \put(120,150){\rotatebox{60}{\textcolor{watermark}{
1719     \fontfamily{phv}\fontsize{105}{130}\fontseries{m}\fontshape{n}\selectfont
1720     #1}
1721   }
1722 }
1723 }%
1724 ~\relax
1725 }
1726 </ex>

```

We add a lastpage label to the final page

```

1727 <*ex>
1728 \AtEndDocument{
1729   \label{lastpage}
1730 }
1731 </ex>
1732 % \end{macrocode
1733 %
1734 % \subsection{References}
1735 % \begin{macrocode}
1736 <*ct | bmt | pt>
1737 \IfFileExists{varioref.sty}{\RequirePackage{varioref}}{}
1738 </ct | bmt | pt>
1739 %
1740 <*ct>
1741 \IfFileExists{hyperref.sty}{
1742   \RequirePackage[backref,hyperindex=true,pagebackref=true]{hyperref}
1743   \hypersetup{
1744     breaklinks=true,
1745     colorlinks=true,
1746     citecolor=black,
1747     filecolor=black,
1748     linkcolor=black,
1749     pageanchor=true,
1750     pdfpagemode=UseOutlines,
1751     urlcolor=black
1752   }
1753   \AtBeginDocument{
1754     \hypersetup{
1755       pdftitle={\@title},
1756       pdfsubject={\@subtitle},

```

```

1757         pdfauthor={\@author}
1758     }
1759 }
1760 }{}
1761 </ct>
1762 %
1763 %
1764 <*bmt | pt>
1765 \IfFileExists{hyperref.sty}{
1766     \RequirePackage[backref,hyperindex=true,pagebackref=true]{hyperref}
1767     \hypersetup{
1768         breaklinks=true,
1769         colorlinks=true,
1770         citecolor=black,
1771         filecolor=black,
1772         linkcolor=black,
1773         pageanchor=true,
1774         pdfpagemode=UseOutlines,
1775         urlcolor=black
1776     }
1777     \AtBeginDocument{
1778         \hypersetup{
1779             pdftitle={\@title},
1780             pdfsubject={\@subtitle},
1781             pdfauthor={\@author}
1782         }
1783     }
1784 }{}
1785 </bmt | pt>

```

## 6 The beamer theme

### 6.1 User guide

```

<*bmrug>
\documentclass[aspectratio=1610]{beamer}
\usetheme[ti]{uantwerpen}
\usepackage[english]{babel}

```

The packages below are for demonstration purpose only.  
They are not required for the template to work

```

\usepackage{metalogo}
\usepackage{lipsum}
\usepackage{pgfplots}
\usepackage{booktabs}

```

```

some stuff to typeset code
\newcommand\command[1]{\tt \textbackslash #1}
\NewEnviron{codesnippet}[1][0.8\textwidth]{
    \scriptsize
    \qqquad\framebox[#1][l]{\texttt{
        \setlength\textwidth{#1}
    }}
}

```

```

        \begin{minipage}{0.9\textwidth}
        \BODY
        \end{minipage}
    }
}
\newcommand\ind[1][2ex]{\hspace*{#1}}
\newcommand\bframe[1][\command{begin}\{#1frame\}}
\newcommand\eframe[1][\command{end}\{#1frame\}}

\title{This is your \texttt{\textbackslash}title{}}
\subtitle[my short title]{This is your \texttt{\textbackslash}subtitle{}}
\date[my short date]{This is your \texttt{\textbackslash}date{}}
\author[my short author]{This is your \texttt{\textbackslash}author{}}

\begin{document}

\begin{frame}[negativefill]
\maketitle
\end{frame}

\begin{frame}
\maketitle
\end{frame}

\begin{frame}[negative]
\maketitle
\end{frame}

\begin{frame}
{What's on the menu?}
{Bon app\`etit!}
~\\
\tableofcontents
\end{frame}

\section{Loading the theme and theme options}

\begin{frame}[negative]
\sectionpage
\end{frame}

\begin{frame}
{Using our beamer theme}

The \texttt{uantwerpen} beamer theme is distributed by CTAN. It
should be installed with your \TeX{} distribution by default.

You can load the package in your preamble as:

\begin{codesnippet}
\command{documentclass}[aspectratio=1610]\{beamer\}\\
\command{usetheme}[theme-options-go-here]\{uantwerpen\}\\
\command{usepackage}[english]\{babel\}

```



```

\end{codesnippet}

\heading{Remarks}
\begin{itemize}
\item The theme behaves well for all supported beamer aspect
ratios.
\item  $16\times 10$  is currently your best option to maximize your
slide size given a modern LCD-projector!
\item Only \texttt{dutch} and \texttt{english} are supported.
The correct logoware is selected using the babel language option!
\end{itemize}
\end{frame}

\begin{l3qframe}[t,rqgraphic={
\begin{minipage}{0.35\textwidth}
\footnotesize
\begin{center}
\begin{tabular}{c}
\toprule
\bfseries option\\
\midrule
\tt be \\
\tt fbd \\
\tt ggw \\
\tt lw \\
\tt ow \\
\tt re \\
\tt sw \\
\tt ti \\
\tt we \\
\tt iob \\
\bottomrule
\end{tabular}
\end{center}
\end{minipage}
}]
{Theme options}{
The following theme options may come in handy:
\begin{description}
\item[\tt X] to invoke your own faculty's colors and logos,
with X one of the options in the table on the right\
(I assume you know your faculty abbreviation)
\item[\tt nofonts] disables font loading, so you can load your own fonts
\item[\tt rgb] to select RGB color encoding (best for projecting, default)
\item[\tt cmyk] to select CMYK color encoding (best for printing)
\item[\tt neutralcolors] to disable your faculty colors and use the
standard UAntwerpen colors
\end{description}
\medskip

The defaults of the theme are:
\begin{itemize}
\item no faculty option ( $\rightarrow$  standard UAntwerpen logos)
\item \texttt{rgb}

```

```

\end{itemize}

\end{13qframe}

\begin{frame}[t]
  {A note on the compiler you are using}
  {Fonts galore}

  Depending on the type of compiler you use, a different font scheme
  is loaded:
  \begin{description}
    \item[\LaTeX] --- ancient compiler - no support\\
      Don't use!
    \item[pdf\LaTeX] --- very old school compiler - no OTF/TTF support\\
      Computer Modern Sans Serif is used as font
    \item[\XeLaTeX] --- old school compiler - the first to have OTF/TTF
      support\\
      Calibri is used as font (with cmbright math fonts)
    \item[\LuaLaTeX] --- current compiler - your best option\\
      Calibri is used as font (with cmbright math fonts)
  \end{description}

\end{frame}

\section{Title slides}

\begin{frame}[negative]
  \sectionpage
\end{frame}

\begin{frame}[t]
  {Title slides}
  \heading{Contents} ---
  The contents of the title slide can be set in your preamble
  using the classical \LaTeX{} commands:
  \begin{itemize}
    \item \command{title}\{\}\}
    \item \command{subtitle}\{\}\}
    \item \command{author}\{\}\}
    \item \command{date}\{\}\}
  \end{itemize}
  We don't specify an institute, as the logos do so.

  \heading{Code} --- The titleslide is easily typeset as:\\
  \begin{codesnippet}
    \bframe[] [option]\\
    \ind\command{maketitle}\\
    \eframe
  \end{codesnippet}

  with no option, or one of: \texttt{normal}, \texttt{negative},
  \texttt{negativefill}.
\end{frame}

```

```

\section{Regular slides}

\subsection{Bare}

\begin{frame}[negative]
  \sectionpage
\end{frame}

\begin{frame}[negative]
  \subsectionpage
\end{frame}

\begin{frame}[t]
  {Frame titles}
  {And subtitles}
  \heading{How to specify them!}\\
  Titles are specified using \command{frametitle\{\}} or
  \command{framesubtitle\{\}} or even easier as first and second argument
  to the \texttt{frame} environment (or their derived versions).

  \begin{codesnippet}
    \bframe[] [options go here, comma separated]\\
    \ind\{first argument\}\\
    \ind\{second argument\}\\
    \ind frame contents \\
    \eframe
  \end{codesnippet}
  \bigskip

  \heading{Don't need them?}\\
  If you need a slide without titles: just don't specify them!

  \heading{Want to get rid of the footer as well?}\\
  Specify the \texttt{plain} option to the frame.

\end{frame}

\begin{frame}[t]
  {The canvas}

  \heading{Flavors} --- The canvas of the slide has four flavors:
  \begin{description}
    \item[normal]
      the ordinary white background slide
    \item[negativefill]
      a reverse video slide on a background (in maincolor) without white
      margins
    \item[negative]
      a reverse video slide on a background (in maincolor) with white
      margins
    \item[graphicfill]
      a graphic canvas without white margins (graphic can be photo,
      graph, \ldots)
    \item[graphic]
      a graphic canvas with white margins (graphic can be

```

```

    anything)
\end{description}
They are specified as options to the frame environment (or its
derivatives).

\heading{Remarks}
\begin{itemize}
\item You don't need to specify the normal canvas, it is the
    default.
    \item In handout mode the negative and negativefill canvas will be
        typeset as normal canvas (to allow for easy printing).
    \item The graphic option has many variants that we will discuss later.
\end{itemize}
\end{frame}

\begin{frame}[negativefill]
    {A negativefill slide}
    {with a subtle subtitle}
    \lipsum[1]
\end{frame}

\begin{frame}[negative,t]
    {A negative slide}
    {with a subtle subtitle}
    Don't do this! Don't use a title and subtitle, nor straight text
    but put material on this slide that does not touch or cross the
    edges of the background!\\
    E.g., the graph on the bottom right
    \place[anchor=south east] at (0.9,0.1) {
        \begin{tikzpicture}[white]
            \begin{axis}
                [width=4cm,height=5cm,grid=both,font=\footnotesize]
                \addplot[white] {x^2};
            \end{axis}
        \end{tikzpicture}
    }
    The best advice is not to reserve this canvas for title frames and
    intermission slides.
\end{frame}

\begin{frame}[t]
    {Vertical alignment}

    You can easily specify the vertical alignment of your frame
    contents, using the options
    \begin{description}
    \item[\texttt{t}] for top
    \item[\texttt{c}] for center
    \item[\texttt{b}] for bottom
    \end{description}

    Example:\\[1ex]
    \begin{codesnippet}
        \bframe[] [t]\\

```

```

\ind\{Title}\}
\ind\{Subtitle}\}
\ind frame contents
\eframe
\end{codesnippet}

\end{frame}

\begin{frame}[t]
{Colors}
{What a wonderful world}

\heading{Standard colors}
You can select the theme colors using:
\textcolor{maincolor}{Main color}:
can be specified as \LaTeX-color \emph{maincolor}
\textcolor{sidecolor}{Side color}:
can be specified as \LaTeX-color \emph{sidecolor}
\textcolor{basecolor}{Base color}:
can be specified as \LaTeX-color
\emph{basecolor}

\heading{Advice}
\begin{itemize}
\item Stick to the standard colors or use grayscale tints!
\item Only use color when functional (e.g. in graphs)
\end{itemize}

\heading{Alert}
You can use \alert{\command{alert{}}} to grab the attention of the
user. It will typeset your content in \alert{red}.

