

The `uantwerpendocs` classes^{*†}

Walter Daems (walter.daems@uantwerpen.be)

2021/07/11

1 Introduction

This package implements the house style of Universiteit Antwerpen (version 2021) for letters, course texts, master/PhD theses, reports and slides (beamer). It also implements a class to format exams. Using these class files will make it easy for you to make and keep your course texts and theses compliant to this version and future versions of the UAntwerpen house style.

If you think (1) there's an error in compliancy w.r.t. the house style, (2) there's a feature missing in this class 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` classes¹ are an extension of the standard `LATEX` `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.

The `report` class is derived from the standard `LATEX` `report` class. It is intended for writing generic (e.g. research or educational) reports. The `letter` class is derived from the standard `LATEX` `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 `LATEX` `article` class.

^{*}This document corresponds to `uantwerpendocs` 4.0, dated 2021/07/11.

[†]Thanks to Paul Levrie for testing and proofreading.

¹For readability the class names have been abbreviated by omitting the `uantwerpen` prefix

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 5.1.

Using this package, requires the following packages:

- the `adjustbox` package
- the `babel` package
- the `background` package
- the `color` package
- the `environ` package
- the `eso-pic` package
- the `etooblox` package
- the `expl3` package
- the `fancyhdr` package
- the `geometry` package
- the `graphicx` package
- the `iftex` package
- the `ifthen` package
- the `tikz` package
- the `ulem` package
- the `xparse` package

So make sure these packages are available to your \LaTeX compiler.

You will notice that as of version 4.0 `expl3` and `xparse` are part of the game. Indeed, the `uantwpendocs` package will be slowly refactored to $\text{\LaTeX}3$ to prepare for a package that is easier to maintain. However, the $\text{\LaTeX}3$ constructs are never exposed to the user of the classes. So: don't worry about it!

3 A note on fonts

The house style of the University of Antwerp recommends using

- Prenton RP Pro for the logos and sublogos; all the logoware is included in this package, so nothing to worry about.
- ITC Officina Sans for posters, titlepages, cards a.s.o.
This font is not included in this package and is not a part of the \LaTeX standard fonts. However, if you have a valid license, for this font, I can help you to set it up, such that you can typeset proper title pages for course texts, PhD theses and the like. Just send me an e-mail.
- Calibri for office-like documents. Just load the `\fontspec` package and issue a `\setmainfont{Calibri}` and you're all set.

Adhering to these fonts is recommended, but not enforced. Personally, I always use a Palatine serif font for my courses. I did not find any better (free) font yet. My second favorite is still the original computer modern font by Donald E. Knuth. You are reading it right now.

4 Portability

These class files should be ready to use with all common modern \LaTeX compilers (PDF \LaTeX , X \LaTeX , Lua \LaTeX , ...) from the major \TeX -distributions (TeX_{live}, MikTeX). However, using an old \LaTeX + dvips setup is likely to get you into font problems. Advice: ditch the route via dvi. If you experience other problems, please inform the author.

5 Usage

5.1 Basic Usage

Use the templates provided below. Remember to \LaTeX your source file twice.

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

5.1.1 `uantwerpencoursetext` class

Use the following harness for your \LaTeX course text:

```
\documentclass[ti,a4paper]{uantwerpencoursetext}

\usepackage{<include any packages you require 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>}
\degree{<official degree title>}
\course{<course code>}{<name of the course>}

\academicyear{<XXXX-YYYY>}

\begin{document}

    \maketitle

    % put your LaTeX code here

    \finalpage

\end{document}

```

As of version 4.0:

- the faculty is specified as an option to the `\documentclass` construct. You can find the available options in section 5.2.
- you are responsible yourself to provide the correct degree description! Maintaining the a correct list of UAntwerpen bachelor and master programs with all their specializations is beyond my ambition.

5.1.2 uantwerpenbamathesis class

Use the following harness for your L^AT_EX bachelor or master's thesis:

```

\documentclass[ti,a4paper]{uantwerpenbamathesis}

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

\title{<put your title here>}
\author{<put your name here>}
\supervisor{<put supervisor's name(s) here>}{<affiliation goes here>}
\supervisor{<put supervisor's name(s) here>}{<affiliation goes here>}
\supervisor{<put supervisor's name(s) here>}{<affiliation goes here>}
\supervisor{<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 options are listed in a table on page 8.

5.1.3 uantwerpenletter class

Use the following harness for your L^AT_EX letter:

```

\documentclass[a4paper,ti]{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>}
\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 options are listed in a table on page 8. You may use lists in the `\carboncopy` and `\enclosed` commands. The spacing will be compact.

5.1.4 uantwerpenphdthesis class

```
\documentclass[ti,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>}
```

```
\affiliation{<put your affiliation here>}
```

```
\address{<put your contact details here>}
```

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

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

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

```
\jurymember{<put member's name here>}{<affiliation goes here>}
```

```
\jurymember{<put member's name here>}{<affiliation goes here>}
```

```
\jurymember{<put member's name here>}{<affiliation goes here>}
```

```
\degree{<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}
```

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

5.1.5 uantwerpenreport class

```
\documentclass[ti,10pt,twoside,openright,filled]{uantwerpenreport}

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>}
\affiliation{<put your affiliation here>}
\address{<put your contact details here>}

\titlepageimage{<set file name of title page image here>}

\begin{document}

\maketitle
\frontmatter
\tableofcontents
\mainmatter

% write your PhD text here

\appendix

% write appendix material here

\makefinalpage

\end{document}
```

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

5.1.6 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}

```

5.2 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).

xx(x) [letter / coursetext / bamathesis / phdthesis / report / beamertheme]

Option	Faculty
be	Faculty of Business and Economics Faculteit Bedrijfswetenschappen en Economie
fb	Faculty of Pharmaceutical, Biomedical and Veterinary Sciences Faculteit Farmaceutische, Biomedische en Diergeneeskundige Wetenschappen
ggw	Faculty of Medicine and Health Sciences Faculteit Geneeskunde en Gezondheidswetenschappen
lw	Faculty of Arts Faculteit Letteren en Wijsbegeerte
ow	Faculty of Design Sciences Faculteit Ontwerpwetenschappen
re	Faculty of Law Faculteit Rechten
sw	Faculty of Social Sciences Faculteit Sociale Wetenschappen
ti	Faculty of Applied Engineering Faculteit Toegepaste Ingenieurswetenschappen
we	Faculty of Science Faculteit Wetenschappen
iob	Institute of Development Policy Instituut voor Ontwikkelingsbeleid- en beheer

You can specify the correct faculty using the following options: This will activate the correct color scheme and logoset.

copyright [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;

examiner [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.

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

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): **a4paper**
- 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: **twoside**, **openright** and (optionally) **filled**
- to make a report: **twoside**, **openright** and (optionally) **filled**

5.3 The macros explained

5.3.1 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 / report] (mandatory)
This macro sets the author of the document. It also sets the **pdfauthor** tag of the hyperref package (if it is loaded), so that the PDF-document meta-information is correct.

\copyrightnotices [coursetext / report] (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.

<code>\courseversion</code>	[coursetext] (optional) This macro indicates which version of the course this is.
<code>\defensedate</code>	[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.
<code>\defenselocation</code>	[bamathesis / phdthesis] (optional) Location of the defense. Defaults to "Antwerpen".
<code>\diploma</code>	[bamathesis] (discontinued) This macro is no longer used. Use <code>\degree{}</code> instead.
<code>\lecturer</code>	[coursetext] (mandatory) You can add one or more lecturers to the course notes (in Dutch: titularis). If there are multiple persons, please, use the macro multiple times.
<code>\phddegree</code>	[phdthesis] (discontinued) This macro is no longer used. Use <code>\degree{}</code> instead.
<code>\degree</code>	[bmthesis,phdthesis,coursetext] (mandatory) This is the official degree name (in the appropriate language, possibly mixed "dutch (english)"). Specify the official title of your diploma. This must be the official title. For bachelor and master programmes in Dutch, it must be the Dutch title. For programmes in English ti may be the English title. For PhD degrees, language constraints are less strict. Consult https://www.hogeronderwijsregister.be for correct bachelor and master degree titles. Consult the Doctoral bylaws of the university for correct PhD degree titles.
<code>\programme</code>	[coursetext] (discontinued) This macro is no longer used. Use <code>\degree{}</code> instead.
<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. Separate the different fields (name, adres, a.s.o) using a pipe symbol.
<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.

`\subtitle` [coursetext / phdthesis / report] (optional)
 This macro sets the title of the document. You may use this

- to further clarify the title
- to indicate the nature of this document

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 `subject` tag of the `hyperref` package (if it is loaded), so that the PDF-document meta-information is correct.

`\supervisor` [bamathesis / phdthesis] (mandatory)
 Specifies the person(s) that promote(s)/supervise(s) the thesis. Please, use the macro multiple times if needed.

`\title` [coursetext / bamathesis / phdthesis / report] (mandatory)
 This macro sets the title of the document. It also sets the `pdftitle` tag of the `hyperref` package (if it is loaded), so that the PDF-document meta-information is correct.

`\titlepageimage` [coursetext / phdthesis / report] (optional)
 This sets the filename of the central image on the title page to appear clipped within the curves. For PhD theses this is highly advised. For course texts, this is optional. If the image is not set, a flat colored area will appear. This is part of the house style.

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

5.3.2 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 `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

<code>\enclosed</code>	[letter] (optional) List of enclosed documents. Format at will.
<code>\fax</code>	[letter] (optional) Probably facsimile is not used anymore, but anyway: fax number of the sending person. See also <code>\email</code> .
<code>\logo</code>	[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.
<code>\mobile</code>	[letter] (optional) Mobile phone number of the sending person. See also <code>\email</code> .
<code>\opening</code>	[letter] (mandatory) Opening address of the letter. E.g. 'Dear X,'.
<code>\phone</code>	[letter] (optional) Phone number of the sending person. See also <code>\email</code> .
<code>\returnaddress</code>	[letter] (mandatory) This is a short return address (listed in small font on top of the destination address (such that it is visible in a windowed envelope (European format))). It should fit on a single line. Typically we list an acronym for the unit, a room number, a campus name and address. The goal is to get the undelivered letter back to the person that can take action accordingly.
<code>\sender</code>	[letter] (mandatory) Description of the person writing the letter. <ul style="list-style-type: none"> • first argument: name of the person writing the letter • second argument: title / role of the person Newlines are not allowed in the arguments.
<code>\signature</code>	[letter] (optional) Add a signature (in between the closing statement of the letter and the sender's name. This might be a text message or a picture of your signature.
<code>\subject</code>	[letter] (mandatory) Short descriptive subject that describes the contents of the letter.
<code>\to</code>	[letter] (mandatory) Name of the addressee. Newlines are allowed. Preferably name and role are split over two lines.
<code>\toaddress</code>	[letter] (mandatory) Address of the addressee. Newlines are allowed. The address should fit on max. 3 lines.
<code>\toorganization</code>	[letter] (optional) Name of the organization that employs the addressee.

`\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.

5.3.3 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.

`\degree` [exam] (mandatory)
 This is the official degree name (in the appropriate language, possibly mixed "dutch (english)"). Specify the official title of your diploma. This must be the official title. For bachelor and master programmes in Dutch, it must be the Dutch title. For programmes in English it may be the English title. For PhD degrees, language constraints are less strict.
 Consult <https://www.hogeronderwijsregister.be> for correct bachelor and master degree titles. Consult the Doctoral bylaws of the university for correct PhD degree titles.

`\examdate` specifies the date of the exam. We recommend the YYYY-MM-DD format, but you are free to choose 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).

`\lecturer` [exam] (mandatory)
 You can add one or more lecturers to the course notes (in Dutch: titularis). If there are multiple persons, please, use the macro multiple times.

`\programme` [exam] (discontinued)

This macro is no longer used. Use `\degree{}` instead.

- `\room` 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. If your exam is taken in multiple rooms, just specify multiple `\room{}` commands.
- `\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'.

5.4 Examples

5.4.1 uantwerpencoursetext

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

\usepackage[english,dutch]{babel}
\usepackage{kantlipsum} % this is just for some dummy text, please remove
\title{Z\'agen, zoeken en zuchten}
\subtitle{Cursusnota's}
\author{Walter Daems en Paul Levrie}

\courseversion{1.3}
\versionyear{2021}

\lecturer{Zoltan Zo\''ekers}
\lecturer{Siana Sigh}
\lecturer{Zeger de Z\'ager}

\degree{Master of Science in de industri\''ele wetenschappen:
elektronica-ICT}
\course{2023FTIZZZ}{5-Zoekmachines in een zaagperspectief}
\course{2045FTIIII}{6-Zaagmachines in \''e\''en zuchtperspectief}

\academicyear{2021-2022}

\titlepageimage{Images/uantwerpen-keyboard.jpg} % this is optional

\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}

\maketitle

\frontmatter

\tableofcontents

\mainmatter
\chapter*{Inleiding}

\kant[1]
\chapter{Onzin voor dummies}

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

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

\kant[4]

\subsection{Herhaling}

\kant[5]

\subsection{Begint vervelend te worden}

\kant[6]
\newpage

\subsection{Begint echt vervelend te worden}

\kant[7-10]

\chapter{Besluit}

\appendix

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

\makefinalpage

```

```
\end{document}
</ct-example>
```

5.4.2 uantwerpenbamathesis

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

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

\usepackage{hyperref} % New: you must load the hyperref package
                      % yourself! This allows you to put it in the
                      % correct order with the other packages you load!

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

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

\academicyear{2021-2022}
\degree{Bachelor of Science in de industri\ "ele wetenschappen - elektronica-
ICT}
\defenselocation{Antwerpen}
\defensedate{juni 2021}

\begin{document}

\maketitle

\frontmatter

\tableofcontents

\mainmatter
\chapter*{Inleiding}

\kant[1]

\chapter{Onderzoeksvraag}

\section{Het gebeuren}

\kant[2]

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

\kant[3]
```



```

\chapter{Literatuurstudie}

\chapter{Theoretische achtergrond}

\chapter{Eigen realisatie}

\chapter{Besluit}

\appendix

\chapter{Symbolen}
\chapter{Referentielijst}

\makefinalpage

\end{document}
</bmt-example>

```

5.4.3 uantwerpenphdthesis

Dutch

```

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

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

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

\usepackage{hyperref}    % New: you must load the hyperref package
                          % yourself! This allows you to put it in the
                          % correct order with the other packages you load!

\title{Harmonische Signaalanalyse\met behulp van Lineaire
  Operatoren}
\subtitle{Waarom moeten titels van doctoraatsthesisen toch altijd
  lang en onverstaanbaar zijn?}
\author{Ing. Theofiel Hoekaff}
\affiliation{Universiteit Antwerpen\\
  Faculteit Toegepaste Ingenieurswetenschappen\\
  Co-design of Cyber-Physical Systems (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}
\supervisor{prof. dr. J. Stekker}{Universiteit Antwerpen, Belgi\"e}

\jurychairman{prof. dr. P. Dalinckx}{Universiteit Antwerpen, Belgi\"e}

\jurymember{prof. dr. J. Dezerooder}{Universiteit Antwerpen, Belgi\"e}
\jurymember{prof. dr. P. De Tollenaere}{Flanders Make, Belgi\"e}
\jurymember{prof. dr. M. Byr}{IMEC, Nederland}

\degree{doctor in de toegepaste ingenieurswetenschappen}
\defenselocation{Antwerpen}
\defensedate{2021}
\titlepageimage{Images/uantwerpen-keyboard.jpg}

\isbn{987-90-57285-34-7} % don't specify this if you don't want one
\depot{D/2021/12.293/03} % idem

\begin{document}

\maketitle

\frontmatter

\tableofcontents

\mainmatter
\chapter*{Inleiding}

\kant[1]

\chapter{Onderzoeksvraag}

\section{Het gegeven}

\kant[2]

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

\kant[3-17]

\chapter{Literatuurstudie}

\kant[18-19]

\chapter{Theoretische achtergrond}

\kant[20-21]

```

```

\chapter{Eigen realisatie}

\kant[22-24]

\chapter{Besluit}

\kant[25]

\appendix
\chapter{Symbolen}

\chapter{Publicaties}
Put your bibliography here using BibTeX

\makefinalpage

\end{document}
</pt-example1>

```

English

```

<*pt-example2>
\documentclass[ti,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{kantlipsum} % this is just for some dummy text, please remove

\usepackage{hyperref} % New: you must load the hyperref package
% yourself! This allows you to put it in the
% correct order with the other packages you load!

\title{Harmonic Signal analysis\\based on Linear Operators}
\subtitle{How did Mindy linearly kill Mork's IC signal analyzer?}
\author{Ing. Theodore Edgeoff}
\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{prof. dr. W. Vlaams}{University of Antwerp, Belgium}
\supervisor{prof. dr. J. Stekker}{University of Antwerp, Belgium}

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

```

```

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

\degree{doctor in applied engineering}
\defenselocation{Antwerpen}
\defensedate{2021}
\titlepageimage{Images/uantwerpen-keyboard.jpg}

\isbn{987-90-57285-34-7}
\depot{D/2021/12.293/03}

\begin{document}

\maketitle

\frontmatter

\tableofcontents

\mainmatter
\chapter*{Introduction}

\kant[1]

\chapter{Research question}

\section{The datum}

\kant[2]

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

\kant[3-17]

\chapter{Literature review}

\kant[18-19]

\chapter{Theoretical background}

\kant[20-21]

\chapter{Technical results}

\kant[22-24]

\chapter{Conclusion}

\kant[25]

\appendix

```

```

\chapter{Symbols}

Put your bibliography here using BibTeX

\makefinalpage

\end{document}
</pt-example2>

```

5.4.4 uantwerpenreport

```

<*rp-example>
\documentclass[10pt,twoside,openright,filled]{uantwerpenreport}

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

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

\usepackage{hyperref} % New: you must load the hyperref package
                      % yourself! This allows you to put it in the
                      % correct order with the other packages you load!

\title{De toepassing van roomijs-derivaten in beton}
\subtitle{Het belang van een smaakvolle architectuur}
\author{Ing. Jan Bouwblauw}
\extra{Onderzoeksrapport}
\affiliation{Universiteit Antwerpen | Building Research Group}
\address{Groenenborgerlaan 171, 2020 Antwerpen, Belgi\''e\\
M: jan.bouwblauw@uantwerpen.be\\
T: +32 265 00 00
}

\versionyear{2021}

\titlepageimage{Images/uantwerpen-keyboard.jpg}

\begin{document}

\maketitle

\frontmatter

```

```

\tableofcontents

\mainmatter
\chapter*{Inleiding}

\kant[1]

\chapter{Smaken en smaakpapillen}

\section{Het gegeven}

\kant[2]

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

\kant[3-17]

\chapter{Experimentele setup}

\kant[18-19]

\chapter{Resulaten}

\kant[20-21]

\chapter{Conclusie}

\kant[22-24]

\chapter{Advies}

\kant[25]

\appendix
\chapter{Symbolen}

\chapter{Publicaties}
Put your bibliography here using BibTeX

\makefinalpage

\end{document}
</rp-example>

```

5.4.5 uantwerpenletter

Plain example

```
<*le-example>
```

```

\documentclass[ti,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{kantlipsum} % this is just for some dummy text, please remove

\sender{prof. Walter Daems}{Senior Lecturer}
\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.

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

```

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

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


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

You may also consider using multiple configuration files in case you have multiple roles in the university. Just make sure they are on your L^AT_EX search path.

5.4.6 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[ti,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{1876FTIDUM}{5-Bistrologie}
\lecturer{Walter Daems}
\degree{Bachelor of Science in de industri\ "ele wetenschappen - elektronica-
ICT}
\academicyear{2017-2018}
\exampart{Schriftelijk Examen}
\examgroupnumber{1 (eerste examenkans-inhaal)}
\examdate{2018-01-29}
\examlength{4h}
\tstart{08h30}
\tend{12h30}
\room{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
voorzien 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[ti,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{1876FTIDUM}{5-Bistrology}
\lecturer{Walter Daems}
\lecturer{Paul Levrie}
\degree{Bachelor of Science in de industri}"ele wetenschappen - elektronica-
ICT}
\academicyear{2017-2018}
\exampart{Written Exam}
\examgroupnumber{1 (eerste examenkans-inhaal)}
\examdate{2018-01-29}
\examlength{4h}
\tstart{08h30}
\tend{12h30}
\room{G.U.025}
\room{G.U.026}
\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}
  }
}

```

```

\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
voorzien 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 ingrediënten hoort niet thuis in
    een b\'echamel saus:
}
\engdutmc{Milk}{Melk}
\engdutmc{Butter}{Boter}
\engdutmc{Flower}{Bloem}
\engdutmc{Eggs}{Eieren}
\engdutmc{Sugar}{Suiker}

```

```

\insertsolutionspagepartial{20}

\insertsolutionspage{}
\clearpage

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

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

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

```

6 Implementation of the classes

6.1 Common options

Colors appear in any document, so let's define them in common in a separate package

```

1 <*clo>
2 \newif\if@neutralcolors
3 \@neutralcolorsfalse
4 \DeclareOption{neutralcolors}{\@neutralcolorstrue}
5
6 \newcommand*\colormodel{rgb}
7 \newif\if@cmyk
8 \@cmykfalse

```

```

9 \DeclareOption{cmyk}{\renewcommand*\colormodel{cmyk}\@cmyktrue}
10 \DeclareOption{rgb}{\renewcommand*\colormodel{rgb}\@cmykfalse}
11
12 \newcommand*\facinenglish[1]{\renewcommand\@faculty{#1}}
13 \newcommand*\facindutch[1]{
14   \AtBeginDocument{
15     \makeatother
16     \@ifpackageloaded{babel}{
17       \addto\captionsdutch{\renewcommand*\@faculty{#1}}
18     }{}
19     \makeatletter
20   }
21 }
22 \newcommand*\fselector{ua}
23 \newcommand*\lselector{en}
24 \newlength\logounitheight
25 \setlength\logounitheight{0.8cm}
26
27 \newcommand*\@faculty{~}
28 \DeclareOption{be}{
29   \renewcommand*\fselector{be}
30   \setlength\logounitheight{1cm}
31   \facinenglish{Faculty of Business and Economics}
32   \facindutch{Faculteit Bedrijfswetenschappen en Economie}
33 }
34 \DeclareOption{fbd}{
35   \renewcommand*\fselector{fbd}
36   \setlength\logounitheight{1cm}
37   \facinenglish{Faculty of Pharmaceutical, Biomedical and Veterinary Sciences}
38   \facindutch{Faculteit Farmaceutische, Biomedische en Diergeneeskundige
39     Wetenschappen}
40 }
41 \DeclareOption{ggw}{
42   \renewcommand*\fselector{ggw}
43   \setlength\logounitheight{1cm}
44   \facinenglish{
45     Faculty of Medicine and Health Sciences}
46   \facindutch{Faculteit Geneeskunde en Gezondheidswetenschappen}
47 }
48 \DeclareOption{lw}{
49   \renewcommand*\fselector{lw}
50   \setlength\logounitheight{1cm}
51   \facinenglish{Faculty of Arts}
52   \facindutch{Faculteit Letteren en Wijsbegeerte}
53 }
54 \DeclareOption{ow}{
55   \renewcommand*\fselector{ow}
56   \setlength\logounitheight{1cm}
57   \facinenglish{Faculty of Design Sciences}
58   \facindutch{Faculteit Ontwerpwetenschappen}
59 }
60 \DeclareOption{re}{
61   \renewcommand*\fselector{re}
62   \setlength\logounitheight{1cm}

```

```

63 \facinenglish{Faculty of Law}
64 \facindutch{Faculteit Rechten}
65 }
66 \DeclareOption{sw}{
67 \renewcommand*\fselector{sw}
68 \setlength\logounitheight{1cm}
69 \facinenglish{Faculty of Social Sciences}
70 \facindutch{Faculteit Sociale Wetenschappen}
71 }
72 \DeclareOption{ti}{
73 \renewcommand*\fselector{ti}
74 \setlength\logounitheight{1cm}
75 \facinenglish{Faculty of Applied Engineering}
76 \facindutch{Faculteit Toegepaste Ingenieurswetenschappen}
77 }
78 \DeclareOption{we}{
79 \renewcommand*\fselector{we}
80 \setlength\logounitheight{1cm}
81 \facinenglish{Faculty of Science}
82 \facindutch{Faculteit Wetenschappen}
83 }
84 \DeclareOption{iob}{
85 \renewcommand*\fselector{iob}
86 \setlength\logounitheight{1cm}
87 \facinenglish{Institute of Development Policy}
88 \facindutch{Instituut voor Ontwikkelingsbeleid- en beheer}
89 }
90 \newcommand*\@facultyacronym{\expandafter\uppercase\expandafter{\fselector}}
91
92 \AtBeginDocument{
93 \makeatother
94 \@ifpackageloaded{babel}{
95 \addto\captionsdutch{
96 \renewcommand*\lselector{nl}
97 }{}}
98 }
99 \makeatletter
100
101 \newcommand*\logopos{Logos/logo-uantwerpen-\fselector-\lselector-\colormodel-
pos}
102 \newcommand*\logoposua{Logos/logo-uantwerpen-ua-\lselector-\colormodel-
pos}
103 \newcommand*\logoneg{Logos/logo-uantwerpen-\fselector-\lselector-\colormodel-
neg}
104 \newcommand*\logonegua{Logos/logo-uantwerpen-ua-\lselector-\colormodel-
neg}
105 \newcommand*\logomonowhite{Logos/logo-uantwerpen-\fselector-\lselector-
\colormodel-mono-white}
106 \newcommand*\logomonowhiteua{Logos/logo-uantwerpen-ua-\lselector-\colormodel-
mono-white}
107 \newcommand*\iconfile{Logos/icon-uantwerpen-\fselector-\colormodel}
108 \newcommand*\iconfileua{Logos/icon-uantwerpen-ua-\colormodel}
109 }
110 </clo>

```


6.2 Color scheme

```

111 (*cls)
112 \if@cmymk
113 %% UAntwerpen
114 \definecolor{uauamain}{cmyk}{0.00,0.96,0.82,0.01}
115 \definecolor{uauaside}{cmyk}{1.00,0.71,0.00,0.51}
116 %% Faculteit Bedrijfswetenschappen en Economie
117 \definecolor{uabemain}{cmyk}{0.58,0.00,1.00,0.04}
118 \definecolor{uabeside}{cmyk}{0.29,0.04,0.41,0.00}
119 %% Faculteit Farmaceutische, Biomedische en Diergeneeskundige Wetenschappen
120 \definecolor{uafbdmain}{cmyk}{0.65,0.03,0.00,0.00}
121 \definecolor{uafbdside}{cmyk}{0.33,0.03,0.00,0.00}
122 %% Faculteit Geneeskunde en Gezondheidswetenschappen
123 \definecolor{uaggwmain}{cmyk}{0.61,0.55,0.00,0.00}
124 \definecolor{uaggwside}{cmyk}{0.21,0.27,0.03,0.00}
125 %% Faculteit Letteren en Wijsbegeerte
126 \definecolor{ualwmain}{cmyk}{0.00,0.27,0.85,0.00}
127 \definecolor{ualwside}{cmyk}{0.00,0.16,0.51,0.00}
128 %% Faculteit Ontwerpwetenschappen
129 \definecolor{uaowmain}{cmyk}{0.53,0.25,0.26,0.05}
130 \definecolor{uaowside}{cmyk}{0.25,0.08,0.16,0.00}
131 %% Faculteit Rechten
132 \definecolor{uaremain}{cmyk}{0.10,1.00,0.90,0.05}
133 \definecolor{uareside}{cmyk}{0.04,0.45,0.36,0.00}
134 %% Faculteit Sociale Wetenschappen
135 \definecolor{uaswmain}{cmyk}{0.08,0.00,1.00,0.26}
136 \definecolor{uaswside}{cmyk}{0.20,0.11,0.50,0.00}
137 %% Faculteit Toegepaste Ingenieurswetenschappen
138 \definecolor{uatimain}{cmyk}{0.31,1.00,0.00,0.01}
139 \definecolor{uatiside}{cmyk}{0.11,0.30,0.02,0.00}
140 %% Faculteit Wetenschappen
141 \definecolor{uawemain}{cmyk}{1.00,0.20,0.00,0.25}
142 \definecolor{uaweside}{cmyk}{0.40,0.08,0.00,0.10}
143 %% IOB
144 \definecolor{uaiobmain}{cmyk}{0.05,0.75,1.00,0.00}
145 \definecolor{uaiobside}{cmyk}{0.40,0.08,0.00,0.10}
146 \else
147 %% UAntwerpen
148 \definecolor{uauamain}{RGB}{234,44,56}
149 \definecolor{uauaside}{RGB}{0,46,101}
150 %% Faculteit Bedrijfswetenschappen en Economie
151 \definecolor{uabemain}{RGB}{101,168,18}
152 \definecolor{uabeside}{RGB}{185,213,169}
153 %% Faculteit Farmaceutische, Biomedische en Diergeneeskundige Wetenschappen
154 \definecolor{uafbdmain}{RGB}{68,184,243}
155 \definecolor{uafbdside}{RGB}{181,221,247}
156 %% Faculteit Geneeskunde en Gezondheidswetenschappen
157 \definecolor{uaggwmain}{RGB}{117,117,203}
158 \definecolor{uaggwside}{RGB}{198,182,210}
159 %% Faculteit Letteren en Wijsbegeerte
160 \definecolor{ualwmain}{RGB}{241,181,61}
161 \definecolor{ualwside}{RGB}{255,218,145}
162 %% Faculteit Ontwerpwetenschappen

```

```

163 \definecolor{uaowmain}{RGB}{130,161,173}
164 \definecolor{uaowside}{RGB}{200,217,216}
165 %% Faculteit Rechten
166 \definecolor{uaremain}{RGB}{210,8,36}
167 \definecolor{uareside}{RGB}{237,157,144}
168 %% Faculteit Sociale Wetenschappen
169 \definecolor{uaswmain}{RGB}{173,165,0}
170 \definecolor{uaswside}{RGB}{215,211,148}
171 %% Faculteit Toegepaste Ingenieurswetenschappen
172 \definecolor{uatimain}{RGB}{177,0,151}
173 \definecolor{uatiside}{RGB}{221,184,210}
174 %% Faculteit Wetenschappen
175 \definecolor{uawemain}{RGB}{0,108,169}
176 \definecolor{uaweside}{RGB}{151,192,223}
177 %% IOB
178 \definecolor{uaiobmain}{RGB}{230,98,8}
179 \definecolor{uaiobside}{RGB}{151,192,223}
180 \fi
181 %%
182 \if@neutralcolors
183 \colorlet{maincolor}{uauaside}
184 \colorlet{sidecolor}{uauamain}
185 \colorlet{basecolor}{uauaside}
186 \else
187 \colorlet{maincolor}{ua\fselector main}
188 \colorlet{sidecolor}{ua\fselector side}
189 \colorlet{basecolor}{uauaside}
190 \fi
191 \</cls>

```

6.3 Class inheritance

For convenience, we'll derive from the standard L^AT_EX book, letter and article class.

Before loading the class, we provide the extra options.

```

192 <*ct | rp>
193 \newif\if@copyright
194 \DeclareOption{copyright}{\@copyrighttrue}
195 </ct | rp>
196 %
197 <*ct | bmt | pt | rp | le>
198 \newif\if@filled
199 \DeclareOption{filled}{\@filledtrue}
200 </ct | bmt | pt | rp | le>
201 %
202 <*ex>
203 \newif\if@examiner
204 \DeclareOption{examiner}{\@examinerttrue}
205 </ex>

```

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

master theses.

```
206 <*ct | bmt | pt | rp>
207 \input{uantwerpencommonoptions.clo}
208 \ExecuteOptions{a4paper,11pt,final,oneside,openright}
209 \ProcessOptions\relax
210 \LoadClassWithOptions{book}
211 </ct | bmt | pt | rp>
212 % We load the |letter| class for letters
213 <*le>
214 \input{uantwerpencommonoptions.clo}
215 \ExecuteOptions{a4paper,10pt,final,oneside,openright}
216 \ProcessOptions
217 \LoadClassWithOptions{letter}
218 \newcommand*\tat{\makeatletter @\makeatother}
219 </le>
220 % We load the |article| class for exams
221 <*ex>
222 \input{uantwerpencommonoptions.clo}
223 \ExecuteOptions{a4paper,twoside,10pt}
224 \ProcessOptions
225 \LoadClassWithOptions{article}
226 </ex>
```

6.4 Modern typesetting

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

```
227 <*ct | bmt | pt | rp | le | ex>
228 \setlength{\parindent}{0pt}
229 \addtolength{\parskip}{0.75\baselineskip}
230 \setcounter{secnumdepth}{3}
231 </ct | bmt | pt | rp | le | ex>
```

6.5 Auxiliary packages

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

6.5.1 Geometry

Let's reduce the margins to 1 inch each for the documents that are unlikely to be glue bound:

```
232 <*ct | bmt | rp | ex>
233 \RequirePackage[top=2.5cm, bottom=2.5cm, left=2.5cm, right=2.5cm]{geometry}
234 </ct | bmt | rp | ex>
235 % Let's follow the instructions by ADS for the (marginal(!) glue provision):
236 <*pt>
```

```

237 \RequirePackage[paperwidth=180mm,paperheight=260mm,
238             top=2.5cm,bottom=2.5cm,left=2.6cm,right=1.8cm,twoside]
239             {geometry}
240 \</pt>
241 \<*/le>
242 \RequirePackage[top=1in, bottom=1in, left=1.34in, right=1in]{geometry}
243 \RequirePackage[normalem]{ulem}
244 \</le>

```

6.5.2 Preparing for L^AT_EX3

Let's make things a bit easier for me.

```

245 \<*ct| bmt| pt| rp| le| ex>
246 \RequirePackage{expl3}
247 %\RequirePackage[check-declarations]{expl3} % I use this during debug phase
248 \RequirePackage{xparse}
249 \</ct| bmt| pt| rp| le| ex>

```

6.5.3 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.

```

250 \<*ct| bmt| pt| rp| le>
251 % no more font code
252 \</ct| bmt| pt| rp| le>

```

6.5.4 Boilerplate packages

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

```

253 \<*ct| bmt| pt| rp| le| ex>
254 \RequirePackage{iftex}
255 \RequirePackage{xstring}
256 \RequirePackage{etoolbox}
257 \RequirePackage{ifthen}
258 \IfFileExists{shellesc.sty}{\RequirePackage{shellesc}}{}
259 \newcommand{\@emptymacro}{}
260 \</ct| bmt| pt| rp| le| ex>

```

6.5.5 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:

```

261 <*ct | bmt | pt | rp | le | ex>
262 \RequirePackage{graphicx}
263 \RequirePackage[export]{adjustbox}
264 \RequirePackage{color}
265 \RequirePackage{tikz}
266 \usetikzlibrary{positioning}
267 \RequirePackage{eso-pic}
268 </ct | bmt | pt | rp | le | ex>
269 <*ct | rp>
270 \if@copyright
271 \RequirePackage[contents={},color=lightgray,scale=3]{background}
272 \fi
273 </ct | rp>
274 <*pt>
275 \usepackage{ean13isbn}
276 </pt>

```

6.5.6 UAntwerpen color and logo scheme

```

277 <*ct | bmt | pt | rp | le | ex>
278 \RequirePackage{uantwerpencolorlogoscheme}
279 </ct | bmt | pt | rp | le | ex>

```

6.5.7 Header/Footer

The de-facto standard for headers and footers:

```

280 <*ct | bmt | pt | rp | le | ex>
281 \RequirePackage{fancyhdr}
282 </ct | bmt | pt | rp | le | ex>

```

6.6 Colors

```

283 <*ct | bmt | pt | rp | le | ex>
284 \definecolor{uacorpbord}{cmyk}{0.00,1.00,0.60,0.37}
285 \definecolor{uacorpblue}{cmyk}{1.00,0.25,0.00,0.50}
286 \definecolor{uacorpplightblue}{cmyk}{1.00,0.00,0.08,0.13}
287 \definecolor{uacorpororange}{cmyk}{0.00,0.32,1.00,0.09}
288 \definecolor{uaftifresh}{cmyk}{0.34,1.00,0.00,0.00}
289 \definecolor{uaftisober}{cmyk}{0.10,1.00,0.00,0.49}
290 \definecolor{lightgray}{cmyk}{0.00,0.00,0.00,0.05}
291 \definecolor{darkgray}{cmyk}{0.00,0.00,0.00,0.80}
292 \definecolor{watermark}{cmyk}{0.00,0.00,0.00,0.05}
293 </ct | bmt | pt | rp | le | ex>

```

6.7 Babel provisions

Let's start by defining our dictionary:

```

294 <*ct | bmt | pt | rp | le | ex>
295 \ExplSyntaxOn
296 \prop_new:N \g_@@_data_prop
297 </ct | bmt | pt | rp | le | ex>%

```

The dictionary can be accessed using the following document command:

```

298 <*ct | bmt | pt | rp | le | ex>
299 \NewDocumentCommand{\uantwerpendocsprop}{m}{
300   \prop_item:Nn \g_@@_data_prop{#1}
301 }
302 \NewDocumentCommand{\uantwerpendocsPROP}{m}{
303   \str_uppercase:f { \prop_item:Nn \g_@@_data_prop{#1} }
304 }
305 \NewDocumentCommand{\uantwerpendocspropread}{m}{
306   \@@_datareader:n { #1 }
307 }
308 </ct | bmt | pt | rp | le | ex>%

```

We will fill the dictionary from the generic data file (for elements that should not be translated, currently empty) and the language specific data files (for elements that can be translated).