\heading{Not taking any advice?}
You can fiddle with the colors, but do so in smart way.
Use \command{setbeamercolor}. You can see how it is used in the
\texttt{beamercolorthemeuantwerpen.sty} file.
\end{frame}

\begin{frame}[t]
{Logo demo}

The logo's can be used as follows (but you should not need them):
\begin{itemize}
\item \command{includegraphics[width=3cm]{\command{logopos}}}\
\begin{center}
\begin{tikzpicture}
\draw[fill,white] (0,0) rectangle node
{\includegraphics[width=3cm]{\command{logopos}}} (4,1.25);
\end{tikzpicture}
\end{center}
\item \command{includegraphics[width=3cm]{\command{logoneg}}}\
\begin{center}
\begin{tikzpicture}
\draw[fill] (0,0) rectangle node

```

```

        {\includegraphics[width=3cm]{\logoneg}} (4,1.25);
    \end{tikzpicture}
\end{center}
\item \command{\includegraphics[width=3cm]{\command{logomonowhite}}}\}
\begin{center}
    \begin{tikzpicture}
        \draw[fill] (0,0) rectangle node
            {\includegraphics[width=3cm]{\logomonowhite}} (4,1.25);
    \end{tikzpicture}
\end{center}
\end{itemize}
\end{frame}

\subsection{With graphic eye candy}

\begin{frame}[negative]
    \subsectionpage
\end{frame}

\begin{frame}[t]
    {Basic idea}

    \heading{The idea} --- put support material (photo or graph) on the
    slide next to the frame content.
    This is done by
    \begin{itemize}
        \item specifying an appropriate canvas
        \item using an appropriate frame derivative
    \end{itemize}

    \heading{Good combinations}
    \begin{center}\small
        \begin{tabular}{ccc}
            \toprule
            \bf frame option & \bf graphic on frame
            & \bf corresponding frame derivative\\
            \midrule
            lqgraphic & left quarter & r3qframe \\
            rqgraphic & right quarter & l3qframe \\
            lhgraphic & left half & rhframe \\
            rhgraphic & right half & lhframe \\
            thgraphic & top half & bhframe \\
            bhgraphic & bottom half & thframe\\
            \bottomrule
        \end{tabular}
    \end{center}

\end{frame}

\begin{l3qframe}[rqgraphic]
    {Some Random Title}
    {Please, adapt!}

    \small

```

```

The slide has been typeset as:\\
\begin{codesnippet}[\textwidth]
  \bframe[l3q][rqgraphic=\{<load photo here>\}\}\\
  \ind\{Title\}\\
  \ind\{Subtitle\}\\
  \ind frame contents\\
  \eframe[l3q]
\end{codesnippet}
\smallskip

\subheading{Remarks}
\begin{itemize}
\item Load photo as:\\
\command{includegraphics}[width=0.25\command{paperwidth}, min height=\command{textheight}]
  \{image.jpg\}
\item If \texttt{rqgraphic} is specified without argument, a standard photo
  is loaded.
\item Note: you can avoid rounding the corner using the
  frame option \texttt{noround} (may be useful when not using a photo)
\end{itemize}
\end{l3qframe}

\begin{r3qframe}[lqgraphic,t]
{Some Random Title}
{Please, adapt!}

\small
The slide has been typeset as:\\
\begin{codesnippet}[\textwidth]
  \bframe[r3q][lqgraphic=\{<load photo here>\}\}\\
  \ind\{Title\}\\
  \ind\{Subtitle\}\\
  \ind frame contents\\
  \eframe[r3q]
\end{codesnippet}
\smallskip

\subheading{Remarks}
\begin{itemize}
\item Load photo as:\\
  \command{includegraphics}[width=0.25\command{paperwidth}, min height=\command{textheight}]
    \{image.jpg\}
\item If \texttt{rqgraphic} is specified without argument, a standard photo
  is loaded.
\item Note: you can avoid rounding the corner using the
  frame option \texttt{noround} (may be useful when not using a photo)
\end{itemize}
\end{r3qframe}

\begin{lhframe}[rhgraphic]
{Some Random Title}

\small
The slide has been typeset as:\\

```

```

\begin{codesnippet}[\textwidth]
  \bframe[lh][rhgraphic=\{<load photo here>\}\}\}
  \ind\{Title\}\}
  \ind\{Subtitle\}\}
  \ind frame contents\}
  \eframe[lh]
\end{codesnippet}
\smallskip

\subheading{Remarks}
\begin{itemize}
\item Load photo as:\}
  \command{includegraphics}[min
    width=0.5\command{paperwidth}, min height=\command{textheight}]
    \{image.jpg\}
\item If \texttt{rqgraphic} is specified without argument, a standard photo
  is loaded.
\item Note: avoid rounding the corner using \texttt{noround}
\end{itemize}
\end{lhframe}

\begin{rhframe}[lhgraphic,t]
  {Some Random Title}

  \small
  The slide has been typeset as:\}
  \begin{codesnippet}[\textwidth]
    \bframe[rh][lhgraphic=\{<load photo here>\}\}\}
    \ind\{Title\}\}
    \ind\{Subtitle\}\}
    \ind frame contents\}
    \eframe[rh]
  \end{codesnippet}
  \smallskip

  \subheading{Remarks}
  \begin{itemize}
  \item Load photo as:\}
    \command{includegraphics}[min
      width=0.5\command{paperwidth}, min height=\command{textheight}]
      \{image.jpg\}
  \item If \texttt{rqgraphic} is specified without argument, a standard photo
    is loaded.
  \item Note: avoid rounding the corner using \texttt{noround}
  \end{itemize}
\end{rhframe}

\begin{bhframe}[thgraphic,t]
  {Some Random Title}{Please, adapt!}
  \small
  The slide has been typeset as:
  \begin{codesnippet}[\textwidth]
    \bframe[bh][thgraphic=\{<load photo here>\}\}\}
    \ind\{Title\}\}

```



```

\ind\{Subtitle\}\
\ind frame contents\
\eframe[bh]
\end{codesnippet}
\end{bhframe}

\begin{thframe}[bhgraphic,t]
{Some Random Title}
{Please, adapt!}
\small
The slide has been typeset as:
\begin{codesnippet}[\textwidth]
\bframe[th][bhgraphic=\{\<load photo here>\}\}\
\ind\{Title\}\
\ind\{Subtitle\}\
\ind frame contents\
\eframe[th]
\end{codesnippet}
\end{thframe}

\section{Intermission slides}

\begin{frame}[negative]
\sectionpage
\end{frame}

\subsection{Standard section slides}

\begin{frame}[negative]
\subsectionpage
\end{frame}

\begin{frame}[t]
{Basic idea}

You can select any of the canvas templates: negative, negativefill,
graphic, graphicfill and normal, and combine it with:
\begin{description}
\item[\command{sectionpage}]
\item[\command{subsectionpage}]
\end{description}

Example:\[1ex]
\begin{codesnippet}[0.8\textwidth]
\bframe[] [negative]\
\ind \command{sectionpage}\
\eframe\[-\
\bframe[] [negative]\
\ind \command{subsectionpage}\
\eframe
\end{codesnippet}\[1ex]
(this how the previous two slide were generated)
\end{frame}

```

```

\subsection{Custom intermission slides}

\begin{frame}[negative]
  \subsectionpage
\end{frame}

\begin{frame}[t]
  {Basic idea}

  If you are a fan of graphic material in slideware, you can use a
  \texttt{graphic} or \texttt{graphicfill} canvas in combination with
  small snippets you put on the slide using\\[1ex]
  \quad\command{place}[node options] at (x,y) \{\<material>\}\}\\[1ex]
  with
  \begin{itemize}
    \item  $(x,y)=(0,0)$  the bottom left of the slide and  $(1,1)$  the top
      right of the slide
    \item \texttt{node options} any options you want to hand over to the
      tikz node that is used to position the material.
  \end{itemize}
  \medskip

  E.g., the next slide was created using:\\[1ex]
  \begin{codesnippet}[0.8\textwidth]
    \bframe[] [graphic,t]\\
    \ind\command{place} at (0.5,0.5) \{\command{untwerpenicon[scale=0.8]}\}\}\\
    \eframe
  \end{codesnippet}
  \medskip

  You will have to run \LaTeX{} twice in order for the position to be correct!
\end{frame}

\begin{frame}[graphic,t]
  \place at (0.5,0.5) {\untwerpenicon[scale=0.8]}
\end{frame}

\begin{frame}[t]
  {Shading photographs}

  Often you need make a photograph a little bit more opaque in order
  for the (white) text to readable.

  To this end you can use the following command\\[1ex]
  \quad\command{darken[s]}\{\<material>\}\}\\[1ex]
  with  $s$  a value between 0 and 1 to specify the level of darkening.