To this end, we use the following parsing infrastructure:

```

309 <*ct | bmt | pt | rp | le | ex>
310 \cs_new_nopar:Npn \@@_dataparser:w #1 = #2!! {
311   \tl_set:Nn \l_tmpa_tl {#1}
312   \tl_set:Nn \l_tmpb_tl {#2}
313   \tl_trim_spaces:N \l_tmpa_tl
314   \tl_trim_spaces:N \l_tmpb_tl
315   \prop_gput:Nxx \g_@@_data_prop { \l_tmpa_tl } { \l_tmpb_tl }
316 }
317 </ct | bmt | pt | rp | le | ex>

```

invoked by the following data file reader:

```

318 <*ct | bmt | pt | rp | le | ex>
319 \ior_new:N \l_@@_data_ior
320 \cs_new_nopar:Nn \@@_datareader:n {
321   \ior_open:Nn \l_@@_data_ior { uantwerpendocs-#1.data }
322   \ior_str_map_inline:Nn \l_@@_data_ior {
323     \regex_match:nnTF {=} {##1} {
324       \@@_dataparser:w ##1!!
325     }
326   }
327 }
328 \ior_close:N \l_@@_data_ior
329 }
330 </ct | bmt | pt | rp | le | ex>

```

By default, we load the generic (not yet!) and the english data file:

```

331 <*ct | bmt | pt | rp | le | ex>
332 \clist_map_inline:nn {en} {
333   \@@_datareader:n { #1 }
334 }
335 %\prop_show:N \g_@@_data_prop
336 \ExplSyntaxOff
337 </ct | bmt | pt | rp | le | ex>

```

```

338 <*ct | bmt | pt | rp | le | ex>
339 \newcommand*\@logo{\logopos}
340 \AtBeginDocument{
341   \makeatother
342   \@ifpackageloaded{babel}{
343     \addto\captionsenglish{%
344       \uantwerpendocspropread{en}
345     }
346     \addto\captionsdutch{%
347       \uantwerpendocspropread{nl}
348     }
349   }
350   {}
351   \makeatletter
352 }
353 </ct | bmt | pt | rp | le | ex>

```

The English data can be found below: <*endata> org-be = Faculty of Business and Economics org-fbd = Faculty of Pharmaceutical, Biomedical and Veterinary Sciences org-ggw = Medicine and Health Sciences org-lw = Faculty of Arts org-ow = Faculty of Design Sciences org-re = Faculty of Law org-sw = Faculty of Social Sciences org-ti = Faculty of Applied Engineering org-we = Faculty of Science org-iob = Institute of Development Policy org-ua = University of Antwerp arr = All rights reserved of = of domainname = uantwerp.be datename = Date subjectname = Subject acyearname = Academic year baname = Bachelor of Science spname = Switching Programme vpname = Preparatory Programme maname = Master of Science phdname = PhD thesisname = Thesis mthesisname = Master's thesis bthesisname = Bachelor's thesis lecturername = Lecturer lecturersname = Lecturers supervisorname = Supervisor supervisorsname = Supervisors examname = Exam — Examen seriesname = Series lastname = Last name — Naam firstname = First name — Voornaam docketname = Docket No. — Rolnr. roomname = Room — Lokaal roomsname = Rooms — Lokalen examstartname = Start — Begin examendname = End — Einde examdurationname = Exam duration — Duur van het examen juryname = Jury jurymembersname = Members jurychairmanname = Chairman bmthesisname = Thesis to obtain the degree of pthesisnamei = Thesis submitted in fulfilment of the requirements for the degree of pthesisnameii = at University of Antwerp weightname = Weight </endata>

The Dutch data can be found below: <*nldata> org-be = Faculteit Bedrijfswetenschappen en Economie org-fbd = Faculteit Farmaceutische, Biomedische en Diergeneeskundige Wetenschappen org-ggw = Faculteit Geneeskunde en Gezondheidswetenschappen org-lw = Faculteit Letteren en Wijsbegeerte org-ow = Faculteit Ontwerpwetenschappen org-re = Faculteit Rechten org-sw = Faculteit Sociale Wetenschappen org-ti = Faculteit Toegepaste Ingenieurswetenschappen org-we = Faculteit Wetenschappen org=iob = Instituut voor Ontwikkelingsbeleid- en beheer org-ua = Universiteit Antwerpen arr = Alle rechten voorbehouden of = van domainname = uantwerpen.be datename = Onderwerp subjectname = Datum acyearname = Academiejaar baname = Bachelor of Science spname = Schakelprogramma vpname = Voorbereidingsprogramma maname = Master of Science phdname = Doctoraat thesisname = Afstudeerproef mthesisname = Masterproef bthesisname = Bachelorproef lecturername = Titularis lecturersname = Titularissen supervisorname = Promotor supervisorsname = Promotoren examname = Ex-

amen seriesname = Reeks lastname = Naam firstname = Voornaam docketname = Rolnr. roomname = Lokaal roomsname = Lokalen examstartname = Begin examendname = Einde examdurationname = Duur van het examen jurynname = Jury jurymembersname = Leden jurychairmannname = Voorzitter bmthesisname = Proefschrift tot het behalen van de graad van pthesisnamei = Proefschrift voorgelegd tot het behalen van de graad van pthesisnameii = aan de Universiteit Antwerpen te verdedigen door weightname = Gewicht </nldata>

6.8 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.

```
354 <*ct | bmt | pt | rp | le | ex>
355 \newcommand*{\facultyacronym}[1]{
356   \PackageError{uantwerpendocs}
357   {The '\protect\facultyacronym{' macro is no longer available. Use
358     your faculty abbreviation in lowercase as class options instead}
359   {The interface of uantwerpendocs 4.0 has been changed. See
360     the uantwerpendocs manual under section '5.2 The class options explained'}
361 }
362 </ct | bmt | pt | rp | le | ex>
```

`\title` The `title` tag is native to L^AT_EX. It sets the `\@title` tag that will be used on the title page.

`\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 (if it is loaded).

```
363 <*bmt>
364 \ExplSyntaxOn
365 \NewDocumentCommand{\@subtitle}{m}{
366   \tl_new:N \l_@@_degree
367   \tl_set:Nx \l_@@_degree { \tl_head:N \@degree }
368   \tl_if_eq:NnTF \l_@@_degree { B } {\uantwerpendocsprop{bthesisname}} {
369     \tl_if_eq:NnTF \l_@@_degree { M } {\uantwerpendocsprop{mthesisname}}
370     {\uantwerpendocsprop{thesisname}}}
371 }
372 \ExplSyntaxOff
373 </bmt>
374 <*ct | pt | rp>
375 \newcommand*{\@subtitle}{~}
376 \newcommand*{\subtitle}[1]{%
377   \renewcommand*\@subtitle{#1}
378 }
379 </ct | pt | rp>
```

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

```
380 <*ex>
```



```

381 \newcommand*{\shorttitle}{}
382 \newcommand*{\shorttitle}[1]{%
383   \renewcommand*{\shorttitle}{#1}
384 }
385 \end{document}

```

\author The `\author` tag is native to L^AT_EX. It sets the `\@author` tag that will be used on the title page.

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

```

386 \begin{document}
387 \newcommand*{\@courseversion}{}
388 \newcommand*{\courseversion}[1]{\renewcommand*{\@courseversion}{#1}}
389 \end{document}

```

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

```

390 \begin{document}
391 \newcommand*{\@versionyear}{}
392 \newcommand*{\versionyear}[1]{\renewcommand*{\@versionyear}{#1}}
393 \end{document}

```

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

```

394 \begin{document}
395 \newcommand*{\@publisher}{Universitas Cursusdienst |
396   Prinsesstraat 16 |
397   2000 Antwerpen |
398   T +32 3 233 23 73 |
399   E info@cursusdienst.be}
400 \newcommand*{\publisher}[1]{\renewcommand*{\@publisher}{#1}}
401 \end{document}

```

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

```

402 \begin{document}
403 \newcommand*{\@publishercode}{}
404 \newcommand*{\publishercode}[1]{\renewcommand*{\@publishercode}{#1}}
405 \end{document}

```

\lecturer This macro adds lecturers (Dutch: titularissen) to the course notes. Use the macro multiple times for multiple lecturers. The order will be preserved. Note that as of v4.0 all lecturers are specified using the same macro!

```

406 \begin{document}
407 \ExplSyntaxOn
408 \seq_new:N \g_@@_lecturers
409 \cs_new:Nn \@@_addlecturer:n {
410   \seq_gpush:Nn \g_@@_lecturers { #1 }

```

```

411 }
412 \NewDocumentCommand{\lecturer}{m}{
413   \@@_addlecturer:n { #1 }
414 }
415 \NewDocumentCommand{\jointlecturers}{m}{
416   \seq_use:Nn \g_@@_lecturers { #1 }
417 }
418 \NewDocumentCommand{\lecturersname}{}{
419   \if_int_compare:w \seq_count:N \g_@@_lecturers > 1
420     \uantwerpendocsprop{lecturersname}
421   \else:
422     \uantwerpendocsprop{lecturername}
423   \fi:
424 }
425 \AtBeginDocument{
426   \seq_greverse:N \g_@@_lecturers
427 }
428
429 \ExplSyntaxOff
430 </ct|ex>

```

\extra The `extra` tag allows to specify some extra comment (e.g. the nature of the document) in the bottom bar on the title page).

```

431 <rp>
432 \newcommand\@extra{}
433 \newcommand\extra[1]{\renewcommand\@extra{#1}}
434 </rp>

```

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

```

435 <pt|rp>
436 \newcommand\@affiliation{
437   \PackageError{uantwerpendocs}
438   {Please, define the affiliation of the author using the
439     '\protect\affiliation{' command in the preamble of your
440     document.}
441   {See the uantwerpendocs manual}
442 }
443 \newcommand\affiliation[1]{\renewcommand\@affiliation{#1}}
444 </pt|rp>

```

\supervisor This macro allows to specify one or more supervisors with their affiliation. This can be done by invoking the macro as many times as needed. Note that as of v4.0 all supervisors are specified using the same macro!

```

445 <bmt|pt>
446 \ExplSyntaxOn
447
448 \seq_new:N \g_@@_supervisors
449 \seq_new:N \g_@@_supervisorswithaffiliation
450 \cs_new:Nn \@@_addsupervisor:nn {
451   \seq_gpush:Nn \g_@@_supervisors { #1 }

```

```

452 \seq_gpush:Nn \g_@@_supervisorswithaffiliation { #1,~#2 }
453 }
454 \NewDocumentCommand{\supervisor}{mm}{
455 \@@_addsupervisor:nn { #1 } { #2 }
456 }
457 \NewDocumentCommand{\jointsupervisors}{m}{
458 \seq_use:Nn \g_@@_supervisors { #1 }
459 }
460 \NewDocumentCommand{\jointsupervisorswithaffiliation}{m}{
461 \seq_use:Nn \g_@@_supervisorswithaffiliation { #1 }
462 }
463 \NewDocumentCommand{\supervisorsname}{}{
464 \if_int_compare:w \seq_count:N \g_@@_supervisors > 1
465 \uantwerpendocsprop{supervisorsname}
466 \else:
467 \if_int_compare:w \seq_count:N \g_@@_supervisors = 1
468 \uantwerpendocsprop{supervisorname}
469 \else:
470 \fi:
471 \fi:
472 }
473 \AtBeginDocument{
474 \seq_greverse:N \g_@@_supervisors
475 \seq_greverse:N \g_@@_supervisorswithaffiliation
476 }
477 \ExplSyntaxOff
478 </bmt | pt>

```

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

```

479 < *pt>
480 \newcommand*{\@jurychairman}{
481 \PackageError{uantwerpendocs}
482 {Please, define a chairman of the jury using the
483 '\protect\jurychairman{ }' command in the preamble of your
484 document.}
485 {See the uantwerpendocs manual}
486 }
487 \newcommand*{\@jurychairmanaff}{ }
488 \newcommand*{\jurychairman}[2]{
489 \renewcommand*{\@jurychairman}{#1}\renewcommand*{\@jurychairmanaff}{#2}}
490 </pt>

```

`\jurymember` This macro allows for the registration of jury members and their affiliation. This can be done by invoking the macro as many times as needed. Note that as of v4.0 all jurymembers are specified using the same macro!

```

491 < *pt>
492 \ExplSyntaxOn
493 \seq_new:N \g_@@_jurymemberswithaffiliation
494 \cs_new:Nn \@@_addjurymember:nn {
495 \seq_gpush:Nn \g_@@_jurymemberswithaffiliation { #1,~#2 }
496 }

```

```

497 \NewDocumentCommand{\jurymember}{mm}{
498   \@@_addjurymember:nn { #1 } { #2 }
499 }
500 \NewDocumentCommand{\jointjurymembers}{m}{
501   \seq_use:Nn \g_@@_jurymemberswithaffiliation { #1 }
502 }
503 \AtBeginDocument{
504   \seq_greverse:N \g_@@_jurymemberswithaffiliation
505 }
506 \ExplSyntaxOff
507 \</pt>

```

`\phddegree` This macro has been discontinued. Use `\degree` instead.

```

508 \<pt>
509 \newcommand*\phddegree{
510   \PackageError{uantwerpendocs}
511   {The '\protect\phddegree{}' macro is no longer available. Use
512     '\protect\degree{}' instead}
513   {The interface of uantwerpendocs 4.0 has been changed. Use the
514     '\protect\degree' macro to specify your degree in full text (see
515     the uantwerpendocs manual)}
516 }
517 \</pt>
518 %
519 %
520 % \begin{macro}{\degree}
521 %   This macro sets the |\@degree| tag that later will
522 %   be used on the title pages.
523 %
524 %   \begin{macrocode}
525 \<bmt | pt | ct | ex>
526 \newcommand*\@degree{
527   \PackageError{uantwerpendocs}
528   {Please, specify the official degree description using
529     the '\protect\degree{}' macro in the preamble of your document.}
530   {See the uantwerpendocs manual}
531 }
532 \newcommand*\degree[1]{\renewcommand*\@degree{#1}}
533 \</bmt | pt | ct | ex>

```

`\programme` This macro is no longer in use.

```

534 \<ct | pt | ex>
535 \newcommand*\{programme}[3]{
536   \PackageError{uantwerpendocs}
537   {The '\protect\programme{}{}{}' macro is no longer available. Use
538     '\protect\degree{}' instead}
539   {The interface of uantwerpendocs 4.0 has been changed. Use the
540     '\protect\degree' macro to specify your degree in full text (see
541     the uantwerpendocs manual)}
542 }
543 \</ct | pt | ex>

```

`\course` For the `coursetext` class, this macro sets one or more courses. and `\@course` tags that later will be used on the title page. Note that as of v4.0 all courses are specified using the same macro!

```

544 <*ct>
545 \newcommand*\coursei[2]{
546   \PackageError{uantwerpendocs}
547   {The '\protect\coursei{' macro is no longer available. Use
548     '\protect\course{' instead (multiple times if you need to)}}
549   {The interface of uantwerpendocs 4.0 has been changed. Use the
550     '\protect\course macro instead of the \protect\coursei,
551     \protect\courseii, \protect\courseiii and \protect\courseiv macros
552     that existed earlier (see
553     the uantwerpendocs manual)'}
554 }
555 \ExplSyntaxOn
556 \seq_new:N \g_@@_courseswithcodes
557 \cs_new:Nn \@@_addcourse:nn {
558   \seq_gpush:Nn \g_@@_courseswithcodes{ \texttt{#1}~#2 }
559 }
560 \NewDocumentCommand{\course}{mm}{
561   \@@_addcourse:nn { #1 } { #2 }
562 }
563 \NewDocumentCommand{\jointcourseswithcodes}{m}{
564   \seq_use:Nn \g_@@_courseswithcodes { #1 }
565 }
566 \AtBeginDocument{
567   \seq_greverse:N \g_@@_courseswithcodes
568 }
569 \ExplSyntaxOff
570 </ct>

```

For the `exam` class (assuming that an exam only holds for a single course), the situation is simple and we assume only a single coursecode and course name.

```

571 <*ex>
572 \newcommand*\{@coursecode}{ }
573 \newcommand*\{@course}{ }
574 \newcommand*\{course}[2]{
575   \renewcommand*\{@coursecode}{#1}
576   \renewcommand*\{@course}{#2}
577 }
578 </ex>

```

`\diploma` This macro sets the official diploma description into the `\@diploma` tag that later will be used on the title page.

```

579 <*bmt | pt>
580 \newcommand*\{diploma}[1]{
581   \PackageError{uantwerpendocs}
582   {The '\protect\diploma{' macro is no longer available. Use
583     '\protect\degree{' instead}
584   {The interface of uantwerpendocs 4.0 has been changed. Use the
585     '\protect\degree' macro to specify your degree in full text (see

```

```

586     the uantwerpendocs manual)'}
587 }
588 </bmt | pt>

```

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

```

589 <*bmt | pt>
590 \newcommand*\@defensedate{ERROR}
591 \newcommand*\defensedate[1]{\renewcommand*\@defensedate{#1}}
592 </bmt | pt>

```

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

```

593 <*bmt | pt>
594 \newcommand*\@defenselocation{Antwerpen}
595 \newcommand*\defenselocation[1]{\renewcommand*\@defenselocation{#1}}
596 </bmt | pt>

```

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

```

597 <*ct | pt | rp>
598 \newcommand*\@titlepageimage{}
599 \newcommand*\titeplageimage[1]{\renewcommand*\@titlepageimage{#1}}
600 </ct | pt | rp>

```

\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).

```

601 <*pt>
602 \newcommand*\@isbn{}
603 \newcommand*\isbn[1]{\renewcommand*\@isbn{#1}}
604 </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).

```

605 <*pt>
606 \newcommand*\@depot{}
607 \newcommand*\depot[1]{\renewcommand*\@depot{#1}}
608 </pt>

```

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

```

609 <*ct | bmt | ex>
610 \newcommand*\@academicyear{XXX-YYYY}
611 \newcommand*\academicyear[1]{\renewcommand*\@academicyear{#1}}
612 </ct | bmt | ex>

```

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

```

613 <*ct | rp>
614 \newcommand{\@copyrightnotices}{}
615 \newcommand{\copyrightnotices}[1]{\renewcommand{\@copyrightnotices}{#1}}
616 </ct | rp>

```

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

```

617 <*le>
618 \newcommand*{\@sender}{< Specify sender using
619   \textbackslash{}sender\{name\}\{role\} >}
620 \newcommand*{\@senderrole}{~}
621 \newcommand*{\sender}[2]{\renewcommand*{\@sender}{#1}\renewcommand*{\@senderrole}{#2}}
622 </le>

```

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

```

623 <*le | ex>
624 \newcommand*{\logo}[1]{\renewcommand*{\@logo}{#1}}
625 </le | ex>

```

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

```

626 <*le>
627 \newcommand*{\@unit}{}
628 \newcommand*{\unit}[1]{\renewcommand*{\@unit}{#1}}
629 </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.

```

630 <*le>
631 \newcommand*{\@emailuser}{}
632 \newcommand*{\@emaildomain}{}
633 \newcommand*{\email}[2]{\renewcommand*{\@emailuser}{#1}\renewcommand*{\@emaildomain}{#2}}
634 </le>

```

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

```

635 <*le>
636 \newcommand*{\@phone}{}
637 \newcommand*{\phone}[1]{\renewcommand*{\@phone}{#1}}
638 </le>

```

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

```

639 <*le>
640 \newcommand*{\@fax}{}
641 \newcommand*{\fax}[1]{\renewcommand*{\@fax}{#1}}
642 </le>

```

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

```
643 (*le)
644 \newcommand*\@mobile{}
645 \newcommand*\mobile[1]{\renewcommand*\@mobile{#1}}
646 \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).

```
647 (*le)
648 \newcommand*\@returnaddress{<specify return-address using \textbackslash{single-
line-return-address}>}
649 \renewcommand*\returnaddress[1]{\renewcommand*\@returnaddress{#1}}
650 \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).

```
651 (*le)
652 \newcommand*\@to{<Specify addressee using \textbackslash{}to{name}>}
653 \renewcommand*\to[1]{\renewcommand*\@to{#1}}
654 \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).