  E.g., the next slide was created using:
  \begin{codesnippet}[0.9\textwidth]
    \bframe[] [graphicfill=\{\command{darken}%
    [0.25]\}\command{includegraphics}%
    [scale=0.1,min width=\command{paperwidth},min height=\command{paperheight}]]%
    \{\Images/untwerpen-09.jpg\}\},t]\\
    \command{place} [anchor=north east] at (0.95,0.5) \{\

```

```

\ind\command{uantwerpencallout}\{3\}\{2.5\}\{\}
\ind\ind\command{bfseries} You cannot be serious!\textbackslash\textbackslash[1ex]\
\ind\ind John McEnroe\}\}
\}\}
\eframe
\end{codesnippet}
\end{frame}

```

```

\begin{frame}[graphicfill={\darken[0.25]%
  {\includegraphics[scale=0.1,min width=\paperwidth,min height=\paperheight]%
    {Images/uantwerpen-09.jpg}}},t]
\place [anchor=north east] at (0.95,0.5) {
  \uantwerpencallout{3}{2.5}{
    \bfseries You cannot be serious!\}[1ex]
    John McEnroe}
}
\end{frame}

```

```

\begin{frame}[t]
{Shading photographs locally}

```

You can also choose to shade the local backdrop of the material you put on the side. If you like the `\command{uantwerpencallout}` command of the previous slide, you can give it an optional argument to set the fill opacity of the backdrop behind the text.

E.g., the next slide was created using:

```

\begin{codesnippet}[0.9\textwidth]
\bframe[] [graphic,t]\
\ind\command{place} [anchor=north west] at (0.1,0.9) \{\}
\ind\ind\command{uantwerpencallout}[fill opacity=0.5]\{4.5\}\{2.5\}\{\}
\ind\ind\ind\command{bfseries} I'll be back!\textbackslash\textbackslash[1ex]\
\ind\ind\ind Arnold Schwarzenegger\}\}
\}
\eframe
\end{codesnippet}
\medskip

```

The `\command{uantwerpencallout}` command has the following syntax:  
`\quad\command{uantwerpencallout}[options]\{width\}\{height\}\{contents\}`  
`\medskip`

Remember to run `\LaTeX{}` twice in order for the position of the callout to be correct!

```

\end{frame}

```

```

\begin{frame}[graphic,t]
\place [anchor=north west] at (0.1,0.9) {
  \uantwerpencallout[fill opacity=0.5]{4.5}{2.5}{
    \bfseries I'll be back!\}[1ex]
    Arnold Schwarzenegger}
}
\end{frame}

```

```

\section{Demo of some inner theme parts}

\begin{frame}[negative]
  \sectionpage
\end{frame}

\begin{frame}[t]
  {Headings}
  {on two levels}
  You can set headings on two levels, by using
  \begin{itemize}
    \item\command{heading}\{\}
    \item\command{subheading}\{\}
  \end{itemize}
  \heading{Main subject}~\
  blabla
  \subheading{Subtopic 1}~\
  blabla
  \subheading{Subtopic 2}~\
  blabla
  \heading{Next main subject}~\
  blabla
\end{frame}

\newcommand\listdemo[1][itemize]{
  \begin{#1}
    \item First level
      \begin{#1}
        \item Second level
          \begin{#1}
            \item Third level
          \end{#1}
        \end{#1}
      \end{#1}
  \end{#1}
}

\begin{frame}[t]
  {Itemize / enumerations}
  {Different styles}
  Usage:\
  Set them (in your preamble) using: \command{setbeamertemplate}\{itemize items\}[triangle]\
  The default of the uantwerpen beamer template is set to \texttt{square} to be
  similar to our logo.
  \medskip

  \begin{columns}
    \column[T]{0.3\textwidth}
    \alert{default}
    \setbeamertemplate{itemize items}[default]
    \listdemo
    \column[T]{0.3\textwidth}
    \alert{triangle}
    \setbeamertemplate{itemize items}[triangle]
  \end{columns}

```

```

\listdemo
\column[T]{0.3\textwidth}
\alert{circle}
\setbeamertemplate{itemize items}[circle]
\listdemo
\end{columns}~\\
\bigskip

\begin{columns}
\column[T]{0.3\textwidth}
\alert{ball}
\setbeamertemplate{itemize items}[ball]
\listdemo
\column[T]{0.3\textwidth}
\alert{square}
\setbeamertemplate{itemize items}[square]
\listdemo
\column[T]{0.3\textwidth}
\alert{enumeration}
\setbeamertemplate{itemize items}[circle]
\listdemo[enumerate]
\end{columns}
\end{frame}

\section{Advanced material}

\begin{frame}[negative]
\sectionpage
\end{frame}

\begin{frame}[t]
{Customizing the template}

If you want to override logos/colors to create a template for your
own research group or department:
renew the commands below. The redefinitions must be put just after
the \command{begin\{document\}} statement.\\
The construction below allows you to put the stuff in a style file
that you must load after (!) the \command{usetheme} command.\\[1ex]
\begin{codesnippet}[0.95\textwidth]
\command{AtBeginDocument\{}}\\
\ind\command{renewcommand}\command{logopos}\{your-pos-logo-filename-here\}\\
\ind\command{renewcommand}\command{logoneg}\{your-negative-logo-filename-
here\}\\
\ind\command{renewcommand}\command{logomonowhite}\{your-mono-logo-filename-
here\}\\
\ind\command{renewcommand}\command{iconfile}\{your-icon-filename-here\}\\
\ind\command{colorlet}\{maincolor\}\{your-favorite-color\}\\
\ind\command{colorlet}\{sidecolor\}\{your-secondfavorite-color\}\\
\ind\command{colorlet}\{basecolor\}\{some-solid-color\}\\
\}
\end{codesnippet}~\\[1ex]
\end{frame}

```

```

\begin{frame}
  {Some genuine advice}
  \small

  Dear user,

  Candy slides are nice for PR, but bad for conveying a message.

  Beamer is a tool to typeset technical presentations. Need more
  animation and eye candy? Use other tools. They are much easier in
  ruining your audiences' day.

  Effective slides are simple slides.\\
  Go by cognitive consonance, flirt with cognitive dissonance, but
  stay away from cognitive cacophony.
  This presentation is i.m.ho. a bad one, as it shows the
  cacophony of possibilities. But hey, you were the one asking for it.

  A lot of effort has gone into this template. I hope you like it.
  If you have good suggestions, e-mail me. If you have questions, I
  might even help you.

  Cheers!

  Walter Daems\\
  (March 2021)

\end{frame}

\end{document}
</bmrug>

```

## 6.2 Implementation

### 6.2.1 Main beamer theme

```

1786 <{*bmr}>
1787 % Copyright 2021 by Walter Daems <walter.daems@uantwerpen.be>
1788 %
1789 % This file may be distributed and/or modified
1790 %
1791 % 1. under the LaTeX Project Public License and/or
1792 % 2. under the GNU Public License.
1793 %
1794 % See the file doc/licenses/LICENSE for more details.
1795
1796 \newif\if@nofonts
1797 \@nofontsfalse
1798 \DeclareOption{nofonts}{\@nofontstrue}
1799 \newif\if@neutralcolors
1800 \@neutralcolorsfalse
1801 \DeclareOption{neutralcolors}{\@neutralcolorstrue}

```

```

1802
1803 \newcommand\colormodel{rgb}
1804 \newif\if@cmymk
1805 \@cmymkfalse
1806 \DeclareOption{cmymk}{\renewcommand\colormodel{cmymk}\@cmymktrue}
1807 \DeclareOption{rgb}{\renewcommand\colormodel{rgb}\@cmymkfalse}
1808
1809 \newcommand\fselector{ua}
1810 \newcommand\lselector{en}
1811 \newlength\logounitheight
1812 \setlength\logounitheight{0.8cm}
1813 \DeclareOption{be}{
1814   \renewcommand\fselector{be}
1815   \setlength\logounitheight{1cm}
1816 }
1817 \DeclareOption{fbd}{
1818   \renewcommand\fselector{fbd}
1819   \setlength\logounitheight{1cm}
1820 }
1821 \DeclareOption{ggw}{
1822   \renewcommand\fselector{ggw}
1823   \setlength\logounitheight{1cm}
1824 }
1825 \DeclareOption{lw}{
1826   \renewcommand\fselector{lw}
1827   \setlength\logounitheight{1cm}
1828 }
1829 \DeclareOption{ow}{
1830   \renewcommand\fselector{ow}
1831   \setlength\logounitheight{1cm}
1832 }
1833 \DeclareOption{re}{
1834   \renewcommand\fselector{re}
1835   \setlength\logounitheight{1cm}
1836 }
1837 \DeclareOption{sw}{
1838   \renewcommand\fselector{sw}
1839   \setlength\logounitheight{1cm}
1840 }
1841 \DeclareOption{ti}{
1842   \renewcommand\fselector{ti}
1843   \setlength\logounitheight{1cm}
1844 }
1845 \DeclareOption{we}{
1846   \renewcommand\fselector{we}
1847   \setlength\logounitheight{1cm}
1848 }
1849 \DeclareOption{iob}{
1850   \renewcommand\fselector{iob}
1851   \setlength\logounitheight{1cm}
1852 }
1853
1854 \AtBeginDocument{
1855   \makeatother

```

```

1856 \@ifpackageloaded{babel}{
1857   \addto\captionsdutch{
1858     \renewcommand\lselector{nl}
1859   }
1860 }
1861 \makeatletter
1862
1863 \newcommand\logopos{Logos/logo-uantwerpen-\fselector-\lselector-\colormodel-
pos}
1864 \newcommand\logoneg{Logos/logo-uantwerpen-\fselector-\lselector-\colormodel-
neg}
1865 \newcommand\logomonowhite{Logos/logo-uantwerpen-\fselector-\lselector-\colormodel-
mono-white}
1866 \newcommand\iconfile{Logos/icon-uantwerpen-\fselector-\colormodel}
1867 \def\appropriatelogo{\logopos}
1868 \def\appropriateslidenumber{%
1869   \usebeamercolor{pageno in head/foot}%
1870   \insertframenumber/\inserttotalframenumber}%
1871 }
1872
1873 \ProcessOptions
1874
1875 \if@neutralcolors
1876 \newcommand\maincolor{uauaside}
1877 \newcommand\sidecolor{uauamain}
1878 \newcommand\basecolor{uauaside}
1879 \else
1880 \newcommand\maincolor{ua\fselector main}
1881 \newcommand\sidecolor{ua\fselector side}
1882 \newcommand\basecolor{uauaside}
1883 \fi
1884
1885 \mode<presentation>
1886
1887 \RequirePackage{tikz}
1888 \RequirePackage{graphicx}
1889 \RequirePackage[export]{adjustbox}
1890 \RequirePackage{environ}
1891
1892 \setbeamersize{
1893   text margin left=.8cm,
1894   text margin right=.8cm
1895 }
1896
1897 \usecolortheme{uantwerpen}
1898 \usefonttheme{uantwerpen}
1899 \useinnertheme{uantwerpen}
1900 \useoutertheme{uantwerpen}
1901
1902 \setbeamertemplate{navigation symbols}{}
1903 \setbeamertemplate{blocks}[rounded][shadow=true]
1904
1905 \mode
1906 <all>

```



1907  $\langle$ /bmr $\rangle$

## 6.2.2 Beamer color theme

```
1908  $\langle$ *bmrcolor $\rangle$ 
1909 % Copyright 2021 by Walter Daems <walter.daems@uantwerpen.be>
1910 %
1911 % This file may be distributed and/or modified
1912 %
1913 % 1. under the LaTeX Project Public License and/or
1914 % 2. under the GNU Public License.
1915 %
1916 % See the file doc/licenses/LICENSE for more details.
1917
1918 \mode<presentation>
1919
1920 \if@cmypk
1921
1922 %% UAntwerpen
1923 \definecolor{uauamain}{cmyk}{0.00,0.96,0.82,0.01}
1924 \definecolor{uauaside}{cmyk}{1.00,0.71,0.00,0.51}
1925 %% Faculteit Bedrijfswetenschappen en Economie
1926 \definecolor{uabemain}{cmyk}{0.58,0.00,1.00,0.04}
1927 \definecolor{uabeside}{cmyk}{0.29,0.04,0.41,0.00}
1928 %% Faculteit Farmaceutische, Biomedische en Diergeneeskundige Wetenschappen
1929 \definecolor{uafbdmain}{cmyk}{0.65,0.03,0.00,0.00}
1930 \definecolor{uafbdside}{cmyk}{0.33,0.03,0.00,0.00}
1931 %% Faculteit Geneeskunde en Gezondheidswetenschappen
1932 \definecolor{uaggwmain}{cmyk}{0.61,0.55,0.00,0.00}
1933 \definecolor{uaggwside}{cmyk}{0.21,0.27,0.03,0.00}
1934 %% Faculteit Letteren en Wijsbegeerte
1935 \definecolor{ualwmain}{cmyk}{0.00,0.27,0.85,0.00}
1936 \definecolor{ualwside}{cmyk}{0.00,0.16,0.51,0.00}
1937 %% Faculteit Ontwerpwetenschappen
1938 \definecolor{uaowmain}{cmyk}{0.53,0.25,0.26,0.05}
1939 \definecolor{uaowside}{cmyk}{0.25,0.08,0.16,0.00}
1940 %% Faculteit Rechten
1941 \definecolor{uaremain}{cmyk}{0.10,1.00,0.90,0.05}
1942 \definecolor{uareside}{cmyk}{0.04,0.45,0.36,0.00}
1943 %% Faculteit Sociale Wetenschappen
1944 \definecolor{uaswmain}{cmyk}{0.08,0.00,1.00,0.26}
1945 \definecolor{uaswside}{cmyk}{0.20,0.11,0.50,0.00}
1946 %% Faculteit Toegepaste Ingenieurswetenschappen
1947 \definecolor{uatimain}{cmyk}{0.31,1.00,0.00,0.01}
1948 \definecolor{uatiside}{cmyk}{0.11,0.30,0.02,0.00}
1949 %% Faculteit Wetenschappen
1950 \definecolor{uawemain}{cmyk}{1.00,0.20,0.00,0.25}
1951 \definecolor{uaweside}{cmyk}{0.40,0.08,0.00,0.10}
1952 %% IOB
1953 \definecolor{uaiobmain}{cmyk}{0.05,0.75,1.00,0.00}
1954 \definecolor{uaiobside}{cmyk}{0.40,0.08,0.00,0.10}
1955
1956 \else
1957
```

```

1958 %% UAntwerpen
1959 \definecolor{uauamain}{RGB}{234,44,56}
1960 \definecolor{uauaside}{RGB}{0,46,101}
1961 %% Faculteit Bedrijfswetenschappen en Economie
1962 \definecolor{uabemain}{RGB}{101,168,18}
1963 \definecolor{uabeside}{RGB}{185,213,169}
1964 %% Faculteit Farmaceutische, Biomedische en Diergeneeskundige Wetenschappen
1965 \definecolor{uafbdmain}{RGB}{68,184,243}
1966 \definecolor{uafbdside}{RGB}{181,221,247}
1967 %% Faculteit Geneeskunde en Gezondheidswetenschappen
1968 \definecolor{uaggwmain}{RGB}{117,117,203}
1969 \definecolor{uaggwside}{RGB}{198,182,210}
1970 %% Faculteit Letteren en Wijsbegeerte
1971 \definecolor{ualwmain}{RGB}{241,181,61}
1972 \definecolor{ualwside}{RGB}{255,218,145}
1973 %% Faculteit Ontwerpwetenschappen
1974 \definecolor{uaowmain}{RGB}{130,161,173}
1975 \definecolor{uaowside}{RGB}{200,217,216}
1976 %% Faculteit Rechten
1977 \definecolor{uaremain}{RGB}{210,8,36}
1978 \definecolor{uareside}{RGB}{237,157,144}
1979 %% Faculteit Sociale Wetenschappen
1980 \definecolor{uaswmain}{RGB}{173,165,0}
1981 \definecolor{uaswside}{RGB}{215,211,148}
1982 %% Faculteit Toegepaste Ingenieurswetenschappen
1983 \definecolor{uatimain}{RGB}{177,0,151}
1984 \definecolor{uatiside}{RGB}{221,184,210}
1985 %% Faculteit Wetenschappen
1986 \definecolor{uawemain}{RGB}{0,108,169}
1987 \definecolor{uaweside}{RGB}{151,192,223}
1988 %% IOB
1989 \definecolor{uaiobmain}{RGB}{230,98,8}
1990 \definecolor{uaiobside}{RGB}{151,192,223}
1991
1992 \fi
1993
1994 %% define main color
1995 \colorlet{maincolor}{\maincolor}
1996 \colorlet{sidecolor}{\sidecolor}
1997 \colorlet{basecolor}{\basecolor}
1998
1999 \setbeamercolor{palette primary}{fg=maincolor}
2000 \setbeamercolor{palette secondary}{fg=sidecolor}
2001 \setbeamercolor{palette tertiary}{fg=uauaside}
2002 \setbeamercolor{palette quaternary}{fg=uauamain}
2003
2004 \setbeamercolor{normal text}{fg=basecolor}
2005 \setbeamercolor{inverse normal text}{fg=white!95!maincolor}
2006 \setbeamercolor{alerted text}{fg=uauamain}
2007 \setbeamercolor{example text}{\}
2008
2009 \setbeamercolor{heading}{fg=basecolor}
2010 \setbeamercolor{subheading}{fg=basecolor}
2011 \setbeamercolor{inverse heading}{fg=white}

```

```

2012 \setbeamercolor{inverse subheading}{fg=white!75!maincolor}
2013
2014 \setbeamercolor{block body}{bg=black!4}
2015 \setbeamercolor{block title}{bg=black!8}
2016
2017 \setbeamercolor{itemize item}{parent=normal text}
2018 \setbeamercolor{enumerate item}{parent=normal text}
2019 \setbeamercolor{itemize subitem}{parent=normal text}
2020 \setbeamercolor{enumerate subitem}{parent=normal text}
2021 \setbeamercolor{itemize subsubitem}{parent=normal text}
2022 \setbeamercolor{enumerate subsubitem}{parent=normal text}
2023
2024 \setbeamercolor{frametitle}{fg=maincolor}
2025 \setbeamercolor{framesubtitle}{fg=sidecolor}
2026 \setbeamercolor{inverse frametitle}{fg=white}
2027 \setbeamercolor{inverse framesubtitle}{fg=white!80!maincolor}
2028
2029 \setbeamercolor{title in title page}{fg=maincolor}
2030 \setbeamercolor{subtitle in title page}{fg=sidecolor}
2031 \setbeamercolor{author in title page}{fg=maincolor}
2032 \setbeamercolor{date in title page}{fg=sidecolor}
2033 \setbeamercolor{inverse title in title page}{fg=white}
2034 \setbeamercolor{inverse subtitle in title page}{fg=white!75!maincolor}
2035 \setbeamercolor{inverse author in title page}{fg=white}
2036 \setbeamercolor{inverse date in title page}{fg=white!75!maincolor}
2037
2038 \setbeamercolor{pageno in head/foot}{fg=basecolor}
2039 \setbeamercolor{inverse pageno in head/foot}{fg=white}
2040
2041 \setbeamercolor{section in toc}{fg=basecolor}
2042 \setbeamercolor{subsection in toc}{fg=basecolor}
2043 \setbeamercolor{section number projected}{fg=white,bg=basecolor}
2044 \setbeamercolor{subsection number projected}{fg=white,bg=basecolor}
2045
2046 \setbeamercolor{section title}{fg=maincolor}
2047 \setbeamercolor{section name}{fg=maincolor}
2048 \setbeamercolor{inverse section title}{fg=white}
2049 \setbeamercolor{inverse section name}{fg=white}
2050
2051 \setbeamercolor{subsection title}{fg=sidecolor}
2052 \setbeamercolor{subsection name}{fg=sidecolor}
2053 \setbeamercolor{inverse subsection title}{fg=white!75!maincolor}
2054 \setbeamercolor{inverse subsection name}{fg=white!75!maincolor}
2055 \mode
2056 <all>
2057 </bmrcolor>

```

### 6.2.3 Beamer font theme

```

2058 (*bmrfont)
2059 % Copyright 2021 by Walter Daems
2060 %
2061 % This file may be distributed and/or modified
2062 %

```

```

2063 % 1. under the LaTeX Project Public License and/or
2064 % 2. under the GNU Public License.
2065 %
2066 % See the file doc/licenses/LICENSE for more details.
2067
2068 \usetikzlibrary{calc}
2069
2070 \if@nofonts
2071 \else
2072   \RequirePackage{iftex}
2073   % Uncomment the following line if in MiKTeX you get the error
2074   % message that \ifluatex is already defined.
2075   % You first option is to update all your packages both in user as in
2076   % admin mode to fix your setup.
2077   % Your second option is to avoid the warning uncommenting the
2078   % following line:
2079   % \let\ifluatex\relax
2080   \iftutex
2081     \usepackage{cmbright}
2082     \usefonttheme{serif}
2083     \usepackage{fontspec}
2084     \setmainfont{Calibri}
2085     \usepackage{sansmathaccent}
2086   \fi
2087 \fi
2088 \usepackage{bm}
2089
2090 \mode<presentation>
2091
2092 \setbeamerfont{normal text}{} % ignored currently
2093 \setbeamerfont{alerted text}{}
2094 \setbeamerfont{example text}{}
2095
2096 \setbeamerfont{structure}{}
2097 \setbeamerfont{tiny structure}{size=\tiny}
2098
2099 \setbeamerfont{title}{size=\large,parent=structure}
2100 \setbeamerfont{title in head/foot}{}
2101 \setbeamerfont{title in sidebar}{size=\tiny}
2102
2103 \setbeamerfont{pageno in head/foot}{size=\tiny}
2104
2105 \setbeamerfont{subtitle}{size=\small,parent=title}
2106
2107 \setbeamerfont{author}{}
2108 \setbeamerfont{author in head/foot}{}
2109 \setbeamerfont{author in sidebar}{size=\tiny}
2110
2111 \setbeamerfont{date}{}
2112 \setbeamerfont{date in head/foot}{}
2113 \setbeamerfont{date in sidebar}{}
2114
2115 \setbeamerfont{part name}{size=\LARGE}
2116 \setbeamerfont{part title}{size=\LARGE,parent=title}

```