```
655 (*le)
656 \newcommand*\@toorganization{<Specify organization using
657 \textbackslash{}toorganization{>}
658 \newcommand*\toorganization[1]{\renewcommand*\@toorganization{#1}}
659 \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).

```
660 (*le)
661 \newcommand*\@toaddress{<Specify (multiline) destination
662 address\\using \textbackslash{}toaddress{>}
663 \newcommand*\toaddress[1]{\renewcommand*\@toaddress{#1}}
664 \le
```

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

```
665 (*le)
666 \newcommand*\@subject{-}
667 \newcommand*\subject[1]{\renewcommand*\@subject{#1}}
668 \le
```

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


```

669 <*\le>
670 \renewcommand*{\opening}[1]{#1}
671 </\le>

```

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

```

672 <*\le>
673 \newcommand*{\@closing}{<specify a closing formula using
674   \textbackslash{closing}\{>}
675 \renewcommand*{\closing}[1]{\renewcommand*{\@closing}{#1}}
676 </\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

```

677 <*\le>
678 \newcommand*{\@signature}{\vspace*{8ex}}
679 \renewcommand*{\signature}[1]{\renewcommand*{\@signature}{#1}}
680 </\le>

```

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

```

681 <*\le>
682 \newcommand*{\@carboncopy}{ }
683 \newcommand*{\carboncopy}[1]{\renewcommand*{\@carboncopy}{#1}}
684 </\le>

```

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

```

685 <*\le>
686 \newcommand*{\@enclosed}{ }
687 \newcommand*{\enclosed}[1]{\renewcommand*{\@enclosed}{#1}}
688 </\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).

```

689 <*\pt | rp | le>
690 \newcommand*{\@address}{
691   \PackageError{uantwerpendocs}
692   {Please, set your multi-line address and contact details using the
693     '\protect\address{' command in the preamble of your document}
694   {See the uantwerpendocs manual}
695 }
696 </\pt | rp | le>
697 %
698 <pt | rp>\newcommand*{\address}[1]{\renewcommand*{\@address}{#1}}
699 \le\renewcommand*{\address}[1]{\renewcommand*{\@address}{#1}}
700 %   \end{\macrocode}
701 % \end{macro}
702 %

```

```

703 % \begin{macro}{\exampart}
704 %   This macro will set the |\@examgropunumber| tag that will be used on
705 %   the exam title page.
706 %   \begin{macrocode}
707 <*ex>
708 \newcommand*{\@exampart}{}
709 \newcommand*{\exampart}[1]{\renewcommand*{\@exampart}{#1}}
710 </ex>

```

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

```

711 <*ex>
712 \newcommand*{\@examgroupnumber}{}
713 \newcommand*{\examgroupnumber}[1]{\renewcommand*{\@examgroupnumber}{#1}}
714 </ex>

```

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

```

715 <*ex>
716 \newcommand*{\@examdate}{TBD}
717 \newcommand*{\examdate}[1]{\renewcommand*{\@examdate}{#1}}
718 </ex>

```

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

```

719 <*ex>
720 \newcommand*{\@examlength}{TBD}
721 \newcommand*{\examlength}[1]{\renewcommand*{\@examlength}{#1}}
722 </ex>

```

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

```

723 <*ex>
724 \newcommand*{\@tstart}{TBD}
725 \newcommand*{\tstart}[1]{\renewcommand*{\@tstart}{#1}}
726 </ex>

```

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

```

727 <*ex>
728 \newcommand*{\@tend}{TBD}
729 \newcommand*{\tend}[1]{\renewcommand*{\@tend}{#1}}
730 </ex>

```

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

```

731 <*ex>
732 \ExplSyntaxOn
733 \seq_new:N \g_@@_rooms
734 \cs_new:Nn \@@_addroom:n {
735   \seq_gpush:Nn \g_@@_rooms { #1 }

```

```

736 }
737 \NewDocumentCommand{\room}{m}{
738   \@@_addroom:n { #1 }
739 }
740 \NewDocumentCommand{\jointrooms}{m}{
741   \seq_use:Nn \g_@@_rooms { #1 }
742 }
743 \NewDocumentCommand{\roomsname}{-}{
744   \if_int_compare:w \seq_count:N \g_@@_rooms > 1
745     \uantwerpendocsprop{roomsname}
746   \else:
747     \uantwerpendocsprop{roomname}
748   \fi:
749 }
750 \AtBeginDocument{
751   \seq_greverse:N \g_@@_rooms
752 }
753
754 \ExplSyntaxOff
755 \end{document}

```

\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.

```

756 \begin{document}
757 \newcommand{\@extrainfo}{}
758 \newcommand{\extrainfo}[2][separatepage]{
759   \ifthenelse{\equal{#1}{separatepage}}{
760     % then
761     \renewcommand{\@extrainfo}{\clearpage #2 \clearpage}
762   }
763   {
764     % else
765     \ifthenelse{\equal{#1}{firstpage}}{
766       {
767         \renewcommand{\@extrainfo}{#2}
768       }
769     }
770     \PackageError{uantwerpendocs}
771     {The first (optional) argument of '\protect\extrainfo' can
772      only be 'separatepage' or 'firstpage'}
773     {See the uantwerpendocs manual}
774   }
775 }
776 }
777 \end{document}

```

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

pages.

```
778 <*ex>
779 \newcommand*{\@studentnr}{0}
780 \newcommand*{\studentnr}[1]{\renewcommand*{\@studentnr}{#1}}
781 </ex>
```

6.9 Header and Footer

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

```
782 <*ct>
783 \if@twoside
784 \lhead[\thepage]{\slshape\rightmark}
785 \chead[]{}
786 \rhead[\slshape\leftmark]{\thepage}
787 \lfoot[\uantwerpendocsprop{org-ua} -- \@facultyacronym]{\@courseversion}
788 \cfoot[]{}
789 \rfoot[]{\@title}\ifvoid{\@subtitle}{\@}{ --- \@subtitle}}
790 \else
791 \lhead[]{\leftmark}
792 \chead[]{}
793 \rhead[]{\thepage}
794 \lfoot[]{\@courseversion}
795 \cfoot[]{\UAntwerpen--\@facultyacronym}
796 \rfoot[]{\@title}
797 \fi
798 </ct>
```

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

```
799 <*bmt | pt | rp>
800 \if@twoside
801 \lhead[\thepage]{\slshape\rightmark}
802 \chead[]{}
803 \rhead[\slshape\leftmark]{\thepage}
804 \lfoot[]{}
805 \cfoot[]{}
806 \rfoot[]{}
807 \else
808 \lhead[]{\leftmark}
809 \chead[]{}
810 \rhead[]{\thepage}
811 \lfoot[]{}
812 \cfoot[]{}
813 \rfoot[]{}
814 \fi
815 </bmt | pt | rp>
```

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

```
816 <*le>
817 \lhead[]{}

```

```

818 \chead[]{}
819 \rhead[]{}
820 \lfoot[\small\textcolor{gray}{\@date}]{\textcolor{gray}{\@date}}
821 \cfoot[]{}
822 \rfoot[\small\textcolor{gray}{\pagename~\thepage~\uantwerpendocsprop{of}~\pageref{lastpage}}]
823   {\small\textcolor{gray}{\pagename~\thepage~\uantwerpendocsprop{of}~\pageref{lastpage}}}
824 \le

```

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

```

825 \ex
826 \lhead[]{}
827 \chead[]{}
828 \cfoot[\small \thepage/\pageref{lastpage}]{\small \thepage/\pageref{lastpage}}
829 \if@examiner
830 \rhead[\small EXAMINER VERSION]{\small EXAMINER VERSION}
831 \AddToShipoutPicture{
832   \put(60,40){\rotatebox{60}{\textcolor{watermark}{
833     \fontfamily{phv}\fontsize{105}{130}\fontseries{m}\fontshape{n}%
834     \selectfont Examiner Version}}}}
835 \else
836 \rhead[\small Student nr. \@studentnr]{\small Student nr. \@studentnr}
837 \fi
838 \ex

```

Some common code remains:

```

839 \ct
840 \setlength{\headheight}{13.7pt}
841 \renewcommand*{\headrulewidth}{1pt}
842 \renewcommand*{\footrulewidth}{1pt}
843 \pagenumbering{arabic}
844 \ct
845 \mt | pt | rp | le
846 \renewcommand*{\headrulewidth}{0pt}
847 \renewcommand*{\footrulewidth}{0pt}
848 \mt | pt | rp | le
849 \ex
850 \renewcommand*{\headrulewidth}{0pt}
851
852 \ex

```

Remains to take care of filling

```

853 \ct | mt | pt | rp | le
854 \if@filled\else
855   \raggedright
856 \fi
857 \raggedbottom
858 \onecolumn
859 \ct | mt | pt | rp | le

```

6.10 Copyright notice

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

```

860 <*ct | rp>
861 \newcommand{\@crnotice}{
862   This document has been typeset using \LaTeX{} and the
863   \texttt{uantwerpendocs} package.\@
864   \@copyrightnotices
865
866 </ct | rp>
867 <ct> \@courseversion
868 <*ct | rp>
869
870   CONFIDENTIAL AND PROPRIETARY.
871
872   \copyright{} \@versionyear{} \uantwerpendocsprop{org-ua}, \uantwerpendocsprop{arr}.
873 }
874 </ct | rp>

```

6.11 Fancy chapter headers for the phdthesis class

```

875 <*pt | rp>
876 \def\@makechapterhead#1{%
877   \vspace*{1ex}%
878   \begin{flushright}
879     \makebox[0pt][l]{\rule[-0.4em]{10cm}{1.8em}}\textcolor{white}
880     {\bf\LARGE~\chaptername~}
881     \raisebox{-24pt}{
882       \begin{tikzpicture}
883         \foreach \theta in {0,5,...,355} {
884           \node[color=white] at (\theta:0.025)
885             {\bf\fontsize{72}{12}\selectfont\thechapter};
886         }
887         \node[color=uacorpblue] at (0,0)
888           {\bf\fontsize{72}{12}\selectfont\thechapter};
889       \end{tikzpicture}
890     }\hspace*{-8pt}
891     \par\nobreak
892     \interlinepenalty\@M
893     \bf\huge\textcolor{darkgray}{\rule[-0.5ex]{0em}{2.6ex}~#1}
894     \par\nobreak
895   \end{flushright}
896   \rule{\textwidth}{1pt}
897   \vspace{5\p@}\par\nobreak
898 }
899 \def\@schapter#1{%
900   \@makeschapterhead{#1}%
901   \@afterheading
902 }
903 \def\@makeschapterhead#1{%
904   \vspace*{1ex}%
905   \begin{flushright}

```

```

906     \bf\LARGE\textcolor{darkgray}{\rule[-0.5ex]{0em}{2.6ex}~#1}
907     \end{flushright}
908     \rule{\textwidth}{1pt}
909     \vspace{5\p@}\par
910 }
911 % overwrite appendix
912 \def\appendix{
913     \setcounter{chapter}{0}
914     \renewcommand*{\thechapter}{\Alph{chapter}}
915     \renewcommand*{\chaptername}{appendixname}
916 }
917 </pt | rp>

```

6.12 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.

`\maketitle` The macro for the coursetext class:

```

918 <*ct>
919 \renewcommand\maketitle{%
920     \pagestyle{empty}
921     \begin{titlepage}
922         \AddToShipoutPicture*{%
923             \put(0,0){%
924                 \begin{tikzpicture}[inner sep=0pt,outer sep=0pt]
925                     \clip (0,0) rectangle(\paperwidth,\paperheight);
926
927                     \begin{scope}
928                         \clip (2.125,20.192) rectangle (\paperwidth,6);
929                         \fill[sidecolor]
930                             (2.125,20.192) rectangle (\paperwidth,6);
931                         \node[anchor=south west]
932                             at (2.125,6)
933                             {\ifx\@titlepageimage\@empty
934                                 \else
935                                 \includegraphics[keepaspectratio,
936                                     scale=0.01,
937                                     min size={18.875cm}{14.192cm}]{\@titlepageimage}
938                                 \fi};
939                     \end{scope}
940
941                     \node
942                     [anchor=west,text width=13.75cm,align=left,font=\Huge,uauaside]
943                     at (2.125,27)
944                     {
945                         \textsf{\textbf{\@title}}
946                     };
947
948                     \node
949                     [anchor=west,text width=13.75cm,align=left,font=\Large,uauaside]
950

```

```

951         at (2.125,25.5)
952         {
953             \textsf{\textbf{\@subtitle}}
954         };
955
956         \node
957         [anchor=base west,maincolor,text width=13.75cm,align=left,font=\LARGE]
958         at (2.125,24)
959         {\textsf{\textbf{\@author}}};
960
961
962         \node
963         [anchor=west,text width=13.75cm,align=left,font=\large,uauaside]
964         at (2.125,22)
965         {\textsf{\jointcourseswithcodes{\}}};
966
967         \fill[maincolor] (2.125,6)
968         -- (\paperwidth,6)
969         -- (\paperwidth,2.625)
970         -- (2.55,2.625)
971         arc (-90:-180:0.425)
972         -- cycle;
973
974         \node[white,anchor=west,align=left,font=\large]
975         (SN) at (2.55,5.1)
976         {
977             \begin{tabular}{@{}l@{~\,}p{14.5cm}}
978                 \textsf{\lecturersname}
979                 & \textsf{\textbf{\jointlecturers{ | }}}
980             \end{tabular}
981         };
982
983         \node[white,anchor=west,text width=17.5cm,align=left,font=\small]
984         at (2.55,3.7)
985         {\textsf{\@degree{}}\}
986         \textsf{\textbf{\@faculty{ | \@academicyear \hfill}
987             \@publishercode{}}\}
988         \textsf{\@publisher{}};
989
990         \node[anchor=west] at (2.125,1.313)
991         {\includegraphics[width=4.75cm]{\logopos}};
992     \end{tikzpicture}
993 }
994 }
995 \end{titlepage}%
996 ~\par\relax
997 \clearpage
998 \if@copyright
999 \backgroundsetup{contents={Copyright University of Antwerp, All
1000     Rights Reserved}}
1001 \fi
1002 \vspace*{\stretch{1}}
1003 \@crnotice
1004 \clearpage

```



```

1005 \setcounter{footnote}{0}%
1006 \global\let\thanks\relax
1007 \global\let\maketitle\relax
1008 \global\let\@thanks\@empty
1009 \global\let\title\relax
1010 \global\let\author\relax
1011 \global\let\date\relax
1012 \global\let\and\relax
1013 \pagestyle{fancy}
1014 \thispagestyle{empty}
1015 }
1016 \</ct>

```

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

```

1017 \< *ct>
1018 \newcommand\makefinalpage{
1019 \cleardoublepage
1020 \thispagestyle{empty}
1021 ~% intentionally blank page
1022 \clearpage
1023 \thispagestyle{empty}
1024 \begin{tikzpicture}[remember picture,overlay]
1025 \node at (current page.center) {
1026 \begin{tikzpicture}[inner sep=0pt]
1027 \clip (0,0) rectangle(\paperwidth,\paperheight);
1028 \fill[sidecolor] (0,0) rectangle (2.125cm,2.625cm);
1029 \end{tikzpicture}
1030 };
1031 \end{tikzpicture}
1032 }
1033 \</ct>

```

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

```

1034 \< *bmt>
1035 \renewcommand\maketitle{%
1036 \pagestyle{empty}
1037 \begin{titlepage}
1038 \AddToShipoutPicture*{%
1039 \put(0,0){%
1040 \begin{tikzpicture}[inner sep=0pt,outer sep=0pt]
1041 \clip (0,0) rectangle(\paperwidth,\paperheight);
1042 \fill[lightgray]
1043 (2.125,{\paperheight-7.5cm}) rectangle (\paperwidth,6);
1044
1045 \node
1046 [anchor=west,text width={\paperwidth-5cm},align=left,font=\Huge,uauaside]
1047 at (2.125,{\paperheight-3cm})
1048 {
1049 \textsf{\textbf{\@title}}
1050 };
1051
1052 \node

```

```

1053     [anchor=west,text width={\paperwidth-5cm},align=left,font=\Large,uauaside]
1054     at (2.125,{\paperheight-5cm})
1055     {
1056         \textsf{\textbf{\@subtitle}}
1057     };
1058
1059     \node
1060     [anchor=base west,uauamain,
1061     text width={\paperwidth-5cm},align=left,font=\LARGE]
1062     at (2.125,{\paperheight-6.5cm})
1063     {\textsf{\textbf{\@author}}};
1064
1065     \fill[gray] (2.125,6)
1066     -- (\paperwidth,6)
1067     -- (\paperwidth,2.625)
1068     -- (2.55,2.625)
1069     arc (-90:-180:0.425)
1070     -- cycle;
1071
1072     \node[white,anchor=west,align=left,font=\large]
1073     (SN) at (2.55,4.9)
1074     {
1075         \begin{tabular}{@{}l@{~\,},p{14.5cm}}
1076             \textsf{\supervisorsname}
1077             & \textsf{\textbf{\jointsupervisors{ | }}}
1078         \end{tabular}
1079     };
1080
1081
1082     \node[white,anchor=west,text width=17.5cm,align=left,font=\small]
1083     at (2.55,3.7)
1084     {\textsf{\uantwerpendocsprop{bmthesisname}
1085         \@degree{}}\}
1086     \textsf{\textbf{\@faculty{
1087         | \@defense\location, \@defensedate}}}};
1088
1089     \node[anchor=west] at
1090     (2.125,1.313)
1091     {\includegraphics[width=4.75cm]{\logoposua}};
1092     \end{tikzpicture}
1093 }
1094 }
1095 \end{titlepage}%
1096 ~\par\relax
1097 \clearpage
1098 \setcounter{footnote}{0}%
1099 \global\let\thanks\relax
1100 \global\let\maketitle\relax
1101 \global\let\@thanks\@empty
1102 \global\let\title\relax
1103 \global\let\author\relax
1104 \global\let\date\relax
1105 \global\let\and\relax
1106 \pagestyle{fancy}

```

```

1107 \thispagestyle{empty}
1108 }
1109 </bmt>

```

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

```

1110 <*bmt>
1111 \newcommand\makefinalpage{
1112   \cleardoublepage
1113   \thispagestyle{empty}
1114   ~% intentionally blank page
1115   \clearpage
1116   \thispagestyle{empty}
1117   \begin{tikzpicture}[remember picture,overlay]
1118     \node at (current page.center) {
1119       \begin{tikzpicture}[inner sep=0pt]
1120         \clip (0,0) rectangle(\paperwidth,\paperheight);
1121         \fill[lightgray] (0,0) rectangle (2.125cm,2.625cm);
1122       \end{tikzpicture}
1123     };
1124   \end{tikzpicture}
1125 }
1126 </bmt>

```

6.13 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.

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

```

1127 <*pt>
1128 \renewcommand\maketitle{%
1129   \pagestyle{empty}
1130   \begin{titlepage}
1131     \AddToShipoutPicture*{%
1132       \put(0,0){%
1133         \begin{tikzpicture}[inner sep=0pt,outer sep=0pt]
1134           \clip (0,0) rectangle(\paperwidth,\paperheight);
1135           \fill[lightgray]
1136             (2.125,19) rectangle (\paperwidth,6);
1137           \begin{scope}
1138             \clip (2.125,19) rectangle (\paperwidth,6);
1139             \node[anchor=south west]
1140               at (2.125,6)
1141               {\ifx\@titlepageimage\@empty
1142                \else
1143                \includegraphics[keepaspectratio,
1144                  scale=0.01,
1145                  min size={15.875cm}{13cm}]{\@titlepageimage}
1146                \fi};
1147           \end{scope}

```

```

1148
1149 \node
1150 [anchor=west,text width=13.75cm,align=left,font=\Huge,uauaside]
1151 at (2.125,23.5)
1152 {
1153 \textsf{\textbf{\@title}}
1154 };
1155
1156 \node
1157 [anchor=west,text width=13.75cm,align=left,font=\Large,uauaside]
1158 at (2.125,21.5)
1159 {
1160 \textsf{\textbf{\@subtitle}}
1161 };
1162
1163 \node
1164 [anchor=base west,maincolor,
1165 text width=13.75cm,align=left,font=\LARGE]
1166 at (2.125,20)
1167 {\textsf{\textbf{\@author}}};
1168
1169 \fill[maincolor] (2.125,6)
1170 -- (\paperwidth,6)
1171 -- (\paperwidth,2.625)
1172 -- (2.55,2.625)
1173 arc (-90:-180:0.425)
1174 -- cycle;
1175
1176 \node[white,anchor=west,align=left,font=\large]
1177 (SN) at (2.55,4.9)
1178 {
1179 \begin{tabular}{@{}l@{~\,}p{11.5cm}}
1180 \textsf{\supervisorsname}
1181 & \textsf{\textbf{\jointsupervisors{ | }}}
1182 \end{tabular}
1183 };
1184
1185
1186 \node[white,anchor=west,text width=14.5cm,align=left,font=\small]
1187 at (2.55,3.7)
1188 {\textsf{\uantwerpendocsprop{pthesisnamei}
1189 \@degree{}}\}
1190 \textsf{\textbf{\@faculty{
1191 | \@defenselocation, \@defensedate}}}};
1192
1193 \node[anchor=west] at
1194 (2.125,1.313)
1195 {\includegraphics[width=4.75cm]{\logoposua}};
1196 \end{tikzpicture}
1197 }
1198 }
1199 \end{titlepage}%
1200 ~\par\relax
1201 \cleardoublepage