```

2117
2118 \setbeamerfont{section name}{size=\Large}
2119 \setbeamerfont{section title}{size=\Large,parent=title}
2120
2121 \setbeamerfont{section in toc}{parent=structure}
2122 \setbeamerfont{section in toc shaded}{parent=section in toc}
2123 \setbeamerfont{section in head/foot}{}
2124 \setbeamerfont{section in sidebar}{size=\tiny}
2125 \setbeamerfont{section number projected}
2126 {size=\small,parent={section in toc,projected text}}
2127
2128 \setbeamerfont{subsection name}{size=\large}
2129 \setbeamerfont{subsection title}{size=\large,parent=title}
2130
2131 \setbeamerfont{subsection in toc}{}
2132 \setbeamerfont{subsection in toc shaded}{parent=subsection in toc}
2133 \setbeamerfont{subsection in head/foot}{}
2134 \setbeamerfont{subsection in sidebar}{}
2135
2136 \setbeamerfont{subsubsection in toc}{size=\footnotesize}
2137 \setbeamerfont{subsubsection in toc shaded}{parent=subsubsection in toc}
2138 \setbeamerfont{subsubsection in head/foot}{}
2139 \setbeamerfont{subsubsection in sidebar}{}
2140
2141 \setbeamerfont{headline}{parent={tiny structure}}
2142 \setbeamerfont{footline}{parent={tiny structure}}
2143
2144 \setbeamerfont{frametitle}
2145 {parent=structure,size=\renewcommand{\baselinestretch}{0.85}\LARGE\bfseries}
2146 \setbeamerfont{framesubtitle}{parent=frametitle,size=\normalsize\bfseries}
2147
2148 \setbeamerfont{caption}{size=\small}
2149 \setbeamerfont{caption name}{parent={structure,caption}}
2150
2151 \setbeamerfont{button}{size=\tiny}
2152
2153 \setbeamerfont{block body}{size=\scriptsize}
2154 \setbeamerfont{block body alerted}{parent={block body}}
2155 \setbeamerfont{block body example}{parent={block body}}
2156 \setbeamerfont{block title}{size=\small,parent={structure,block body}}
2157 \setbeamerfont{block title alerted}{parent={block title,alerted text}}
2158 \setbeamerfont{block title example}{parent={block title,example text}}
2159
2160 \setbeamerfont{item}{parent=structure}
2161 \setbeamerfont{subitem}{parent=item}
2162 \setbeamerfont{subsubitem}{parent=subitem}
2163
2164 \setbeamerfont{item projected}{size=\tiny,parent={item,projected text}}
2165 \setbeamerfont{subitem projected}{parent=item projected}
2166 \setbeamerfont{subsubitem projected}{parent=subitem projected}
2167
2168 \setbeamerfont{itemize item}{parent=item}
2169 \setbeamerfont{itemize subitem}{parent=subitem}
2170 \setbeamerfont{itemize subsubitem}{parent=subsubitem}

```

```

2171
2172 \setbeamerfont{enumerate item}{parent=item}
2173 \setbeamerfont{enumerate subitem}{parent=subitem}
2174 \setbeamerfont{enumerate subsubitem}{parent=subsubitem}
2175
2176 \setbeamerfont{itemize/enumerate body}{}
2177 \setbeamerfont{itemize/enumerate subbody}{size=\small}
2178 \setbeamerfont{itemize/enumerate subsubbody}{size=\footnotesize}
2179
2180 \setbeamerfont{description item}{parent=item}
2181
2182 \setbeamerfont{projected text}{parent={tiny structure}}
2183
2184 \setbeamerfont{abstract}{size=\small}
2185 \setbeamerfont{abstract title}{parent={abstract,structure},size=\normalsize}
2186
2187 \setbeamerfont{verse}{family=\rmfamily,shape=\itshape}
2188
2189 \setbeamerfont{quotation}{shape=\itshape}
2190 \setbeamerfont{quote}{parent=quotation}
2191
2192 \setbeamerfont{note page}{size=\small}
2193
2194 \mode
2195 <all>
2196 \</bmrfont>

```

#### 6.2.4 Beamer inner theme

```

2197 \*bmrinner
2198 % Copyright 2021 by Walter Daems <walter.daems@uantwerpen.be>
2199 %
2200 % This file may be distributed and/or modified
2201 %
2202 % 1. under the LaTeX Project Public License and/or
2203 % 2. under the GNU Public License.
2204 %
2205 % See the file doc/licenses/LICENSE for more details.
2206
2207 \mode<presentation>
2208
2209 \setlength\parskip{0.5\baselineskip}
2210 \setlength\parindent{0em}
2211
2212 % use square (can also be circle or ball
2213 \setbeamertemplate{sections/subsections in toc}[square]
2214 \setbeamertemplate{itemize items}[square]
2215
2216 %\setbeamertemplate{description item}[align left]
2217
2218 \newif\if@noround
2219 \@noroundfalse
2220
2221 \newcommand\uantwerpenleftshape[3][[]]{

```

```

2222 \newcommand\mycradius{0.05*(\getlength{\paperheight}-1.6)}%
2223 \coordinate (bl) at #2;
2224 \coordinate (tr) at #3;
2225 \if@noround
2226 \path[#1] (bl) rectangle (tr);
2227 \else
2228 \path[#1] (bl|-tr) -- (tr) -- (bl|-tr) -- ($ (bl)+(\mycradius,0)$)
2229 arc(-90:-180:{\mycradius}) -- cycle;
2230 \fi
2231 }
2232 \newcommand\uantwerpenrightshape[3][]{
2233 \newcommand\mycradius{0.05*(\getlength{\paperheight}-1.6)}%
2234 \coordinate (bl) at #2;
2235 \coordinate (tr) at #3;
2236 \if@noround
2237 \path[#1] (bl) rectangle (tr);
2238 \else
2239 \path[#1] (bl|-tr) -- (tr) -- ($ (bl|-tr)+(0,{\mycradius})$)
2240 arc(0:-90:{\mycradius}) -- (bl) -- cycle;
2241 \fi
2242 }
2243
2244 \newcommand\darken[2][0.5]{%
2245 \begin{tikzpicture}[inner sep=0pt,outer sep=0pt]
2246 \node (a) {#2};
2247 \fill[fill=black,opacity=#1] (a.south west) rectangle (a.north east);
2248 \end{tikzpicture}
2249 }
2250
2251 \newcommand\uantwerpenleftshape[4][]{
2252 \begin{tikzpicture}
2253 \uantwerpenleftshape[fill=black,fill opacity=0.0,text opacity=1,text=white,#1]{(-
2254 #2/2,-{#3/2})}{({#2/2},{#3/2})}
2255 \node[align=left,anchor=center] at (0,0) { \callout\ #4 };
2256 \end{tikzpicture}
2257 }
2258 \newcommand\callout[1][scale=0.70711]{
2259 \begin{tikzpicture}[#1]
2260 \fill[maincolor] (0.4,0) -- (0.5,0) -- (0.75,-0.15) -- (0.75,0) --
2261 (0.9,0) arc(-90:0:0.1) -- (1,0.65) arc(0:90:0.1) -- (0.1,0.75) arc
2262 (90:180:0.1) -- (0,0.1) arc(-180:-90:0.1) -- cycle;
2263 \foreach \x in {0.35,0.7} {
2264 \begin{scope}[shift={(\x,0.425)},scale=0.25]
2265 \fill[white] (0,0) circle[radius=0.5];
2266 \fill[white] (0.5,0) arc(0:-90:1) --
2267 (-0.5,-0.725) arc(-90:0:0.725) -- cycle;
2268 \end{scope}
2269 }
2270 \end{tikzpicture}
2271 }
2272
2273 \newcommand\uantwerpenicon[1][scale=1]{
2274 \includegraphics[#1]{\iconfile}

```

```

2275 }
2276
2277 \newcommand\heading[1]{\par{\usebeamercolor{\maybeinverse heading}\color{fg}{\small\bfseries #
2278 \newcommand\subheading[1]{\par{
2279     \usebeamercolor{\maybeinverse
2280     subheading}\color{fg}{\footnotesize\it\bfseries #1~}}}
2281
2282 \mode
2283 <all>
2284 </bmrinner>

```

## 6.2.5 Beamer outer theme

```

2285 (*bmrouter)
2286 % Copyright 2021 by Walter Daems <walter.daems@uantwerpen.be>
2287 %
2288 % This file may be distributed and/or modified
2289 %
2290 % 1. under the LaTeX Project Public License and/or
2291 % 2. under the GNU Public License.
2292 %
2293 % See the file doc/licenses/LICENSE for more details.
2294
2295 \mode<presentation>
2296
2297 \newcommand*\getlength[1]{\strip@pt#1/28.45274}
2298 \newcommand\pw{\getlength{\paperwidth}}%
2299 \newcommand\ph{\getlength{\paperheight}}%
2300
2301 \newif\if@rhtext
2302 \@rhtextfalse
2303 \newif\if@lhtext
2304 \@lhtextfalse
2305 \newif\if@rqtext
2306 \@rqtextfalse
2307 \newif\if@lqtext
2308 \@lqtextfalse
2309 \newif\if@bhtext
2310 \@bhtextfalse
2311 \gdef\maybeinverse{}
2312
2313 \define@key{beamerframe}{noround}[true]{
2314     \expandafter\csname @noround#1\endcsname
2315 }
2316
2317 \define@key{beamerframe}{normal}[true]{
2318     \setbeamertemplate{title page}[main]
2319     \setbeamertemplate{section page}[main]%
2320     \setbeamertemplate{subsection page}[main]%
2321     \setbeamertemplate{background canvas}[normal]
2322     \gdef\maybeinverse{}
2323 }
2324
2325 \mode<handout|trans>

```