```

```

1202 \begin{center}
1203 \includegraphics[width=4.75cm]{\logoposua}
1204 \vfill
1205 \@faculty\\
1206 \@degree\par
1207 \vfill
1208 \Huge\textsf{\@title}\par
1209 \large\textsf{\@subtitle}\par
1210 \vfill
1211 \normalsize\uantwerpendocsprop{pthesisnamei}\\
1212 \@degree\\
1213 \uantwerpendocsprop{pthesisnameii}\\
1214 \medskip
1215 \textbf{\@author}
1216 \vfill
1217 \begin{minipage}[b]{0.4\textwidth}
1218 \@defenselocation, \@defensedate
1219 \end{minipage}
1220 \hfill
1221 \begin{minipage}[b]{0.4\textwidth}
1222 \flushright
1223 \supervisorsname\\
1224 \jointssupervisors{\\}
1225 \end{minipage}
1226 \end{center}
1227 \clearpage
1228 \textbf{\uantwerpendocsprop{juryname}}\hfill\par
1229 \textbf{\uantwerpendocsprop{jurychairmanname}}\hfill\break
1230 \@jurychairman{\ifdefvoid{\@jurychairmanaff}{}, \@jurychairmanaff}\\
1231 \hfill\break
1232 \textbf{\supervisorsname}\hfill\break
1233 \jointssupervisorswithaffiliation{\\}\\
1234 \hfill\break
1235 \textbf{\uantwerpendocsprop{jurymembersname}}\hfill\break
1236 \jointjurymembers{\\}
1237 \hfill\break
1238 \vfill
1239 \textbf{Contact}\\
1240 \smallskip
1241 \@author\\
1242 \@affiliation\\
1243 \@address\\
1244 \vfill
1245 \copyright{} \@defensedate{} \@author\\
1246 \uantwerpendocsprop{arr}.
1247 \vfill
1248 \begin{minipage}[b]{.5\linewidth}
1249 \ifdefempty{\@isbn}{\{ISBN \@isbn\}~\\
1250 \ifdefempty{\@depot}{\{Wettelijk depot \@depot\}~\\
1251 \end{minipage}
1252 \hfill
1253 \ifdefempty{\@isbn}{\{
1254 \begin{minipage}[b]{.5\linewidth}
1255 \expandafter\EAN \@isbn

```

```

1256     \end{minipage}
1257   }
1258   \setcounter{footnote}{0}%
1259   \global\let\thanks\relax
1260   \global\let\maketitle\relax
1261   \global\let\@thanks\@empty
1262   \global\let\title\relax
1263   \global\let\author\relax
1264   \global\let\date\relax
1265   \global\let\and\relax
1266   \pagestyle{fancy}
1267   \thispagestyle{empty}
1268   \
1269 }
1270 </pt>

```

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

```

1271 <*pt>
1272 \newcommand\makefinalpage{
1273   \cleardoublepage
1274   \thispagestyle{empty}
1275   ~% intentionally blank page
1276   \clearpage
1277   \thispagestyle{empty}
1278   \begin{tikzpicture}[remember picture,overlay]
1279     \node at (current page.center) {
1280       \begin{tikzpicture}[inner sep=0pt]
1281         \clip (0,0) rectangle(\paperwidth,\paperheight);
1282         \fill[sidecolor] (0,0) rectangle (2.125cm,2.625cm);
1283       \end{tikzpicture}
1284     };
1285   \end{tikzpicture}
1286 }
1287 </pt>

```

6.14 Title page for the report classes

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

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

```

1288 <*rp>
1289 \renewcommand\maketitle{%
1290   \pagestyle{empty}
1291   \begin{titlepage}
1292     \AddToShipoutPicture*{%
1293       \put(0,0){%
1294         \begin{tikzpicture}[inner sep=0pt,outer sep=0pt]
1295           \clip (0,0) rectangle(\paperwidth,\paperheight);
1296           \fill[lightgray]

```

```

1297 (2.125,20.192) rectangle (\paperwidth,6);
1298 \begin{scope}
1299 \clip (2.125,20.192) rectangle (\paperwidth,6);
1300 \node[anchor=south west]
1301 at (2.125,6)
1302 {\ifx\@titlepageimage\empty
1303 \else
1304 \includegraphics[keepaspectratio,
1305 scale=0.01,
1306 min size={18.875cm}{14.192cm}]{\@titlepageimage}
1307 \fi};
1308 \end{scope}
1309
1310 \node
1311 [anchor=west,text width=17cm,align=left,font=\Huge,uauaside]
1312 at (2.125,\paperheight-3cm)
1313 {
1314 \textsf{\textbf{\@title}}
1315 };
1316
1317 \node
1318 [anchor=west,text width=17cm,align=left,font=\Large,uauaside]
1319 at (2.125,\paperheight-5cm)
1320 {
1321 \textsf{\textbf{\@subtitle}}
1322 };
1323
1324 \node
1325 [anchor=base west,maincolor,
1326 text width=17cm,align=left,font=\LARGE]
1327 at (2.125,\paperheight-6.5cm)
1328 {\textsf{\textbf{\@author}}};
1329
1330 \fill[maincolor] (2.125,6)
1331 -- (\paperwidth,6)
1332 -- (\paperwidth,2.625)
1333 -- (2.55,2.625)
1334 arc (-90:-180:0.425)
1335 -- cycle;
1336
1337 \node[white,anchor=west,text width=17cm,align=left,font=\small]
1338 at (2.55,5.3)
1339 {\textsf{\textbf{\@extra}}};
1340
1341 \node[white,anchor=west,text width=17cm,align=left,font=\small]
1342 at (2.55,4)
1343 {\textsf{\textbf{\@affiliation}}
1344 | \@versionyear}\@
1345 \@address}};
1346
1347 \node[anchor=west] at
1348 (2.125,1.313)
1349 {\includegraphics[width=4.75cm]{\logopos}};
1350 \end{tikzpicture}

```

```

1351     }
1352   }
1353   \end{titlepage}%
1354   ~\par\relax
1355   \cleardoublepage
1356   \begin{center}
1357     \includegraphics[width=4.75cm]{\logopos}
1358     \vfill
1359     \@affiliation\\
1360     \@extra\par
1361     \vfill
1362     \Huge\textsf{\@title}\par
1363     \large\textsf{\@subtitle}\par
1364     \vfill
1365     \textbf{\@author}
1366     \vfill
1367   \end{center}
1368   \clearpage
1369   \vfill
1370   \textbf{Contact}\\
1371   \smallskip
1372   \@author\\
1373   \@affiliation\\
1374   \@address\\
1375   \vfill
1376   \copyright{} \@versionyear{} \@author\\
1377   \uantwerpendocsprop{arr}.
1378   \vfill
1379   \setcounter{footnote}{0}%
1380   \global\let\thanks\relax
1381   \global\let\maketitle\relax
1382   \global\let\@thanks\@empty
1383   \global\let\title\relax
1384   \global\let\author\relax
1385   \global\let\date\relax
1386   \global\let\and\relax
1387   \pagestyle{fancy}
1388   \thispagestyle{empty}
1389   \
1390 }
1391 </rp>

```

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

```

1392 <rp>
1393 \newcommand\makefinalpage{
1394   \cleardoublepage
1395   \thispagestyle{empty}
1396   ~% intentionally blank page
1397   \clearpage
1398   \thispagestyle{empty}
1399   \begin{tikzpicture}[remember picture,overlay]
1400     \node at (current page.center) {
1401       \begin{tikzpicture}[inner sep=0pt]

```



```

1402     \clip (0,0) rectangle(\paperwidth,\paperheight);
1403     \fill[sidecolor] (0,0) rectangle (2.125cm,2.625cm);
1404     \end{tikzpicture}
1405 };
1406 \end{tikzpicture}
1407 }
1408 \rp>

```

6.15 Title page for the letter class

6.15.1 Title Page

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

```

1409 (*le)
1410 \newcommand\maketitle{%
1411     \pagestyle{fancy}
1412     \thispagestyle{empty}
1413     \begin{tikzpicture}[overlay,remember picture]
1414         \path (current page.north west) +(1.8cm,-1.2cm)
1415         node[anchor=north west] {
1416             \includegraphics[height=1.1cm]{\@logo}
1417         };
1418         \draw (current page.north west)
1419         +(1cm,-98mm) -- +(1.5cm,-98mm);
1420         % 90 x 45
1421         % pos: 20mm van kant, 15mm van onderkant
1422         \path (current page.north east) +(-100mm,-65mm)
1423         node[anchor=west,text width=80mm,align=left] {
1424             \scriptsize\textcolor{gray}{\uuline{\@returnaddress}}\\*
1425             \normalsize\@to\\*
1426             \@toorganization\\*
1427             \@toaddress
1428         };
1429     \end{tikzpicture}
1430     ~\\[3ex]
1431     \textcolor{uacorpblue}{\bf \@sender}
1432     \ifx\@senderrole\@emptymacro\\[1.75ex]\else \\*\@senderrole\\[1.75ex]\fi
1433     \@faculty
1434     \ifx\@unit\@emptymacro\else\\* \@unit\fi~\\[1.75ex]
1435     \@address\\[1.75ex]
1436     \ifx\@email\@emptymacro\else E \@emailuser\tat{}\@emaildomain\\fi
1437     \ifx\@phone\@emptymacro\else T \@phone\\fi
1438     \ifx\@fax\@emptymacro\else F \@fax\\fi
1439     \ifx\@mobile\@emptymacro\else M \@mobile\\fi
1440     ~\\[4ex]
1441     \begin{tikzpicture}[anchor=north west,align=left,outer sep=0,inner sep=0]
1442         \path
1443         (0,0) node { \scriptsize \strut
1444             \textcolor{gray}{\uppercase\expandafter{\uantwerpendocsprop{datename}}} } }
1445         (4cm,0) node { \scriptsize \strut
1446             \textcolor{gray}{\uppercase\expandafter{\uantwerpendocsprop{subjectname}}} } }
1447         (0,-2.5ex) node { \strut \@date }

```

```

1448      (4cm,-2.5ex) node[align=left] { \strut \@subject };
1449      \end{tikzpicture}~\|[4ex]
1450 }
1451 \[le)

```

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

```

1452 \[le)
1453 \AtEndDocument{
1454   \@closing\[*[3ex]\@signature~\|[3ex]
1455   \@sender
1456   \ifx\@senderrole\@emptymacro\|[8ex]\else\[*\@senderrole\|[8ex]\fi
1457   \setlength{\parskip}{0em}
1458   \ifx\@carboncopy\@emptymacro\else CC: \@carboncopy\|[4ex]\fi
1459   \ifx\@enclosed\@emptymacro\else ENCL: \@enclosed\fi
1460   \label{lastpage}
1461 }
1462 \[le)

```

6.16 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.

```

1463 \[ex)
1464 \renewcommand\maketitle{%
1465   \pagestyle{fancy}
1466   \AddToShipoutPicture*{%
1467     \put(0,0){%
1468       \begin{tikzpicture}[inner sep=0pt,outer sep=0pt]
1469         \clip (0,0) rectangle(\paperwidth,\paperheight);
1470         \fill[lightgray]
1471           (2.125,{\paperheight-7cm}) rectangle (\paperwidth,6);
1472       }
1473       \node
1474         [anchor=west,text width={\paperwidth-5cm},align=left]
1475         at (2.125,{\paperheight-3cm})
1476         {%
1477           \fontfamily{phv}\fontsize{18}{22}\fontseries{b}%
1478           \fontshape{n}\selectfont%
1479           \@course{}
1480           \ifx\@exampart\@emptymacro
1481             \else --- \@exampart\fi
1482         };
1483       \node
1484         [anchor=west,text width={\paperwidth-5cm},align=left]
1485         at (2.125,{\paperheight-4cm})
1486         {%
1487           \fontfamily{phv}\fontsize{12}{18}\fontseries{b}%
1488           \fontshape{n}\selectfont%

```

```

1489         \@coursecode
1490     };
1491
1492     \node
1493     [anchor=west,text width={\paperwidth-5cm},align=left,font=\large]
1494     at (2.125,{\paperheight-5cm})
1495     {%
1496         \fontfamily{phv}\fontsize{12}{18}\fontseries{m}%
1497         \fontshape{n}\selectfont%
1498         \uantwerpendocsprop{seriesname} \@examgroupnumber{} \hfill \@examdate{}
1499     };
1500
1501     \node[anchor=south west,align=left,inner sep=0pt] at (3,21)
1502     {%
1503         \fontfamily{phv}\fontsize{14}{19}\fontseries{b}%
1504         \fontshape{n}\selectfont%
1505         \uantwerpendocsprop{examname}
1506     };
1507
1508     \node[anchor=south west,align=left,inner sep=0pt] at (3,19)
1509     {%
1510         \fontfamily{phv}\fontsize{12}{18}\fontseries{m}%
1511         \fontshape{n}\selectfont%
1512         \uantwerpendocsprop{lastname}
1513     };
1514     \foreach \nn in {0,1,...,33} {
1515         \draw[fill=white] (3,18) ++({0.5*\nn},0) rectangle +(0.5,0.8);
1516     }
1517
1518     \node[anchor=south west,align=left,inner sep=0pt] at (3,17)
1519     {%
1520         \fontfamily{phv}\fontsize{12}{18}\fontseries{m}%
1521         \fontshape{n}\selectfont%
1522         \uantwerpendocsprop{firstname}
1523     };
1524
1525     \foreach \nn in {0,1,...,23} {
1526         \draw[fill=white] (3,16) ++({0.5*\nn},0) rectangle +(0.5,0.8);
1527     }
1528
1529     \node[anchor=south west,align=left,inner sep=0pt] at (16,17)
1530     {%
1531         \fontfamily{phv}\fontsize{12}{18}\fontseries{m}%
1532         \fontshape{n}\selectfont%
1533         \uantwerpendocsprop{docketname}
1534     };
1535     \foreach \nn in {0,1,...,7} {
1536         \draw[fill=white] (16,16) ++({0.5*\nn},0) rectangle +(0.5,0.8);
1537     }
1538
1539     \node[anchor=south west,align=left,inner sep=0pt,text width=17cm]
1540     at (3,14)
1541     {%
1542         \fontfamily{phv}\fontsize{12}{21}\fontseries{m}%

```

```

1543         \fontshape{n}\selectfont%
1544         \uantwerpendocsprop{examdurationname}: \@examlength
1545     };
1546     \node[anchor=south west,align=left,inner sep=0pt,text width=17cm]
1547     at (3,11)
1548     {%
1549         \fontfamily{phv}\fontsize{12}{15}\fontseries{m}%
1550         \fontshape{n}\selectfont%
1551         \begin{tabular}{@{}l@{}l}%
1552             \uantwerpendocsprop{examstartname}& : & \@tstart\\
1553             \uantwerpendocsprop{examendname} & : & \@tend
1554         \end{tabular}
1555     };
1556
1557     \node[anchor=south west,align=left,inner sep=0pt,text width=17cm]
1558     at (3,8)
1559     {%
1560         \fontfamily{phv}\fontsize{12}{21}\fontseries{m}%
1561         \fontshape{n}\selectfont%
1562         \roomsname: \jointrooms{, }
1563     };
1564
1565     \node
1566     [anchor=base west,uauamain,
1567     text width={\paperwidth-5cm},align=left,font=\LARGE]
1568     at (2.125,{\paperheight-6.5cm})
1569     {\textsf{\textbf{\@author}}};
1570
1571     \fill[gray] (2.125,6)
1572     -- (\paperwidth,6)
1573     -- (\paperwidth,2.625)
1574     -- (2.55,2.625)
1575     arc (-90:-180:0.425)
1576     -- cycle;
1577
1578     \node[white,anchor=west,align=left,font=\large]
1579     (SN) at (2.55,4.9)
1580     {
1581         \begin{tabular}{@{}l@{~\,}p{14.5cm}}
1582             \textsf{\lecturersname}
1583             & \textsf{\textbf{\jointlecturers{ | }}}
1584         \end{tabular}
1585     };
1586
1587     \node[white,anchor=west,text width=17.5cm,align=left,font=\small]
1588     at (2.55,3.7)
1589     {\textsf{\@degree{}}\}
1590     \textsf{\textbf{\@faculty{}}}};
1591
1592     \node[anchor=west] at (2.125,1.313)
1593     {\includegraphics[width=4.75cm]{\logopos}};
1594 \end{tikzpicture}
1595 }
1596 }

```

```

1597 ~\par\relax
1598 \clearpage
1599 \lfoot[\small \@shorttitle]{\small \@shorttitle}
1600 \rfoot[\small Groep \@examgroupnumber{} ---
1601 \@academicyear]{\small Groep \@examgroupnumber{} --- \@academicyear}
1602 \renewcommand*{\footrulewidth}{1pt}
1603 }
1604 \</ex>

```

6.17 Auxiliary functions to typeset exams

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

```

1605 \<ex>
1606 \newcounter{question}
1607 \setcounter{question}{0}
1608 \renewcommand*{\thequestion}{\@arabic\c@question}
1609 \newcommand{\question}[1]{
1610   \stepcounter{question}
1611   \thequestion.~#1%
1612 }
1613 \</ex>

```

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

```

1614 \<ex>
1615 \newcommand*{\questionweight}[1]{%
1616   \hspace{\fill}
1617   \begin{tabular}{|c|}
1618     \hline
1619     \small \uantwerpendocsprop{weightname}: #1\\
1620     \hline
1621   \end{tabular}\\
1622 }
1623 \</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.

```

1624 \<ex>
1625 \newcommand{\engdut}[2]{%
1626   \begin{tabular}{ccc}%
1627     \selectlanguage{english}%
1628     \begin{minipage}[t]{0.45\textwidth}%
1629       #1
1630     \end{minipage}%
1631     &~~~&
1632     \selectlanguage{dutch}%
1633     \begin{minipage}[t]{0.45\textwidth}%
1634       #2
1635     \end{minipage}%
1636   \end{tabular}

```

```

1637 \selectlanguage{english}%
1638 }
1639 \end{ex}

```

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

```

1640 \end{ex}
1641 \newcommand*\@mcsymbol{\square}
1642 \newcommand*\setmcsymbol[1]{\renewcommand\@mcsymbol{#1}}
1643 \end{ex}

```

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

```

1644 \end{ex}
1645 \newcommand\mc[1]{%
1646   \hfill\break\quad\begin{tabular}{cc}
1647     & $\@mcsymbol$ \\
1648     & & \\
1649     & \begin{minipage}[t]{0.9\textwidth}%
1650       #1 \\
1651       \end{minipage}%
1652     \end{tabular} \\
1653   }
1654 \end{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.

```

1655 \end{ex}
1656 \newcommand\engdutm[2]{%
1657   \hfill\break\begin{tabular}{cccc}
1658     & $\@mcsymbol$ \\
1659     & & \\
1660     & \selectlanguage{english}%
1661     & \begin{minipage}[t]{0.42\textwidth}%
1662       #1 \\
1663       \end{minipage}%
1664     & --- & \\
1665     & \selectlanguage{dutch}%
1666     & \begin{minipage}[t]{0.42\textwidth}%
1667       #2 \\
1668       \end{minipage}%
1669     \end{tabular} \\
1670   \selectlanguage{english}%
1671 }
1672 \end{ex}

```

`\insertsolutionspagepartial` fills the remainder of the page with 'fill-out' squares. as observing/controlling the current line position in L^AT_EX 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.

```

1673 <*ex>
1674 \newcommand\insertsolutionspagepartial[1]{
1675   ~\relax
1676   \AddToShipoutPicture*{%
1677     \put(0,0){%
1678       \begin{tikzpicture}
1679         \clip (0,0) rectangle (21,#1);
1680 % \draw[densely dotted, step=0.5cm,black!20] (0.999,0.990) grid (20,1.5);
1681 \draw[densely dotted, step=0.5cm,black!20] (0.999,1.499) grid (2,2.5);
1682 \draw[densely dotted, step=0.5cm,black!20] (18.999,1.499) grid (20,2.5);
1683
1684 \draw[densely dotted, step=0.5cm,black!20] (0.999,2.499) grid (20,27);
1685 \draw[densely dotted, step=0.5cm,black!20] (0.999,27) grid (16,28);
1686 \draw[densely dotted, step=0.5cm,black!20] (19.499,27) grid (20,28);
1687 \draw[densely dotted, step=0.5cm,black!20] (0.99,27.999) grid
1688 (20,28.5);
1689 \draw[ultra thick] (1,#1) -- (20,#1);
1690 \end{tikzpicture}
1691 }
1692 }%
1693 \clearpage
1694 \relax
1695 }
1696 </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').

```

1697 <*ex>
1698 \newcommand\insertsolutionspage[1]{
1699   \clearpage
1700   \AddToShipoutPicture*{%
1701     \put(0,0){%
1702       \begin{tikzpicture}
1703         \clip (0,0) rectangle (21,29.5);
1704         \draw[densely dotted, step=0.5cm,black!20] (0.999,1.499) grid (2,2.5);
1705         \draw[densely dotted, step=0.5cm,black!20] (18.999,1.499) grid (20,2.5);
1706
1707         \draw[densely dotted, step=0.5cm,black!20] (0.999,2.499) grid (20,28);
1708         \draw[densely dotted, step=0.5cm,black!20] (0.999,28) grid (16,28.5);
1709         \draw[densely dotted, step=0.5cm,black!20] (19.499,28) grid (20,28.5);
1710       \end{tikzpicture}
1711     }
1712     \put(120,150){\rotatebox{60}{\textcolor{watermark}{
1713       \fontfamily{phv}\fontsize{105}{130}\fontseries{m}\fontshape{n}\selectfont
1714       #1}
1715     }
1716   }
1717 }%
1718 ~\relax
1719 }
1720 </ex>

```

We add a lastpage label to the final page

```
1721 <*ex>
1722 \AtEndDocument{
1723   \label{lastpage}
1724 }
1725 </ex>
1726 % \end{macrocode
1727 %
1728 % \subsection{References}
1729 %   \begin{macrocode}
1730 <*ct | bmt | pt | rp>
1731 \AtBeginDocument{
1732   \@ifpackageloaded{hyperref}{
1733     \hypersetup{
1734       backref=true,
1735       hyperindex=true,
1736       pagebackref=true,
1737       breaklinks=true,
1738       colorlinks=true,
1739       citecolor=black,
1740       filecolor=black,
1741       linkcolor=black,
1742       pageanchor=true,
1743       pdfpagemode=UseOutlines,
1744       urlcolor=black,
1745       pdftitle={\@title},
1746       pdfsubject={\@subtitle},
1747       pdfauthor={\@author}
1748     }
1749   }{}
1750 }
1751 </ct | bmt | pt | rp>
```

7 The beamer theme

7.1 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{kantlipsum}
\usepackage{pgfplots}
\usepackage{booktabs}
```

```
some stuff to typeset code
\newcommand*\command[1]{\tt \textbackslash #1}}
```



```

\NewEnviron{codesnippet}[1][0.8\textwidth]{
  \scriptsize
  \quad\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\texttt{'}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[pdftex] --- 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 bakcground (in maincolor) with white
            margins
    \end{description}

```

```

\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}
    \kant[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]{\\logopos}} (4,1.25);
      \\end{tikzpicture}
    \\end{center}
  \\end{itemize}

```

```

\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]
\begin{frame}[graphic,t]\[1ex]
\ind\command{place} at (0.5,0.5) \{\command{untwerpenicon[scale=0.8]}\}\[1ex]
\end{frame}
\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]
\begin{frame}[graphicfill=\command{darken}%

```

```

[0.25]\{\command{includegraphics}%
[scale=0.1,min width=\command{paperwidth},min height=\command{paperheight}]%
\{Images/uantwerpen-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}
}

\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]
    \end{columns}

```

```

\listdemo
\column[T]{0.3\textwidth}
\alert{triangle}
\setbeamertemplate{itemize items}[triangle]
\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}~\[[lex]
\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>

```

7.2 Implementation

7.2.1 Main beamer theme

```

1752 <*bmr>
1753 %      Copyright 2021 by Walter Daems <walter.daems@uantwerpen.be>
1754 %
1755 %      This file may be distributed and/or modified
1756 %
1757 %      1. under the LaTeX Project Public License and/or
1758 %      2. under the GNU Public License.
1759 %
1760 %      See the file doc/licenses/LICENSE for more details.
1761
1762 \newif\if@nofonts
1763 \@nofontsfalse

```

```

1764 \DeclareOption{nofonts}{\@nofontstrue}
1765
1766 \input{uantwerpencommonoptions.clo}
1767
1768 \ProcessOptions
1769
1770 \RequirePackage{uantwerpencolorlogoscheme}
1771
1772 \AtBeginDocument{
1773   \def\appropriatelogo{\logopos}
1774   \def\appropriateslidenumber{%
1775     \usebeamercolor{pageno in head/foot}%
1776     \insertframenumber/\inserttotalframenumber}%
1777 }
1778
1779 \mode<presentation>
1780
1781 \RequirePackage{tikz}
1782 \RequirePackage{graphicx}
1783 \RequirePackage[export]{adjustbox}
1784 \RequirePackage{environ}
1785
1786 \setbeamersize{
1787   text margin left=.8cm,
1788   text margin right=.8cm
1789 }
1790
1791 \usecolortheme{uantwerpen}
1792 \usefonttheme{uantwerpen}
1793 \useinnertheme{uantwerpen}
1794 \useoutertheme{uantwerpen}
1795
1796 \setbeamertemplate{navigation symbols}{}
1797 \setbeamertemplate{blocks}[rounded][shadow=true]
1798
1799 \mode
1800 <all>
1801 </bmr>

```

7.2.2 Beamer color theme

```

1802 <*bmrcolor>
1803 %      Copyright 2021 by Walter Daems <walter.daems@uantwerpen.be>
1804 %
1805 %      This file may be distributed and/or modified
1806 %
1807 %      1. under the LaTeX Project Public License and/or
1808 %      2. under the GNU Public License.
1809 %
1810 %      See the file doc/licenses/LICENSE for more details.
1811
1812 \mode<presentation>
1813
1814 \RequirePackage{uantwerpencolorlogoscheme}

```



```

1815
1816 %% define main color
1817 \setbeamercolor{palette primary}{fg=maincolor}
1818 \setbeamercolor{palette secondary}{fg=sidecolor}
1819 \setbeamercolor{palette tertiary}{fg=uauaside}
1820 \setbeamercolor{palette quaternary}{fg=uauamain}
1821
1822 \setbeamercolor{normal text}{fg=basecolor}
1823 \setbeamercolor{inverse normal text}{fg=white!95!maincolor}
1824 \setbeamercolor{alerted text}{fg=uauamain}
1825 \setbeamercolor{example text}{fg=white}
1826
1827 \setbeamercolor{heading}{fg=basecolor}
1828 \setbeamercolor{subheading}{fg=basecolor}
1829 \setbeamercolor{inverse heading}{fg=white}
1830 \setbeamercolor{inverse subheading}{fg=white!75!maincolor}
1831
1832 \setbeamercolor{block body}{bg=black!4}
1833 \setbeamercolor{block title}{bg=black!8}
1834
1835 \setbeamercolor{itemize item}{parent=normal text}
1836 \setbeamercolor{enumerate item}{parent=normal text}
1837 \setbeamercolor{itemize subitem}{parent=normal text}
1838 \setbeamercolor{enumerate subitem}{parent=normal text}
1839 \setbeamercolor{itemize subsubitem}{parent=normal text}
1840 \setbeamercolor{enumerate subsubitem}{parent=normal text}
1841
1842 \setbeamercolor{frametitle}{fg=maincolor}
1843 \setbeamercolor{framesubtitle}{fg=sidecolor}
1844 \setbeamercolor{inverse frametitle}{fg=white}
1845 \setbeamercolor{inverse framesubtitle}{fg=white!80!maincolor}
1846
1847 \setbeamercolor{title in title page}{fg=maincolor}
1848 \setbeamercolor{subtitle in title page}{fg=sidecolor}
1849 \setbeamercolor{author in title page}{fg=maincolor}
1850 \setbeamercolor{date in title page}{fg=sidecolor}
1851 \setbeamercolor{inverse title in title page}{fg=white}
1852 \setbeamercolor{inverse subtitle in title page}{fg=white!75!maincolor}
1853 \setbeamercolor{inverse author in title page}{fg=white}
1854 \setbeamercolor{inverse date in title page}{fg=white!75!maincolor}
1855
1856 \setbeamercolor{pageno in head/foot}{fg=basecolor}
1857 \setbeamercolor{inverse pageno in head/foot}{fg=white}
1858
1859 \setbeamercolor{section in toc}{fg=basecolor}
1860 \setbeamercolor{subsection in toc}{fg=basecolor}
1861 \setbeamercolor{section number projected}{fg=white,bg=basecolor}
1862 \setbeamercolor{subsection number projected}{fg=white,bg=basecolor}
1863
1864 \setbeamercolor{section title}{fg=maincolor}
1865 \setbeamercolor{section name}{fg=maincolor}
1866 \setbeamercolor{inverse section title}{fg=white}
1867 \setbeamercolor{inverse section name}{fg=white}
1868

```

```

1869 \setbeamercolor{subsection title}{fg=sidecolor}
1870 \setbeamercolor{subsection name}{fg=sidecolor}
1871 \setbeamercolor{inverse subsection title}{fg=white!75!maincolor}
1872 \setbeamercolor{inverse subsection name}{fg=white!75!maincolor}
1873 \mode
1874 <all>
1875 \</bmrcolor>

```

7.2.3 Beamer font theme

```

1876 \<*bmrfont>
1877 %      Copyright 2021 by Walter Daems
1878 %
1879 %      This file may be distributed and/or modified
1880 %
1881 %      1. under the LaTeX Project Public License and/or
1882 %      2. under the GNU Public License.
1883 %
1884 %      See the file doc/licenses/LICENSE for more details.
1885
1886 \usetikzlibrary{calc}
1887
1888 \if@nofonts
1889 \else
1890 \RequirePackage{iftex}
1891 % Uncomment the following line if in MiKTeX you get the error
1892 % message that \ifluatex is already defined.
1893 % You first option is to update all your packages both in user as in
1894 % admin mode to fix your setup.
1895 % Your second option is to avoid the warning uncommenting the
1896 % following line:
1897 % \let\ifluatex\relax
1898 \iftutex
1899   \usepackage{cmbright}
1900   \usefonttheme{serif}
1901   \usepackage{fontspec}
1902   \setmainfont{Calibri}
1903   \usepackage{sansmathaccent}
1904 \fi
1905 \fi
1906 \usepackage{bm}
1907
1908 \mode<presentation>
1909
1910 \setbeamerfont{normal text}{} % ignored currently
1911 \setbeamerfont{alerted text}{}
1912 \setbeamerfont{example text}{}
1913
1914 \setbeamerfont{structure}{}
1915 \setbeamerfont{tiny structure}{size=\tiny}
1916
1917 \setbeamerfont{title}{size=\large,parent=structure}
1918 \setbeamerfont{title in head/foot}{}
1919 \setbeamerfont{title in sidebar}{size=\tiny}

```

```

1920
1921 \setbeamerfont{pageno in head/foot}{size=\tiny}
1922
1923 \setbeamerfont{subtitle}{size=\small,parent=title}
1924
1925 \setbeamerfont{author}{}
1926 \setbeamerfont{author in head/foot}{}
1927 \setbeamerfont{author in sidebar}{size=\tiny}
1928
1929 \setbeamerfont{date}{}
1930 \setbeamerfont{date in head/foot}{}
1931 \setbeamerfont{date in sidebar}{}
1932
1933 \setbeamerfont{part name}{size=\LARGE}
1934 \setbeamerfont{part title}{size=\LARGE,parent=title}
1935
1936 \setbeamerfont{section name}{size=\Large}
1937 \setbeamerfont{section title}{size=\Large,parent=title}
1938
1939 \setbeamerfont{section in toc}{parent=structure}
1940 \setbeamerfont{section in toc shaded}{parent=section in toc}
1941 \setbeamerfont{section in head/foot}{}
1942 \setbeamerfont{section in sidebar}{size=\tiny}
1943 \setbeamerfont{section number projected}
1944   {size=\small,parent={section in toc,projected text}}
1945
1946 \setbeamerfont{subsection name}{size=\large}
1947 \setbeamerfont{subsection title}{size=\large,parent=title}
1948
1949 \setbeamerfont{subsection in toc}{}
1950 \setbeamerfont{subsection in toc shaded}{parent=subsection in toc}
1951 \setbeamerfont{subsection in head/foot}{}
1952 \setbeamerfont{subsection in sidebar}{}
1953
1954 \setbeamerfont{subsubsection in toc}{size=\footnotesize}
1955 \setbeamerfont{subsubsection in toc shaded}{parent=subsubsection in toc}
1956 \setbeamerfont{subsubsection in head/foot}{}
1957 \setbeamerfont{subsubsection in sidebar}{}
1958
1959 \setbeamerfont{headline}{parent={tiny structure}}
1960 \setbeamerfont{footline}{parent={tiny structure}}
1961
1962 \setbeamerfont{frametitle}
1963   {parent=structure,size=\renewcommand*{\baselinestretch}{0.85}\LARGE\bfseries}
1964 \setbeamerfont{framesubtitle}{parent=frametitle,size=\normalsize\bfseries}
1965
1966 \setbeamerfont{caption}{size=\small}
1967 \setbeamerfont{caption name}{parent={structure,caption}}
1968
1969 \setbeamerfont{button}{size=\tiny}
1970
1971 \setbeamerfont{block body}{size=\scriptsize}
1972 \setbeamerfont{block body alerted}{parent={block body}}
1973 \setbeamerfont{block body example}{parent={block body}}

```

```

1974 \setbeamerfont{block title}{size=\small,parent={structure,block body}}
1975 \setbeamerfont{block title alerted}{parent={block title>alerted text}}
1976 \setbeamerfont{block title example}{parent={block title,example text}}
1977
1978 \setbeamerfont{item}{parent=structure}
1979 \setbeamerfont{subitem}{parent=item}
1980 \setbeamerfont{subsubitem}{parent=subitem}
1981
1982 \setbeamerfont{item projected}{size=\tiny,parent={item,projected text}}
1983 \setbeamerfont{subitem projected}{parent=item projected}
1984 \setbeamerfont{subsubitem projected}{parent=subitem projected}
1985
1986 \setbeamerfont{itemize item}{parent=item}
1987 \setbeamerfont{itemize subitem}{parent=subitem}
1988 \setbeamerfont{itemize subsubitem}{parent=subsubitem}
1989
1990 \setbeamerfont{enumerate item}{parent=item}
1991 \setbeamerfont{enumerate subitem}{parent=subitem}
1992 \setbeamerfont{enumerate subsubitem}{parent=subsubitem}
1993
1994 \setbeamerfont{itemize/enumerate body}{}
1995 \setbeamerfont{itemize/enumerate subbody}{size=\small}
1996 \setbeamerfont{itemize/enumerate subsubbody}{size=\footnotesize}
1997
1998 \setbeamerfont{description item}{parent=item}
1999
2000 \setbeamerfont{projected text}{parent={tiny structure}}
2001
2002 \setbeamerfont{abstract}{size=\small}
2003 \setbeamerfont{abstract title}{parent={abstract,structure},size=\normalsize}
2004
2005 \setbeamerfont{verse}{family=\rmfamily,shape=\itshape}
2006
2007 \setbeamerfont{quotation}{shape=\itshape}
2008 \setbeamerfont{quote}{parent=quotation}
2009
2010 \setbeamerfont{note page}{size=\small}
2011
2012 \mode
2013 <all>
2014 \</bmrfont>

```

7.2.4 Beamer inner theme

```

2015 \<bmrrinner>
2016 % Copyright 2021 by Walter Daems <walter.daems@uantwerpen.be>
2017 %
2018 % This file may be distributed and/or modified
2019 %
2020 % 1. under the LaTeX Project Public License and/or
2021 % 2. under the GNU Public License.
2022 %
2023 % See the file doc/licenses/LICENSE for more details.
2024

```

```

2025 \mode<presentation>
2026
2027 \setlength\parskip{0.5\baselineskip}
2028 \setlength\parindent{0em}
2029
2030 % use square (can also be circle or ball
2031 \setbeamertemplate{sections/subsections in toc}[square]
2032 \setbeamertemplate{itemize items}[square]
2033
2034 %\setbeamertemplate{description item}[align left]
2035
2036 \newif\if@noround
2037 \@noroundfalse
2038
2039 \newcommand*\uantwerpenleftshape[3][ ]{
2040   \newcommand\mycradius{0.05*(\getlength{\paperheight}-1.6)}%
2041   \coordinate (bl) at #2;
2042   \coordinate (tr) at #3;
2043   \if@noround
2044     \path[#1] (bl) rectangle (tr);
2045   \else
2046     \path[#1] (bl|-tr) -- (tr) -- (bl|-tr) -- ($ (bl)+(\mycradius,0)$)
2047     arc(-90:-180:\mycradius) -- cycle;
2048   \fi
2049 }
2050 \newcommand*\uantwerpenrightshape[3][ ]{
2051   \newcommand\mycradius{0.05*(\getlength{\paperheight}-1.6)}%
2052   \coordinate (bl) at #2;
2053   \coordinate (tr) at #3;
2054   \if@noround
2055     \path[#1] (bl) rectangle (tr);
2056   \else
2057     \path[#1] (bl|-tr) -- (tr) -- ($ (bl|-tr)+(0,\mycradius)$)
2058     arc(0:-90:\mycradius) -- (bl) -- cycle;
2059   \fi
2060 }
2061
2062 \newcommand*\darken[2][0.5]{%
2063   \begin{tikzpicture}[inner sep=0pt,outer sep=0pt]
2064     \node (a) {#2};
2065     \fill[fill=black,opacity=#1] (a.south west) rectangle (a.north east);
2066   \end{tikzpicture}
2067 }
2068
2069 \newcommand*\uantwerpenpencallout[4][ ]{
2070   \begin{tikzpicture}
2071     \uantwerpenleftshape[fill=black,fill opacity=0.0,text opacity=1,text=white,#1]{(-
2072       #2/2,-{#3/2})}{({#2/2},{#3/2})}
2073     \node[align=left,anchor=center] at (0,0) { \callout\ #4 };
2074   \end{tikzpicture}
2075 }
2076 \newcommand\callout[1][scale=0.70711]{
2077   \begin{tikzpicture}[#1]

```

```

2078 \fill[maincolor] (0.4,0) -- (0.5,0) -- (0.75,-0.15) -- (0.75,0) --
2079 (0.9,0) arc(-90:0:0.1) -- (1,0.65) arc(0:90:0.1) -- (0.1,0.75) arc
2080 (90:180:0.1) -- (0,0.1) arc(-180:-90:0.1) -- cycle;
2081 \foreach \x in {0.35,0.7} {
2082 \begin{scope}[shift={(\x,0.425)},scale=0.25]
2083 \fill[white] (0,0) circle[radius=0.5];
2084 \fill[white] (0.5,0) arc(0:-90:1) --
2085 (-0.5,-0.725) arc(-90:0:0.725) -- cycle;
2086 \end{scope}
2087 }
2088 \end{tikzpicture}
2089 }
2090
2091 \newcommand*\uantwerpenicon[1][scale=1]{
2092 \includegraphics[#1]{\iconfile}
2093 }
2094
2095 \newcommand\heading[1]{\par{\usebeamercolor{\maybeinverse heading}\color{fg}{\small\bfseries #1}}
2096 \newcommand\subheading[1]{\par{
2097 \usebeamercolor{\maybeinverse
2098 subheading}\color{fg}{\footnotesize\it\bfseries #1~}}}
2099
2100 \mode
2101 <all>
2102 </bmrinner>

```

7.2.5 Beamer outer theme

```

2103 (*bmrouter)
2104 % Copyright 2021 by Walter Daems <walter.daems@uantwerpen.be>
2105 %
2106 % This file may be distributed and/or modified
2107 %
2108 % 1. under the LaTeX Project Public License and/or
2109 % 2. under the GNU Public License.
2110 %
2111 % See the file doc/licenses/LICENSE for more details.
2112
2113 \mode<presentation>
2114
2115 \newcommand*\getlength[1]{\strip@pt#1/28.45274}
2116 \newcommand*\pw{\getlength{\paperwidth}}%
2117 \newcommand*\ph{\getlength{\paperheight}}%
2118
2119 \newif\if@rhtext
2120 \@rhtextfalse
2121 \newif\if@lhtext
2122 \@lhtextfalse
2123 \newif\if@rqtext
2124 \@rqtextfalse
2125 \newif\if@lqtext
2126 \@lqtextfalse
2127 \newif\if@bhtext
2128 \@bhtextfalse