```

2326
2327 \define@key{beamerframe}{negativefill}[true]{
2328 }
2329
2330 \define@key{beamerframe}{negative}[true]{
2331 }
2332
2333 \mode
2334 <all>
2335
2336 \mode<beamer|second>
2337
2338 \define@key{beamerframe}{negativefill}[true]{
2339   \gdef\maybeinverse{inverse }%
2340   \usebeamercolor[fg]{\maybeinverse normal text}%
2341   \setbeamertemplate{title page}[negativefill]
2342   \setbeamertemplate{section page}[negative]%
2343   \setbeamertemplate{subsection page}[negative]%
2344   \setbeamertemplate{background canvas}[negativefill]%
2345 }
2346
2347 \define@key{beamerframe}{negative}[true]{
2348   \gdef\maybeinverse{inverse }%
2349   \usebeamercolor[fg]{\maybeinverse normal text}%
2350   \setbeamertemplate{title page}[negative]
2351   \setbeamertemplate{section page}[negative]%
2352   \setbeamertemplate{subsection page}[negative]%
2353   \setbeamertemplate{background canvas}[negative]%
2354 }
2355
2356 \mode
2357 <all>
2358
2359 \define@key{beamerframe}{graphicfill}[{\includegraphics[scale=0.1,min
2360   width=\paperwidth,min height=\paperheight]{Images/uantwerpen-01.jpg}}]{
2361   \gdef\maybeinverse{inverse }%
2362   \usebeamercolor[fg]{\maybeinverse normal text}%
2363   \setbeamertemplate{background canvas}[graphicfill]{#1}
2364 }
2365
2366 \define@key{beamerframe}{graphic}[{\includegraphics[scale=0.1,min
2367   width=\textwidth,min height=\textheight]{Images/uantwerpen-02.jpg}}]{
2368   \gdef\maybeinverse{inverse }%
2369   \usebeamercolor[fg]{\maybeinverse normal text}%
2370   \setbeamertemplate{background canvas}[graphic]{#1}
2371 }
2372
2373 \define@key{beamerframe}{lhgraphic}
2374   [{\includegraphics[scale=0.1,min width=0.5\paperwidth,min
2375     height=\textheight]{Images/uantwerpen-03.jpg}}]{
2376   \gdef\maybeinverse{}%
2377   \setbeamertemplate{background canvas}[lhgraphic]{#1}
2378   \@rhtexttrue
2379 }

```

```

2380
2381 \define@key{beamerframe}{lqgraphic}
2382   [{\includegraphics[scale=0.1,min width=0.5\paperwidth,min
2383     height=\textheight]{Images/uantwerpen-04.jpg}}]{
2384   \gdef\maybeinverse{}%
2385   \setbeamertemplate{background canvas}[lqgraphic]{#1}
2386   \@rqttexttrue
2387 }
2388
2389 \define@key{beamerframe}{rhgraphic}
2390   [{\includegraphics[scale=0.1,min width=0.5\paperwidth,min
2391     height=\textheight]{Images/uantwerpen-05.jpg}}]{
2392   \gdef\maybeinverse{}%
2393   \setbeamertemplate{background canvas}[rhgraphic]{#1}
2394   \@lhtexttrue
2395 }
2396
2397 \define@key{beamerframe}{rqgraphic}
2398   [{\includegraphics[scale=0.5,min width=0.5\paperwidth,min
2399     height=\textheight]{Images/uantwerpen-05.jpg}}]{
2400   \gdef\maybeinverse{}%
2401   \setbeamertemplate{background canvas}[rqgraphic]{#1}
2402   \@lqttexttrue
2403 }
2404
2405 \define@key{beamerframe}{thgraphic}
2406   [{\includegraphics[scale=0.5,min width=\paperwidth,min
2407     height=0.5\textheight]{Images/uantwerpen-06.jpg}}]{
2408   \gdef\maybeinverse{}%
2409   \setbeamertemplate{background canvas}[thgraphic]{#1}
2410   \@bhtexttrue
2411 }
2412
2413 \define@key{beamerframe}{bhgraphic}
2414   [{\includegraphics[scale=0.5,min width=\paperwidth,min
2415     height=0.5\textheight]{Images/uantwerpen-07.jpg}}]{
2416   \gdef\maybeinverse{}%
2417   \setbeamertemplate{background canvas}[bhgraphic]{#1}
2418 }
2419
2420 \BeforeBeginEnvironment{frame}{%
2421   \gdef\maybeinverse{}%
2422   \setbeamertemplate{title page}[main]%
2423   \setbeamertemplate{section page}[main]%
2424   \setbeamertemplate{subsection page}[main]%
2425   \setbeamertemplate{background canvas}[normal]%
2426   \usebeamercolor[fg]{normal text}%
2427 }
2428
2429 % The following does not work as \end{frame} is never executed by
2430 % beamer!
2431 % \AtEndEnvironment{frame}{\gdef\maybeinverse{}}
2432
2433 \NewEnviron{rhframe}[3] []{%

```

```

2434 \begin{frame}[#1]{#2}{#3}
2435 \begin{minipage}[t]{0.525\textwidth}
2436 ~
2437 \end{minipage}
2438 \begin{minipage}[t]{0.465\textwidth}
2439 \BODY
2440 \end{minipage}
2441 \end{frame}
2442 }
2443
2444 \NewEnviron{r3qframe}[3][\%
2445 \begin{frame}[#1]{#2}{#3}
2446 \begin{minipage}[t]{0.23\textwidth}
2447 ~
2448 \end{minipage}
2449 \begin{minipage}[t]{0.76\textwidth}
2450 \BODY
2451 \end{minipage}
2452 \end{frame}
2453 }
2454
2455 \NewEnviron{lhframe}[3][\%
2456 \begin{frame}[#1]{#2}{#3}
2457 \begin{minipage}[t]{0.465\textwidth}
2458 \BODY
2459 \end{minipage}
2460 \begin{minipage}[t]{0.525\textwidth}
2461 ~
2462 \end{minipage}
2463 \end{frame}
2464 }
2465
2466 \NewEnviron{l3qframe}[3][\%
2467 \begin{frame}[#1]{#2}{#3}
2468 \begin{minipage}[t]{0.77\textwidth}
2469 \BODY
2470 \end{minipage}
2471 \begin{minipage}[t]{0.22\textwidth}
2472 ~
2473 \end{minipage}
2474 \end{frame}
2475 }
2476
2477 \NewEnviron{bhframe}[3][\%
2478 \begin{frame}[#1]{#2}{#3}
2479 \BODY
2480 \end{frame}
2481 }
2482
2483 \NewEnviron{thframe}[3][\%
2484 \begin{frame}[#1]{#2}{#3}
2485 \BODY
2486 \end{frame}
2487 }

```

```

2488
2489 %%%%%%%%%%%
2490 % Order:
2491 % 1. option is executed
2492 % 2. frametitle is typeset
2493 % 3. canvas is typeset
2494 % 4. frame is typeset
2495 %%%%%%%%%%%
2496
2497 \def\ps@uantwerpen@titlepage{%
2498   \setbeamercolor{title in title page}{parent=palette primary}
2499   \setbeamertemplate{footline}[empty]
2500   \@nameuse{ps@uantwerpen}
2501 }
2502
2503 \defbeamertemplate*{background canvas}{negativefill}[1]
2504 {%
2505   \gdef\appropriatelogo{\logomonowhite}%
2506   \gdef\appropriateslidenumber{\usebeamercolor{pageno in head/foot}%
2507     \insertframenumber/\inserttotalframenumber}%
2508   \color{maincolor}\vrule width\paperwidth height\paperheight
2509 }
2510
2511 \defbeamertemplate*{background canvas}{negative}[1]
2512 {%
2513   \gdef\appropriatelogo{\logopos}%
2514   \gdef\appropriateslidenumber{}%
2515   \begin{tikzpicture}
2516     \clip (0,0) rectangle (\pw,\ph);
2517     \uantwerpenleftshape[fill=maincolor]{(0.8,0.8)}{(\pw-0.8,\ph-0.8)}
2518   \end{tikzpicture}
2519 }
2520
2521 \defbeamertemplate*{background canvas}{graphicfill}[1]
2522 {%
2523   \gdef\appropriatelogo{\logoneg}%
2524   \gdef\appropriateslidenumber{}%
2525   \begin{tikzpicture}
2526     \clip (0,0) rectangle (\pw,\ph);
2527     \node[align=center] at (0.5*\pw,0.5*\ph) {\#1};
2528   \end{tikzpicture}%
2529 }
2530
2531 \defbeamertemplate*{background canvas}{graphic}[1]
2532 {%
2533   \gdef\appropriatelogo{\logopos}%
2534   \gdef\appropriateslidenumber{}%
2535   \begin{tikzpicture}
2536     \clip (0,0) rectangle (\pw,\ph);
2537     \begin{scope}
2538       \uantwerpenleftshape[clip]{(0.8,0.8)}{(\pw-0.8,\ph-0.8)}
2539       \node[align=center] at (0.5*\pw,0.5*\ph) {\#1};
2540     \end{scope}
2541   \end{tikzpicture}%

```