```

```

2129 \gdef\maybeinverse{}
2130
2131 \define@key{beamerframe}{noround}[true]{
2132   \expandafter\csname @noround#1\endcsname
2133 }
2134
2135 \define@key{beamerframe}{normal}[true]{
2136   \setbeamertemplate{title page}[main]
2137   \setbeamertemplate{section page}[main]%
2138   \setbeamertemplate{subsection page}[main]%
2139   \setbeamertemplate{background canvas}[normal]
2140   \gdef\maybeinverse{}
2141 }
2142
2143 \mode<handout|trans>
2144
2145 \define@key{beamerframe}{negativefill}[true]{
2146 }
2147
2148 \define@key{beamerframe}{negative}[true]{
2149 }
2150
2151 \mode
2152 <all>
2153
2154 \mode<beamer|second>
2155
2156 \define@key{beamerframe}{negativefill}[true]{
2157   \gdef\maybeinverse{inverse }%
2158   \usebeamercolor[fg]{\maybeinverse normal text}%
2159   \setbeamertemplate{title page}[negativefill]
2160   \setbeamertemplate{section page}[negative]%
2161   \setbeamertemplate{subsection page}[negative]%
2162   \setbeamertemplate{background canvas}[negativefill]%
2163 }
2164
2165 \define@key{beamerframe}{negative}[true]{
2166   \gdef\maybeinverse{inverse }%
2167   \usebeamercolor[fg]{\maybeinverse normal text}%
2168   \setbeamertemplate{title page}[negative]
2169   \setbeamertemplate{section page}[negative]%
2170   \setbeamertemplate{subsection page}[negative]%
2171   \setbeamertemplate{background canvas}[negative]%
2172 }
2173
2174 \mode
2175 <all>
2176
2177 \define@key{beamerframe}{graphicfill}[{\includegraphics[scale=0.1,min
2178   width=\paperwidth,min height=\paperheight]{Images/uantwerpen-01.jpg}}]{
2179   \gdef\maybeinverse{inverse }%
2180   \usebeamercolor[fg]{\maybeinverse normal text}%
2181   \setbeamertemplate{background canvas}[graphicfill]{#1}
2182 }

```

```

2183
2184 \define@key{beamerframe}{graphic}[{\includegraphics[scale=0.1,min
2185   width=\textwidth,min height=\textheight]{Images/uantwerpen-02.jpg}}]{
2186   \gdef\maybeinverse{inverse }%
2187   \usebeamercolor[fg]{\maybeinverse normal text}%
2188   \setbeamertemplate{background canvas}[graphic]{#1}
2189 }
2190
2191 \define@key{beamerframe}{lhgraphic}
2192   [{\includegraphics[scale=0.1,min width=0.5\paperwidth,min
2193     height=\textheight]{Images/uantwerpen-03.jpg}}]{
2194     \gdef\maybeinverse{}%
2195     \setbeamertemplate{background canvas}[lhgraphic]{#1}
2196     \@rhtexttrue
2197 }
2198
2199 \define@key{beamerframe}{lqgraphic}
2200   [{\includegraphics[scale=0.1,min width=0.5\paperwidth,min
2201     height=\textheight]{Images/uantwerpen-04.jpg}}]{
2202     \gdef\maybeinverse{}%
2203     \setbeamertemplate{background canvas}[lqgraphic]{#1}
2204     \@rqttexttrue
2205 }
2206
2207 \define@key{beamerframe}{rhgraphic}
2208   [{\includegraphics[scale=0.1,min width=0.5\paperwidth,min
2209     height=\textheight]{Images/uantwerpen-05.jpg}}]{
2210     \gdef\maybeinverse{}%
2211     \setbeamertemplate{background canvas}[rhgraphic]{#1}
2212     \@lhtexttrue
2213 }
2214
2215 \define@key{beamerframe}{rqgraphic}
2216   [{\includegraphics[scale=0.5,min width=0.5\paperwidth,min
2217     height=\textheight]{Images/uantwerpen-05.jpg}}]{
2218     \gdef\maybeinverse{}%
2219     \setbeamertemplate{background canvas}[rqgraphic]{#1}
2220     \@lqttexttrue
2221 }
2222
2223 \define@key{beamerframe}{thgraphic}
2224   [{\includegraphics[scale=0.5,min width=\paperwidth,min
2225     height=0.5\textheight]{Images/uantwerpen-06.jpg}}]{
2226     \gdef\maybeinverse{}%
2227     \setbeamertemplate{background canvas}[thgraphic]{#1}
2228     \@bhtexttrue
2229 }
2230
2231 \define@key{beamerframe}{bhgraphic}
2232   [{\includegraphics[scale=0.5,min width=\paperwidth,min
2233     height=0.5\textheight]{Images/uantwerpen-07.jpg}}]{
2234     \gdef\maybeinverse{}%
2235     \setbeamertemplate{background canvas}[bhgraphic]{#1}
2236 }

```



```

2237
2238 \BeforeBeginEnvironment{frame}{%
2239   \gdef\maybeinverse{%
2240     \setbeamertemplate{title page}[main]%
2241     \setbeamertemplate{section page}[main]%
2242     \setbeamertemplate{subsection page}[main]%
2243     \setbeamertemplate{background canvas}[normal]%
2244     \usebeamercolor[fg]{normal text}%
2245 }
2246
2247 % The following does not work as \end{frame} is never executed by
2248 % beamer!
2249 % \AtEndEnvironment{frame}{\gdef\maybeinverse{}}
2250
2251 \NewEnviron{rhframe}[3][[]]{%
2252   \begin{frame}[#1]{#2}{#3}
2253     \begin{minipage}[t]{0.525\textwidth}
2254       ~
2255     \end{minipage}
2256     \begin{minipage}[t]{0.465\textwidth}
2257       \BODY
2258     \end{minipage}
2259   \end{frame}
2260 }
2261
2262 \NewEnviron{r3qframe}[3][[]]{%
2263   \begin{frame}[#1]{#2}{#3}
2264     \begin{minipage}[t]{0.23\textwidth}
2265       ~
2266     \end{minipage}
2267     \begin{minipage}[t]{0.76\textwidth}
2268       \BODY
2269     \end{minipage}
2270   \end{frame}
2271 }
2272
2273 \NewEnviron{lhframe}[3][[]]{%
2274   \begin{frame}[#1]{#2}{#3}
2275     \begin{minipage}[t]{0.465\textwidth}
2276       \BODY
2277     \end{minipage}
2278     \begin{minipage}[t]{0.525\textwidth}
2279       ~
2280     \end{minipage}
2281   \end{frame}
2282 }
2283
2284 \NewEnviron{l3qframe}[3][[]]{%
2285   \begin{frame}[#1]{#2}{#3}
2286     \begin{minipage}[t]{0.77\textwidth}
2287       \BODY
2288     \end{minipage}
2289     \begin{minipage}[t]{0.22\textwidth}
2290       ~

```

```

2291 \end{minipage}
2292 \end{frame}
2293 }
2294
2295 \NewEnviron{bhframe}[3] [] {%
2296 \begin{frame}[#1]{#2}{#3}
2297 \BODY
2298 \end{frame}
2299 }
2300
2301 \NewEnviron{thframe}[3] [] {%
2302 \begin{frame}[#1]{#2}{#3}
2303 \BODY
2304 \end{frame}
2305 }
2306
2307 %%%%%%%%%%%
2308 % Order:
2309 % 1. option is executed
2310 % 2. frametitle is typeset
2311 % 3. canvas is typeset
2312 % 4. frame is typeset
2313 %%%%%%%%%%%
2314
2315 \def\ps@uantwerpen@titlepage{%
2316 \setbeamercolor{title in title page}{parent=palette primary}
2317 \setbeamertemplate{footline}[empty]
2318 \@nameuse{ps@uantwerpen}
2319 }
2320
2321 \defbeamertemplate*{background canvas}{negativefill}[1]
2322 {%
2323 \gdef\appropriatelogo{\logomonowhite}%
2324 \gdef\appropriateslidenumber{\usebeamercolor{pageno in head/foot}%
2325 \insertframenumber/\inserttotalframenumber}%
2326 \color{maincolor}\vrule width\paperwidth height\paperheight
2327 }
2328
2329 \defbeamertemplate*{background canvas}{negative}[1]
2330 {%
2331 \gdef\appropriatelogo{\logopos}%
2332 \gdef\appropriateslidenumber{}%
2333 \begin{tikzpicture}
2334 \clip (0,0) rectangle (\pw,\ph);
2335 \uantwerpenleftshape[fill=maincolor]{(0.8,0.8)}{(\pw-0.8,\ph-0.8)}
2336 \end{tikzpicture}
2337 }
2338
2339 \defbeamertemplate*{background canvas}{graphicfill}[1]
2340 {%
2341 \gdef\appropriatelogo{\logoneg}%
2342 \gdef\appropriateslidenumber{}%
2343 \begin{tikzpicture}
2344 \clip (0,0) rectangle (\pw,\ph);

```

```

2345     \node[align=center] at (0.5*\pw,0.5*\ph) {#1};
2346 \end{tikzpicture}%
2347 }
2348
2349 \defbeamertemplate*{background canvas}{graphic}[1]
2350 {%
2351     \gdef\appropriatelogo{\logopos}%
2352     \gdef\appropriateslidenumber{}%
2353     \begin{tikzpicture}
2354         \clip (0,0) rectangle (\pw,\ph);
2355         \begin{scope}
2356             \untwerpenleftshape[clip]{(0.8,0.8)}{(\pw-0.8,\ph-0.8)}
2357             \node[align=center] at (0.5*\pw,0.5*\ph) {#1};
2358         \end{scope}
2359     \end{tikzpicture}%
2360 }
2361
2362 \defbeamertemplate*{background canvas}{lhgraphic}[1]
2363 {%
2364     \gdef\maybeinverse{}%
2365     \gdef\appropriatelogo{\logopos}%
2366     \gdef\appropriateslidenumber{\usebeamercolor{pageno in head/foot}%
2367         \insertframenumber/\inserttotalframenumber}%
2368     \pgfmathsetmacro\dx{0.5*\pw-1.2}%
2369     \pgfmathsetmacro\dy{\ph-1.6}%
2370     \begin{tikzpicture}
2371         \clip (0,0) rectangle (\pw,\ph);
2372         \begin{scope}
2373             \untwerpenleftshape[clip]{(0.8,0.8)}{(0.8+\dx,0.8+\dy)}
2374             \node[align=center] at (0.8+0.5*\dx,0.8+0.5*\dy) {#1};
2375         \end{scope}
2376     \end{tikzpicture}
2377     \@tempswatrue
2378 }
2379
2380 \defbeamertemplate*{background canvas}{lqgraphic}[1]
2381 {%
2382     \gdef\maybeinverse{}%
2383     \gdef\appropriatelogo{\logopos}%
2384     \gdef\appropriateslidenumber{\usebeamercolor{pageno in head/foot}%
2385         \insertframenumber/\inserttotalframenumber}%
2386     \pgfmathsetmacro\dx{0.25*\pw-1.2}%
2387     \pgfmathsetmacro\dy{\ph-1.6}%
2388     \begin{tikzpicture}
2389         \clip (0,0) rectangle (\pw,\ph);
2390         \begin{scope}
2391             \untwerpenleftshape[clip]{(0.8,0.8)}{(0.8+\dx,0.8+\dy)}
2392             \node[align=center] at (0.8+0.5*\dx,0.8+0.5*\dy)
2393                 {#1};
2394         \end{scope}
2395     \end{tikzpicture}
2396     \@tempswatrue
2397 }
2398

```

```

2399 \defbeamertemplate*{background canvas}{rhgraphic}[1]
2400 {%
2401   \gdef\maybeinverse{}%
2402   \gdef\appropriatelogo{\logopos}%
2403   \gdef\appropriateslidenumber{\usebeamercolor{pageno in head/foot}%
2404     \insertframenumber/\inserttotalframenumber}%
2405   \pgfmathsetmacro\dx{0.5*\pw-1.2}%
2406   \pgfmathsetmacro\dy{\ph-1.6}%
2407   \begin{tikzpicture}
2408     \clip (0,0) rectangle (\pw,\ph);
2409     \begin{scope}[shift={(0.5*\pw,0)}]
2410       \untwerpenrightshape[clip]{(0.4,0.8)}{(0.4+\dx,0.8+\dy)}
2411       \node[align=center] at (0.8+0.5*\dx,0.8+0.5*\dy) {#1};
2412     \end{scope}
2413   \end{tikzpicture}
2414   \@tempwatrue
2415 }
2416
2417 \defbeamertemplate*{background canvas}{rqgraphic}[1]
2418 {%
2419   \gdef\maybeinverse{}%
2420   \gdef\appropriatelogo{\logopos}%
2421   \gdef\appropriateslidenumber{\usebeamercolor{pageno in head/foot}%
2422     \insertframenumber/\inserttotalframenumber}%
2423   \pgfmathsetmacro\dx{0.25*\pw-1.2}%
2424   \pgfmathsetmacro\dy{\ph-1.6}%
2425   \begin{tikzpicture}
2426     \clip (0,0) rectangle (\pw,\ph);
2427     \begin{scope}[shift={(0.75*\pw,0)}]
2428       \untwerpenrightshape[clip]{(0.4,0.8)}{(0.4+\dx,0.8+\dy)}
2429       \node[align=center] at (0.8+0.5*\dx,0.8+0.5*\dy) {#1};
2430     \end{scope}
2431   \end{tikzpicture}
2432   \@tempwatrue
2433 }
2434
2435 \defbeamertemplate*{background canvas}{thgraphic}[1]
2436 {%
2437   \gdef\maybeinverse{}%
2438   \gdef\appropriatelogo{\logopos}%
2439   \gdef\appropriateslidenumber{\usebeamercolor{pageno in head/foot}%
2440     \insertframenumber/\inserttotalframenumber}%
2441   \pgfmathsetmacro\dx{\pw-1.6}%
2442   \pgfmathsetmacro\dy{0.5*\ph-0.8}%
2443   \begin{tikzpicture}
2444     \clip (0,0) rectangle (\pw,\ph);
2445     \begin{scope}[shift={(0,0.5*\ph)}]
2446       \untwerpenleftshape[clip]{(0.8,0)}{(0.8+\dx,\dy)}
2447       \node[align=center] at (0.8+0.5*\dx,0.5*\dy) {#1};
2448     \end{scope}
2449   \end{tikzpicture}
2450   \@tempwatrue
2451 }
2452

```

```

2453 \defbeamertemplate*{background canvas}{bhgraphic}[1]
2454 {%
2455   \gdef\maybeinverse{%
2456   \gdef\appropriatelogo{\logopos}%
2457   \gdef\appropriateslidenumber{\usebeamercolor{pageno in head/foot}%
2458   \insertframenumber/\inserttotalframenumber}%
2459   \pgfmathsetmacro\dx{\pw-1.6}%
2460   \pgfmathsetmacro\dy{0.5*\ph-0.8}%
2461   \begin{tikzpicture}
2462     \clip (0,0) rectangle (\pw,\ph);
2463     \begin{scope}[shift={(0,0.8)}]
2464       \untwerpenleftshape[clip] {(0.8,0)}{(0.8+\dx,\dy)}
2465       \node[align=center] at (0.8+0.5*\dx,0.5*\dy) {#1};
2466     \end{scope}
2467   \end{tikzpicture}
2468   \@tempswatrue
2469 }
2470
2471
2472 \defbeamertemplate*{background canvas}{normal}
2473 {%
2474   \gdef\maybeinverse{%
2475   \gdef\appropriatelogo{\logopos}%
2476   \gdef\appropriateslidenumber{\usebeamercolor{pageno in
2477   head/foot}\insertframenumber/\inserttotalframenumber}%
2478 }
2479
2480
2481 \defbeamertemplate*{title page}{main}[1][
2482 {%
2483   \thispagestyle{untwerpen@titlepage}%
2484   \begin{tikzpicture}
2485     \clip (0,0) rectangle (\textwidth,\paperheight-0.075cm);
2486     \node[anchor=center] at (0.5*\textwidth,0.75*\ph)
2487     {\includegraphics[height=.9\logounitheight]{\logopos}};
2488     \node[
2489       text width=0.98\textwidth,
2490       text=basecolor,
2491       align=center] at (0.5*\textwidth,0.5*\ph) {
2492       \begin{beamercolorbox}[wd=\textwidth,center]{title in title page}
2493         \LARGE\bfseries\inserttitle\[\[1ex]
2494         \usebeamercolor{fg}{subtitle in title page}
2495         \color{fg}\large\bfseries\insertsubtitle
2496       \end{beamercolorbox}
2497     };
2498     \node[
2499       text width=0.98\textwidth,
2500       color=basecolor,
2501       align=center] at (0.5*\textwidth,0.25*\ph) {
2502       \begin{beamercolorbox}[wd=\textwidth,center]{author in title page}
2503         \large\bfseries\insertauthor
2504       \end{beamercolorbox}
2505     };
2506     \node[

```

```

2507     text width=0.98\textwidth,
2508     color=basecolor,
2509     align=center] at (0.5*\textwidth,0.15*\ph) {
2510         \begin{beamercolorbox}[wd=\textwidth,center]{date in title page}
2511             \normalsize\bfseries\insertdate
2512         \end{beamercolorbox}
2513     };
2514 \end{tikzpicture}
2515 }
2516
2517 \defbeamertemplate*{title page}{negative}[1][
2518 {
2519     \begin{tikzpicture}
2520         \clip (0,0) rectangle (\textwidth,\paperheight-0.075cm);
2521         \node[
2522             text width=0.98\textwidth,
2523             align=center] at (0.5*\textwidth,0.5*\ph) {
2524                 \begin{beamercolorbox}[wd=\textwidth,center]{inverse title in title page}
2525                     \LARGE\bfseries\inserttitle\[\[1ex]
2526                     \usebeamercolor[fg]{\maybeinverse subtitle in title page}
2527                     \color{fg}\large\bfseries\insertsubtitle
2528                 \end{beamercolorbox}
2529             };
2530         \node[
2531             text width=0.98\textwidth,
2532             align=center,] at (0.5*\textwidth,0.25*\ph) {
2533                 \begin{beamercolorbox}[wd=\textwidth,center]{inverse author in title page}
2534                     \large\bfseries\insertauthor
2535                 \end{beamercolorbox}
2536             };
2537         \node[
2538             text width=0.98\textwidth,
2539             color=basecolor,
2540             align=center] at (0.5*\textwidth,0.15*\ph) {
2541                 \begin{beamercolorbox}[wd=\textwidth,center]{inverse date in title page}
2542                     \normalsize\bfseries\insertdate
2543                 \end{beamercolorbox}
2544             };
2545     \end{tikzpicture}
2546 }
2547
2548 \defbeamertemplate*{title page}{negativefill}[1][
2549 {
2550     \thispagestyle{uantwerpen@titlepage}
2551     \begin{tikzpicture}
2552         \clip (0,0) rectangle (\textwidth,\paperheight-0.075cm);
2553         \node[anchor=center] at (0.5*\textwidth,0.75*\ph)
2554             {\includegraphics[height=.9\logounitheight]{\logomonowhite}};
2555         \node[
2556             draw,rectangle,
2557             text width=0.98\textwidth,
2558             color=maincolor,
2559             align=center] at (0.5*\textwidth,0.5*\ph) {
2560                 \begin{beamercolorbox}[wd=\textwidth,center]{inverse title in title page}