```

2542 }
2543
2544 \defbeamertemplate*{background canvas}{lhgraphic}[1]
2545 {%
2546   \gdef\maybeinverse{}%
2547   \gdef\appropriatelogo{\logopos}%
2548   \gdef\appropriateslidenumber{\usebeamercolor{pageno in head/foot}}%
2549   \insertframenumber/\inserttotalframenumber}%
2550   \pgfmathsetmacro\dx{0.5*\pw-1.2}%
2551   \pgfmathsetmacro\dy{\ph-1.6}%
2552   \begin{tikzpicture}
2553     \clip (0,0) rectangle (\pw,\ph);
2554     \begin{scope}
2555       \untwerpenleftshape[clip]{(0.8,0.8)}{(0.8+\dx,0.8+\dy)}
2556       \node[align=center] at (0.8+0.5*\dx,0.8+0.5*\dy) {#1};
2557     \end{scope}
2558   \end{tikzpicture}
2559   \@tempswatrue
2560 }
2561
2562 \defbeamertemplate*{background canvas}{lqgraphic}[1]
2563 {%
2564   \gdef\maybeinverse{}%
2565   \gdef\appropriatelogo{\logopos}%
2566   \gdef\appropriateslidenumber{\usebeamercolor{pageno in head/foot}}%
2567   \insertframenumber/\inserttotalframenumber}%
2568   \pgfmathsetmacro\dx{0.25*\pw-1.2}%
2569   \pgfmathsetmacro\dy{\ph-1.6}%
2570   \begin{tikzpicture}
2571     \clip (0,0) rectangle (\pw,\ph);
2572     \begin{scope}
2573       \untwerpenleftshape[clip]{(0.8,0.8)}{(0.8+\dx,0.8+\dy)}
2574       \node[align=center] at (0.8+0.5*\dx,0.8+0.5*\dy)
2575       {#1};
2576     \end{scope}
2577   \end{tikzpicture}
2578   \@tempswatrue
2579 }
2580
2581 \defbeamertemplate*{background canvas}{rhgraphic}[1]
2582 {%
2583   \gdef\maybeinverse{}%
2584   \gdef\appropriatelogo{\logopos}%
2585   \gdef\appropriateslidenumber{\usebeamercolor{pageno in head/foot}}%
2586   \insertframenumber/\inserttotalframenumber}%
2587   \pgfmathsetmacro\dx{0.5*\pw-1.2}%
2588   \pgfmathsetmacro\dy{\ph-1.6}%
2589   \begin{tikzpicture}
2590     \clip (0,0) rectangle (\pw,\ph);
2591     \begin{scope}[shift={(0.5*\pw,0)}]
2592       \untwerpenrightshape[clip]{(0.4,0.8)}{(0.4+\dx,0.8+\dy)}
2593       \node[align=center] at (0.8+0.5*\dx,0.8+0.5*\dy) {#1};
2594     \end{scope}
2595   \end{tikzpicture}

```

```

2596 \@tempwattrue
2597 }
2598
2599 \defbeamertemplate*{background canvas}{rqgraphic}[1]
2600 {%
2601 \gdef\maybeinverse{}%
2602 \gdef\appropriatelogo{\logopos}%
2603 \gdef\appropriateslidenumber{\usebeamercolor{pageno in head/foot}%
2604 \insertframenumber/\inserttotalframenumber}%
2605 \pgfmathsetmacro\dx{0.25*\pw-1.2}%
2606 \pgfmathsetmacro\dy{\ph-1.6}%
2607 \begin{tikzpicture}
2608 \clip (0,0) rectangle (\pw,\ph);
2609 \begin{scope}[shift={(0.75*\pw,0)}]
2610 \untwerpenrightshape[clip] {(0.4,0.8)}{(0.4+\dx,0.8+\dy)}
2611 \node[align=center] at (0.8+0.5*\dx,0.8+0.5*\dy) {#1};
2612 \end{scope}
2613 \end{tikzpicture}
2614 \@tempwattrue
2615 }
2616
2617 \defbeamertemplate*{background canvas}{thgraphic}[1]
2618 {%
2619 \gdef\maybeinverse{}%
2620 \gdef\appropriatelogo{\logopos}%
2621 \gdef\appropriateslidenumber{\usebeamercolor{pageno in head/foot}%
2622 \insertframenumber/\inserttotalframenumber}%
2623 \pgfmathsetmacro\dx{\pw-1.6}%
2624 \pgfmathsetmacro\dy{0.5*\ph-0.8}%
2625 \begin{tikzpicture}
2626 \clip (0,0) rectangle (\pw,\ph);
2627 \begin{scope}[shift={(0,0.5*\ph)}]
2628 \untwerpenleftshape[clip] {(0.8,0)}{(0.8+\dx,\dy)}
2629 \node[align=center] at (0.8+0.5*\dx,0.5*\dy) {#1};
2630 \end{scope}
2631 \end{tikzpicture}
2632 \@tempwattrue
2633 }
2634
2635 \defbeamertemplate*{background canvas}{bhgraphic}[1]
2636 {%
2637 \gdef\maybeinverse{}%
2638 \gdef\appropriatelogo{\logopos}%
2639 \gdef\appropriateslidenumber{\usebeamercolor{pageno in head/foot}%
2640 \insertframenumber/\inserttotalframenumber}%
2641 \pgfmathsetmacro\dx{\pw-1.6}%
2642 \pgfmathsetmacro\dy{0.5*\ph-0.8}%
2643 \begin{tikzpicture}
2644 \clip (0,0) rectangle (\pw,\ph);
2645 \begin{scope}[shift={(0,0.8)}]
2646 \untwerpenleftshape[clip] {(0.8,0)}{(0.8+\dx,\dy)}
2647 \node[align=center] at (0.8+0.5*\dx,0.5*\dy) {#1};
2648 \end{scope}
2649 \end{tikzpicture}

```

```

2650 \@tempwtrue
2651 }
2652
2653
2654 \defbeamertemplate*{background canvas}{normal}
2655 {%
2656 \gdef\maybeinverse{}%
2657 \gdef\appropriatelogo{\logopos}%
2658 \gdef\appropriateslidenumber{\usebeamercolor{pageno in
2659 head/foot}\insertframenumber/\inserttotalframenumber}%
2660 }
2661
2662
2663 \defbeamertemplate*{title page}{main}[1] []
2664 {%
2665 \thispagestyle{uantwerpen@titlepage}%
2666 \begin{tikzpicture}
2667 \clip (0,0) rectangle (\textwidth,\paperheight-0.075cm);
2668 \node[anchor=center] at (0.5*\textwidth,0.75*\ph)
2669 {\includegraphics[height=.9\logounitheight]{\logopos}};
2670 \node[
2671 text width=0.98\textwidth,
2672 text=basecolor,
2673 align=center] at (0.5*\textwidth,0.5*\ph) {
2674 \begin{beamercolorbox}[wd=\textwidth,center]{title in title page}
2675 \LARGE\bfseries\inserttitle\\[1ex]
2676 \usebeamercolor{fg}{subtitle in title page}
2677 \color{fg}\large\bfseries\insertsubtitle
2678 \end{beamercolorbox}
2679 };
2680 \node[
2681 text width=0.98\textwidth,
2682 color=basecolor,
2683 align=center] at (0.5*\textwidth,0.25*\ph) {
2684 \begin{beamercolorbox}[wd=\textwidth,center]{author in title page}
2685 \large\bfseries\insertauthor
2686 \end{beamercolorbox}
2687 };
2688 \node[
2689 text width=0.98\textwidth,
2690 color=basecolor,
2691 align=center] at (0.5*\textwidth,0.15*\ph) {
2692 \begin{beamercolorbox}[wd=\textwidth,center]{date in title page}
2693 \normalsize\bfseries\insertdate
2694 \end{beamercolorbox}
2695 };
2696 \end{tikzpicture}
2697 }
2698
2699 \defbeamertemplate*{title page}{negative}[1] []
2700 {
2701 \begin{tikzpicture}
2702 \clip (0,0) rectangle (\textwidth,\paperheight-0.075cm);
2703 \node[

```

```

2704 text width=0.98\textwidth,
2705 align=center] at (0.5*\textwidth,0.5*\ph) {
2706   \begin{beamercolorbox}[wd=\textwidth,center]{inverse title in title page}
2707     \LARGE\bfseries\inserttitle\\[1ex]
2708     \usebeamercolor[fg]{\maybeinverse subtitle in title page}
2709     \color{fg}\large\bfseries\insertsubtitle
2710   \end{beamercolorbox}
2711 };
2712 \node[
2713 text width=0.98\textwidth,
2714 align=center,] at (0.5*\textwidth,0.25*\ph) {
2715   \begin{beamercolorbox}[wd=\textwidth,center]{inverse author in title page}
2716     \large\bfseries\insertauthor
2717   \end{beamercolorbox}
2718 };
2719 \node[
2720 text width=0.98\textwidth,
2721 color=basecolor,
2722 align=center] at (0.5*\textwidth,0.15*\ph) {
2723   \begin{beamercolorbox}[wd=\textwidth,center]{inverse date in title page}
2724     \normalsize\bfseries\insertdate
2725   \end{beamercolorbox}
2726 };
2727 \end{tikzpicture}
2728 }
2729
2730 \defbeamertemplate*{title page}{negativefill}[1] []
2731 {
2732   \thispagestyle{uantwerpen@titlepage}
2733   \begin{tikzpicture}
2734     \clip (0,0) rectangle (\textwidth,\paperheight-0.075cm);
2735     \node[anchor=center] at (0.5*\textwidth,0.75*\ph)
2736       {\includegraphics[height=.9\logounitheight]{\logomonowhite}};
2737     \node[
2738 draw,rectangle,
2739 text width=0.98\textwidth,
2740 color=maincolor,
2741 align=center] at (0.5*\textwidth,0.5*\ph) {
2742       \begin{beamercolorbox}[wd=\textwidth,center]{inverse title in title page}
2743         \LARGE\bfseries\inserttitle\\[1ex]
2744         \usebeamercolor[fg]{inverse subtitle in title page}
2745         \color{fg}\large\bfseries\insertsubtitle
2746       \end{beamercolorbox}
2747     };
2748     \node[
2749 text width=0.98\textwidth,
2750 color=maincolor,
2751 align=center] at (0.5*\textwidth,0.25*\ph) {
2752       \begin{beamercolorbox}[wd=\textwidth,center]{inverse author in title page}
2753         \large\bfseries\insertauthor
2754       \end{beamercolorbox}
2755     };
2756     \node[
2757 text width=0.98\textwidth,

```



```

2758     color=basecolor,
2759     align=center] at (0.5*\textwidth,0.15*\ph) {
2760         \begin{beamercolorbox}[wd=\textwidth,center]{inverse date in title page}
2761             \normalsize\bfseries\insertdate
2762         \end{beamercolorbox}
2763     };
2764 \end{tikzpicture}
2765 }
2766
2767 \defbeamertemplate*{section page}{main}[1] []
2768 {%
2769     \begin{tikzpicture}
2770         \clip (0,0) rectangle (\textwidth,\paperheight-0.075cm);
2771         \node[
2772             text width=0.98\textwidth,
2773             text=basecolor,
2774             align=center] at (0.5*\textwidth,0.55*\ph) {
2775             \begin{beamercolorbox}[wd=\textwidth,center]{section title}
2776                 \Large\bfseries\insertsectionnumber.\~\insertsection
2777             \end{beamercolorbox}
2778         };
2779     \end{tikzpicture}
2780 }
2781
2782 \defbeamertemplate*{subsection page}{main}[1] []
2783 {%
2784     \begin{tikzpicture}
2785         \clip (0,0) rectangle (\textwidth,\paperheight-0.075cm);
2786         \node[
2787             text width=0.98\textwidth,
2788             text=basecolor,
2789             align=center] at (0.5*\textwidth,0.55*\ph) {
2790             \begin{beamercolorbox}[wd=\textwidth,center]{section title}
2791                 \Large\bfseries\insertsectionnumber.\~\insertsection
2792             \end{beamercolorbox}
2793         };
2794         \node[
2795             text width=0.98\textwidth,
2796             text=basecolor,
2797             align=center] at (0.5*\textwidth,0.45*\ph) {
2798             \begin{beamercolorbox}[wd=\textwidth,center]{subsection title}
2799                 \large\bfseries\insertsubsection
2800             \end{beamercolorbox}
2801         };
2802     \end{tikzpicture}
2803 }
2804
2805 \defbeamertemplate*{section page}{negative}[1] []
2806 {
2807     \begin{tikzpicture}
2808         \clip (0,0) rectangle (\textwidth,\paperheight-0.075cm);
2809         \node[
2810             text width=0.98\textwidth,
2811             text=basecolor,

```

```

2812     align=center] at (0.5*\textwidth,0.55*\ph) {
2813         \begin{beamercolorbox}[wd=\textwidth,center]{inverse section title}
2814             \Large\bfseries\insertsectionnumber.\sim\insertsection
2815         \end{beamercolorbox}
2816     };
2817 \end{tikzpicture}
2818 }
2819
2820 \defbeamertemplate*{subsection page}{negative}[1] []
2821 {
2822     \begin{tikzpicture}
2823         \clip (0,0) rectangle (\textwidth,\paperheight-0.075cm);
2824         \node[
2825             text width=0.98\textwidth,
2826             text=basecolor,
2827             align=center] at (0.5*\textwidth,0.55*\ph) {
2828             \begin{beamercolorbox}[wd=\textwidth,center]{inverse section title}
2829                 \Large\bfseries\insertsectionnumber.\sim\insertsection
2830             \end{beamercolorbox}
2831         };
2832         \node[
2833             text width=0.98\textwidth,
2834             text=basecolor,
2835             align=center] at (0.5*\textwidth,0.45*\ph) {
2836             \begin{beamercolorbox}[wd=\textwidth,center]{inverse subsection title}
2837                 \large\bfseries\insertsubsection
2838             \end{beamercolorbox}
2839         };
2840     \end{tikzpicture}
2841 }
2842
2843 \defbeamertemplate*{footline}{empty}
2844 {
2845 }
2846
2847 \defbeamertemplate*{footline}{normal}
2848 {%
2849     \leavevmode%
2850     \hbox{\begin{beamercolorbox}
2851         [wd=.5\paperwidth,ht=0.55cm,dp=0.25cm,left,leftskip=.8cm
2852         plus1filll]{author in head/foot}%
2853         \includegraphics[height=0.35\logounitheight]{\appropriatelogo}
2854         \hskip0pt plus 1filll ~
2855     \end{beamercolorbox}%
2856     \begin{beamercolorbox}[wd=.5\paperwidth,ht=0.55cm,dp=0.25cm,
2857         right,rightskip=.8cm plus1filll]{\maybeinverse pageno in head/foot}%
2858         \usebeamerfont{pageno in head/foot}\sim\hskip0pt plus 1filll
2859         \appropriateslidenumber
2860     \end{beamercolorbox}}%
2861     \vskip0pt%
2862 }
2863
2864 \defbeamertemplate*{frametitle}{empty}
2865 {

```

```

2866 }
2867
2868 \defbeamertemplate*{frametitle}{normal}
2869 {%
2870   \vskip0.75cm%
2871   \if@rhtext%
2872     \@tempdima=0.5\textwidth%
2873     \@tempdimb=0.5\textwidth%
2874     \advance\@tempdima by0.5\beamer@leftmargin%
2875     \advance\@tempdimb by-0.5\beamer@leftmargin%
2876   \else%
2877     \if@rqtext%
2878       \@tempdima=0.23\textwidth%
2879       \@tempdimb=0.77\textwidth%
2880     \else%
2881       \if@lhtext%
2882         \@tempdima=0em%
2883         \@tempdimb=0.5\textwidth%
2884         \advance\@tempdimb by-0.5\beamer@leftmargin%
2885       \else%
2886         \if@lqttext%
2887           \@tempdima=0em%
2888           \@tempdimb=0.77\textwidth%
2889         \else%
2890           \if@bhtext%
2891             \@tempdima=0em%
2892             \@tempdimb=\textwidth%
2893             \vskip0.5\textheight%
2894           \else%
2895             \@tempdima=0em%
2896             \@tempdimb=\textwidth%
2897           \fi%
2898           \fi%
2899           \fi%
2900           \fi%
2901           \fi%
2902         \hskip\@tempdima%
2903         \begin{beamercolorbox}[wd=\@tempdimb]{\maybeinverse frametitle}%
2904           \usebeamerfont{frametitle}\insertframetitle\[\[0.5ex]%
2905           \ifx\insertframesubtitle\@empty%
2906             {\usebeamerfont{framesubtitle}%
2907               \usebeamercolor[fg]{\maybeinverse framesubtitle}~\strut\par}%
2908             \vskip-1ex%
2909           \else%
2910             {\usebeamerfont{framesubtitle}%
2911               \usebeamercolor[fg]{\maybeinverse framesubtitle}%
2912               \insertframesubtitle\strut\par}%
2913             \fi%
2914           \if@tempswa\else\vskip-.3cm\fi set inside beamercolorbox... evil here...
2915         \end{beamercolorbox}%
2916   }
2917
2918 \newdimen\xlleft
2919 \newdimen\ylleft

```

```

2920 \newdimen\xupright
2921 \newdimen\yupright
2922 \newdimen\xcurrent
2923 \newdimen\ycurrent
2924 \newcommand\extractlloleft[1]{\path (#1);\pgfgetlastxy{\xlloleft}{\ylloleft};}
2925 \newcommand\extractupright[1]{\path (#1);\pgfgetlastxy{\xupright}{\yupright};}
2926 \newcommand\extractcurrent[1]{\path (#1);\pgfgetlastxy{\xcurrent}{\ycurrent};}
2927
2928 \DeclareRobustCommand\place{\@ifnextchar[{\@place}{\@place[align=left] }}
2929 \def\@place[#1] at (#2,#3)#4{
2930   \begin{tikzpicture}[overlay,remember picture]
2931     \extractlloleft{$(current page.south west)$}
2932     \extractupright{$(current page.north east)$}
2933     \node[#1] at
2934       ({\xlloleft*(1-#2)+\xupright*#2},{\ylloleft*(1-#3)+\yupright*#3}) {#4};
2935   \end{tikzpicture}
2936 }
2937
2938 \mode
2939 <all>
2940 </bmrouter>

```

## Change History

v1.0	General: Consolidated uacoursetext class and uamasterthesis class . . . . . 1 Added option qr . . . . . 29 Added option titlepagenoartwork . . . . . 29 Added option titlepagetableonly 29	Removed documentation . . . . . 63
v1.1	\diploma: Fixed typo on programme's name (e-umlaut) 42 General: Small bugfixes and 'filled' option . . . . . 1 Added option user documentation . . . . . 7 Made raggedright conditional on option 'filled', because it can't be undone . . . . . 50	v1.6 \diploma: Added diploma codes . 42 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 . . . . . 30 Increased headheight to please Fancyhdr . . . . . 50	v1.7 \maketitle: Embedded babel translations of keywords into title page . . . . . 54, 57 General: Added babel translations of elements of master's thesis title page . . . . . 1 Added babel tags of elements of master's thesis title page . . . . 32
v1.3	\makefinalpage: Changed eso-pic for tikz . . . . . 57, 58 \maketitle: Changed eso-pic for tikz . . . . . 57 General: Minor bugfixes, abandonment of a few packages, font freedom . . . . . 1 Abandoned use of cmbright - no more font dictatorship for theses and courses . . . . . 30 Added inclusion of background package . . . . . 31 Changed eso-pic for tikz and background . . . . . 54	v1.8 \makefinalpage: Inserted blank one but last page . . . . . 57 \maketitle: Allowed for empty senderrole . . . . . 63 \signature: Added signature . . . 47 General: Corrected minor typographic mistakes, added signature and solved problems with shell escape . . . . . 1 Added missing packages ifmtarg and shellesc . . . . . 31 Allowed for empty senderrole . 64
v1.4	General: Implemented uantwerpenletter class . . . . . 1 Implemented letter class . . . . 29	v1.81 General: Bugfixes for release v1.8 . 1 Apparently shellesc is still missing from quite a number of installations, therefore, conditional loading . . . . . 31
v1.5	\maketitle: Implemented new footer . . . . . 63 General: Replaced bottom arcs in footer of letter by official PDF versions . . . . . 1	v1.9 General: Integrated uantwerpenexam class into package . . . . . 1 Added ASoE (Antwerp School of Education) . . . . . 8 Added etoolbox for convenience reasons . . . . . 31 Implemented uantwerpenexam class . . . . . 29
		v2.0 \makefinalpage: Implemented final page . . . . . 62 \maketitle: Implemented title page . . . . . 59

General: Implemented	2019/03/27	64
uantwerpenphdthesis class into	Added boxes to fill out name	
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Implemented	Introduced bachelor level codes	
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Removed package ifmtarg		
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Updated diploma code	\diploma: Added code for Master	
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PhD degrees	General: Added option for	
	diploma without specialization	
v2.1	for EM	1
\engdut: Increased intercolumn	v2.5	
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\extrainfo: Changed default to	depot number optional	44
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\maketitle: Corrected information	Corrected for 'one page too	
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\subtitle: Added subtitle to phd	\maketitle: Corrected formatting	
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Ensured that subtitle is really	depot number	59
optional by adding default	\programme: Shortened	
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General: Improved visibility of	house style of UAntwerpen and	
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Added white chapter number	Changed REC in RE, TEW in	
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\diploma: Added diploma level	v3.1	
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General: Reworked masterthesis	General: Small bugfixes (e.g.,	
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