```

```

2561         \LARGE\bfseries\inserttitle\\[1ex]
2562         \usebeamercolor[fg]{inverse subtitle in title page}
2563         \color{fg}\large\bfseries\insertsubtitle
2564     \end{beamercolorbox}
2565 };
2566 \node[
2567     text width=0.98\textwidth,
2568     color=maincolor,
2569     align=center] at (0.5*\textwidth,0.25*\ph) {
2570     \begin{beamercolorbox}[wd=\textwidth,center]{inverse author in title page}
2571     \large\bfseries\insertauthor
2572     \end{beamercolorbox}
2573 };
2574 \node[
2575     text width=0.98\textwidth,
2576     color=basecolor,
2577     align=center] at (0.5*\textwidth,0.15*\ph) {
2578     \begin{beamercolorbox}[wd=\textwidth,center]{inverse date in title page}
2579     \normalsize\bfseries\insertdate
2580     \end{beamercolorbox}
2581 };
2582 \end{tikzpicture}
2583 }
2584
2585 \defbeamertemplate*{section page}{main}[1] []
2586 {%
2587     \begin{tikzpicture}
2588         \clip (0,0) rectangle (\textwidth,\paperheight-0.075cm);
2589         \node[
2590             text width=0.98\textwidth,
2591             text=basecolor,
2592             align=center] at (0.5*\textwidth,0.55*\ph) {
2593             \begin{beamercolorbox}[wd=\textwidth,center]{section title}
2594             \Large\bfseries\insertsectionnumber.\~\insertsection
2595             \end{beamercolorbox}
2596         };
2597     \end{tikzpicture}
2598 }
2599
2600 \defbeamertemplate*{subsection page}{main}[1] []
2601 {%
2602     \begin{tikzpicture}
2603         \clip (0,0) rectangle (\textwidth,\paperheight-0.075cm);
2604         \node[
2605             text width=0.98\textwidth,
2606             text=basecolor,
2607             align=center] at (0.5*\textwidth,0.55*\ph) {
2608             \begin{beamercolorbox}[wd=\textwidth,center]{section title}
2609             \Large\bfseries\insertsectionnumber.\~\insertsection
2610             \end{beamercolorbox}
2611         };
2612         \node[
2613             text width=0.98\textwidth,
2614             text=basecolor,

```

```

2615     align=center] at (0.5*\textwidth,0.45*\ph) {
2616         \begin{beamercolorbox}[wd=\textwidth,center]{subsection title}
2617         \large\bfseries\insertsubsection
2618     \end{beamercolorbox}
2619 };
2620 \end{tikzpicture}
2621 }
2622
2623 \defbeamertemplate*{section page}{negative}[1] []
2624 {
2625     \begin{tikzpicture}
2626         \clip (0,0) rectangle (\textwidth,\paperheight-0.075cm);
2627         \node[
2628             text width=0.98\textwidth,
2629             text=basecolor,
2630             align=center] at (0.5*\textwidth,0.55*\ph) {
2631             \begin{beamercolorbox}[wd=\textwidth,center]{inverse section title}
2632             \Large\bfseries\insertsectionnumber.\~\insertsection
2633             \end{beamercolorbox}
2634         };
2635     \end{tikzpicture}
2636 }
2637
2638 \defbeamertemplate*{subsection page}{negative}[1] []
2639 {
2640     \begin{tikzpicture}
2641         \clip (0,0) rectangle (\textwidth,\paperheight-0.075cm);
2642         \node[
2643             text width=0.98\textwidth,
2644             text=basecolor,
2645             align=center] at (0.5*\textwidth,0.55*\ph) {
2646             \begin{beamercolorbox}[wd=\textwidth,center]{inverse section title}
2647             \Large\bfseries\insertsectionnumber.\~\insertsection
2648             \end{beamercolorbox}
2649         };
2650         \node[
2651             text width=0.98\textwidth,
2652             text=basecolor,
2653             align=center] at (0.5*\textwidth,0.45*\ph) {
2654             \begin{beamercolorbox}[wd=\textwidth,center]{inverse subsection title}
2655             \large\bfseries\insertsubsection
2656             \end{beamercolorbox}
2657         };
2658     \end{tikzpicture}
2659 }
2660
2661 \defbeamertemplate*{footline}{empty}
2662 {
2663 }
2664
2665 \defbeamertemplate*{footline}{normal}
2666 {%
2667     \leavevmode%
2668     \hbox{\begin{beamercolorbox}

```



```

2669         [wd=.5\paperwidth,ht=0.55cm,dp=0.25cm,left,leftskip=.8cm
2670         plus1filll]{author in head/foot}%
2671         \includegraphics[height=0.35\logunitheight]{\appropriatelogo}
2672         \hskip0pt plus 1filll ~
2673     \end{beamercolorbox}%
2674     \begin{beamercolorbox}[wd=.5\paperwidth,ht=0.55cm,dp=0.25cm,
2675         right,rightskip=.8cm plus1filll]{\maybeinverse pageno in head/foot}%
2676         \usebeamerfont{pageno in head/foot}~\hskip0pt plus 1filll
2677         \appropriateslidenumber
2678     \end{beamercolorbox}}%
2679     \vskip0pt%
2680 }
2681
2682 \defbeamertemplate*{frametitle}{empty}
2683 {
2684 }
2685
2686 \defbeamertemplate*{frametitle}{normal}
2687 {%
2688     \vskip0.75cm%
2689     \if@rhtext%
2690         \@tempdima=0.5\textwidth%
2691         \@tempdimb=0.5\textwidth%
2692         \advance\@tempdima by0.5\beamer@leftmargin%
2693         \advance\@tempdimb by-0.5\beamer@leftmargin%
2694     \else%
2695         \if@rqtext%
2696             \@tempdima=0.23\textwidth%
2697             \@tempdimb=0.77\textwidth%
2698         \else%
2699             \if@lhtext%
2700                 \@tempdima=0em%
2701                 \@tempdimb=0.5\textwidth%
2702                 \advance\@tempdimb by-0.5\beamer@leftmargin%
2703             \else%
2704                 \if@lqtext%
2705                     \@tempdima=0em%
2706                     \@tempdimb=0.77\textwidth%
2707                 \else%
2708                     \if@bhtext%
2709                         \@tempdima=0em%
2710                         \@tempdimb=\textwidth%
2711                         \vskip0.5\textheight%
2712                     \else%
2713                         \@tempdima=0em%
2714                         \@tempdimb=\textwidth%
2715                     \fi%
2716                 \fi%
2717             \fi%
2718             \fi%
2719             \fi%
2720             \hskip\@tempdima%
2721             \begin{beamercolorbox}[wd=\@tempdimb]{\maybeinverse frametitle}%
2722                 \usebeamerfont{frametitle}\insertframetitle\|[0.5ex]%

```

```

2723 \ifx\insertframesubtitle\@empty%
2724 {\usebeamerfont{framesubtitle}%
2725   \usebeamercolor[fg]{\maybeinverse framesubtitle}~\strut\par}%
2726 \vskip-1ex%
2727 \else%
2728 {\usebeamerfont{framesubtitle}%
2729   \usebeamercolor[fg]{\maybeinverse framesubtitle}%
2730   \insertframesubtitle\strut\par}%
2731 \fi%
2732 \if@tempswa\else\vskip-.3cm\fi% set inside beamercolorbox... evil here...
2733 \end{beamercolorbox}%
2734 }
2735
2736 \newdimen\xlleft
2737 \newdimen\ylleft
2738 \newdimen\xupright
2739 \newdimen\yupright
2740 \newdimen\xcurrent
2741 \newdimen\ycurrent
2742 \newcommand*\extractlleft[1]{\path (#1);\pgfgetlastxy{\xlleft}{\ylleft};}
2743 \newcommand*\extractupright[1]{\path (#1);\pgfgetlastxy{\xupright}{\yupright};}
2744 \newcommand*\extractcurrent[1]{\path (#1);\pgfgetlastxy{\xcurrent}{\ycurrent};}
2745
2746 \DeclareRobustCommand\place{\@ifnextchar[{\@place}{\@place[align=left] }}
2747 \def\@place[#1] at (#2,#3)#4{
2748   \begin{tikzpicture}[overlay,remember picture]
2749     \extractlleft{$(current page.south west)$}
2750     \extractupright{$(current page.north east)$}
2751     \node[#1] at
2752       ({\xlleft*(1-#2)+\xupright*#2},{\ylleft*(1-#3)+\yupright*#3}) {#4};
2753   \end{tikzpicture}
2754 }
2755
2756 \mode
2757 <all>
2758 \bmrout

```

Change History

v1.0	General: Consolidated uacoursetext class and uamasterthesis class 1 Added option qr 34 Added option titlepagenoartwork 34 Added option titlepagetableonly 34	General: Added diploma codes for Faculty of Applied Economics . 1 Added diploma code documentation 10
v1.1	\diploma : Fixed typo on programme's name (e-umlaut) 45 General: Small bugfixes and 'filled' option 1 Added option user documentation 8 Made raggedright conditional on option 'filled', because it can't be undone 53	v1.7 \maketitle : Embedded babel translations of keywords into title page 55, 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 . . . 37
v1.2	General: Added lmodern package and increased headheight to 13.7pt to please Fancyhdr . . . 1 Added lmodern package to please MikTeX 36 Increased headheight to please Fancyhdr 53	v1.8 \makefinalpage : Inserted blank one but last page 57 \maketitle : Allowed for empty senderrole 65 \signature : Added signature . . . 49 General: Corrected minor typographic mistakes, added signature and solved problems with shell escape 1 Added missing packages ifmtarg and shellesc 36 Allowed for empty senderrole . . 66
v1.3	\makefinalpage : Changed eso-pic for tikz 57, 59 \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 36 Added inclusion of background package 36	v1.81 General: Bugfixes for release v1.8 . 1 Apparently shellesc is still missing from quite a number of installations, therefore, conditional loading 36
v1.4	General: Implemented uantwerpenletter class 1 Implemented letter class 34	v1.9 General: Integrated uantwerpenexam class into package 1 Added etoolbox for convenience reasons 36 Implemented uantwerpenexam class 34
v1.5	\maketitle : Implemented new footer 65 General: Replaced bottom arcs in footer of letter by official PDF versions 1	v2.0 \makefinalpage : Implemented final page 62, 64 \maketitle : Implemented title page 59 General: Implemented uantwerpenphdthesis class into package 1 Implemented uantwerpenphdthesis class . . . 34
v1.6	\diploma : Added diploma codes . 45	

Removed package ifmtarg because unreliable	36	General: Added option for diploma without specialization for EM	1
Updated diploma code documentation to incorporate PhD degrees	10	v2.5 \depot : Made the specification of a depot number optional	46
v2.1 \engdut : Increased intercolumn spacing for engdut	69	\insertsolutionspagepartial : Corrected for 'one page too early' in solutionspagepartial . .	70
\extrainfo : Changed default to empty	51	\maketitle : Corrected formatting in case of absent ISBN or depot number	59
\maketitle : Corrected information page (p4) jury spacing	59	\programme : Shortened 'voorbereidingsprogramma' and 'schakelprogramma' tags .	44
\subtitle : Added subtitle to phd text	40	\publisher : changed publisher to universitas in default	41
Ensured that subtitle is really optional by adding default space value	40	General: changed publisher to universitas in example	14
General: Bugfix release after promotion event on research day	1	v3.0 \facultyacronym : Changed REC in RE, TEW in BE and WET in WE (according to official naming scheme)	40
Added appropriate \appendix command	54	General: Adapted to the new house style of UAntwerpen and added a beamer template	1
Allow for setting the multiple choice mark symbol	70	Added iftex	36
Corrected erroneous line breaking	70	v3.1 General: Renamed generic images to be unique for TexLive distribution	1
Corrected spacing in title + exampart	66	v3.2 General: Small bugfixes (e.g., frame numbering instead of page numbering)	1
v2.2 General: Improved visibility of chapter numbers by adding a white outline	1	v4.0 \diploma : Discontinued: removed all diploma codes	45
Added white chapter number outline	54	\facultyacronym : This function is now obsolete	40
Corrected spacing	54	General: Last update of house style (phdthesis coursetext and bamathesis), added uantwerpenreport class, improvements based on use feedback and major rework to benefit from expl3, removed all diploma codes to ease maintainability	1
v2.3 \diploma : Added diploma level . .	45	Removed diploma codes, as too many faculties are requesting to maintain them	10
\extrainfo : The command \extrainfo now allows for an extra (optional) first argument 'firstpage'	51	Removed option qr again	34
General: Reworked masterthesis to bamathesis and minor bug fixes	1		
2019/03/27	66		
Added boxes to fill out name and docket number	66		
Introduced bachelor level codes to allow for bachelor theses . .	10		
v2.4 \diploma : Added code for Master EM without specialization . . .	45		

Removed options	Total rewrite of this part based
titlepagetableonly and	on expl3 37
titlepagenoartwork 34	

Index

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

Symbols		
\, . 977, 1075, 1179, 1581	\@degree 367, 521, 526, 532, 985, 1085, 1189, 1206, 1212, 1589	\@makeschapterhead 900, 903
\@@ 306, 310, 320, 324, 333, 409, 413, 450, 455, 494, 498, 557, 561, 734, 738	\@depot .. 606, 607, 1250	\@mcsymbol ... 1641, 1642, 1647, 1658
\@M 892	\@email 1436	\@mobile . 644, 645, 1439
\@academicyear 610, 611, 986, 1601	\@emaildomain 632, 633, 1436	\@nameuse 2318
\@address 690, 698, 699, 1243, 1345, 1374, 1435	\@emailuser 631, 633, 1436	\@neutralcolorsfalse 3
\@affiliation 436, 443, 1242, 1343, 1359, 1373	\@enclosed 686, 687, 1459	\@neutralcolorstrue . 4
\@afterheading 901	\@examdate 716, 717, 1498	\@nofontsfalse ... 1763
\@arabic 1608	\@examgropunumber . 704	\@nofontstrue 1764
\@author 959, 1063, 1167, 1215, 1241, 1245, 1328, 1365, 1372, 1376, 1569, 1747	\@examgroupnumber 712, 713, 1498, 1600, 1601	\@noroundfalse ... 2037
\@bhtextfalse 2128	\@examinertrue 204	\@phone .. 636, 637, 1437
\@bhtexttrue 2228	\@examlength 720, 721, 1544	\@place 2746, 2747
\@carboncopy 682, 683, 1458	\@exampart 708, 709, 1480, 1481	\@publisher 395, 400, 988
\@closing 673, 675, 1454	\@extra 432, 433, 1339, 1360	\@publishercode 403, 404, 987
\@cmkyfalse 8, 10	\@extrainfo 757, 761, 767	\@returnaddress 648, 649, 1424
\@cmkytrue 9	\@faculty 12, 17, 27, 986, 1086, 1190, 1205, 1433, 1590	\@rhtextfalse 2120
\@copyrightnotices 614, 615, 864	\@facultyacronym 90, 787, 795	\@rhtexttrue 2196
\@copyrighttrue ... 194	\@fax 640, 641, 1438	\@rqtextfalse 2124
\@course . 573, 576, 1479	\@filledtrue 199	\@rqtexttrue 2204
\@coursecode 572, 575, 1489	\@ifnextchar 2746	\@schapter 899
\@courseversion 387, 388, 787, 794, 867	\@ifpackageloaded . . 16, 94, 342, 1732	\@sender 618, 621, 1431, 1455
\@cnotice ... <u>860</u> , 1003	\@isbn 602, 603, 1249, 1253, 1255	\@senderrole 620, 621, 1432, 1456
\@date 820, 1447	\@jurychairman 480, 489, 1230	\@shorttitle 381, 383, 1599
\@defensedate 590, 591, 1087, 1191, 1218, 1245	\@jurychairmanaff 487, 489, 1230	\@signature 678, 679, 1454
\@defenselocation 594, 595, 1087, 1191, 1218	\@lhtextfalse 2122	\@studentnr 779, 780, 836
	\@lhtexttrue 2212	\@subject 666, 667, 1448
	\@logo ... 339, 624, 1416	\@subtitle 365, 375, 377, 789, 953, 1056, 1160, 1209, 1321, 1363, 1746
	\@lqtextfalse 2126	\@tend ... 728, 729, 1553
	\@lqtexttrue 2220	\@thanks 1008, 1101, 1261, 1382
	\@makechapterhead . 876	\@title 789, 796, 946, 1049, 1153, 1208, 1314, 1362, 1745
		\@titlepageimage 598, 599,

933, 937, 1141, 1145, 1302, 1306 \@to 652, 653, 1425 \@toaddress 661, 663, 1427 \@toorganization 656, 658, 1426 \@tstart . 724, 725, 1552 \@unit ... 627, 628, 1434 \@versionyear .. 391, 392, 872, 1344, 1376 \{ 619, 648, 652, 657, 662, 674 \} 619, 648, 652, 657, 662, 674	\author .. 386, 1010, 1103, 1263, 1384	D \darken 2062 \date 1011, 1104, 1264, 1385 \DeclareOption 4, 9, 10, 28, 34, 41, 48, 54, 60, 66, 72, 78, 84, 194, 199, 204, 1764 \DeclareRobustCommand 2746 \def 876, 899, 903, 912, 1773, 1774, 2315, 2747 \defbeamertemplate 2321, 2329, 2339, 2349, 2362, 2380, 2399, 2417, 2435, 2453, 2472, 2481, 2517, 2548, 2585, 2600, 2623, 2638, 2661, 2665, 2682, 2686 \defensedate 589 \defenselocation .. 593 \definecolor 114, 115, 117, 118, 120, 121, 123, 124, 126, 127, 129, 130, 132, 133, 135, 136, 138, 139, 141, 142, 144, 145, 148, 149, 151, 152, 154, 155, 157, 158, 160, 161, 163, 164, 166, 167, 169, 170, 172, 173, 175, 176, 178, 179, 284–292 \degree ... 512, 514, 520, 529, 532, 538, 540, 583, 585 \depot 605 \diploma 579
A \academicyear 609 \address 689 \addto .. 17, 95, 343, 346 \addtolength 229 \AddToShipoutPicture 831, 922, 1038, 1131, 1292, 1466, 1676, 1700 \advance 2692, 2693, 2702 \affiliation 435 \appendix 912 \appendixname 915 \appropriatelogo 1773, 2323, 2331, 2341, 2351, 2365, 2383, 2402, 2420, 2438, 2456, 2475, 2671 \appropriateslidenumber ... 1774, 2324, 2332, 2342, 2352, 2366, 2384, 2403, 2421, 2439, 2457, 2476, 2677 \AtBeginDocument 14, 92, 340, 425, 473, 503, 566, 750, 1731, 1772 \AtEndDocument 1453, 1722 \AtEndEnvironment 2249	B \backgroundsetup .. 999 \baselineskip . 229, 2027 \baselinestretch . 1963 \beamer@leftmargin .. 2692, 2693, 2702 \BeforeBeginEnvironment 2238 C \c@question 1608 \callout 2072, 2076 \captionsdutch 17, 95, 346 \captionsenglish .. 343 \carboncopy 681 \cfoot 788, 795, 805, 812, 821, 828 \chaptername . 880, 915 \chead 785, 792, 802, 809, 818, 827 \cleardoublepage 1019, 1112, 1201, 1273, 1355, 1394 \clearpage 761, 997, 1004, 1022, 1097, 1115, 1227, 1276, 1368, 1397, 1598, 1693, 1699 \clist 332 \closing 672 \colorlet 183–185, 187–189 \colormodel 6, 9, 10, 101–108 \coordinate .. 2041, 2042, 2052, 2053 \copyright 872, 1245, 1376 \copyrightnotices . 613 \course 544 \coursei .. 545, 547, 550 \courseii 551 \courseiii 551 \courseiv 551 \courseversion 386 \cs ... 310, 320, 409, 450, 494, 557, 734 \csname 2132	E \EAN 1255 \email 630 \enclosed 685

<code>\end</code>	700,	<code>\endcsname</code>	2132	<code>\fontsize</code>	833, 885,
	701, 889, 895,	<code>\engdut</code>	<u>1624</u>		888, 1477, 1487,
	907, 939, 980,	<code>\engdutm</code>	<u>1655</u>		1496, 1503,
	992, 995, 1029,	<code>\equal</code>	759, 765		1510, 1520,
	1031, 1078,	<code>\examdate</code>	<u>715</u>		1531, 1542,
	1092, 1095,	<code>\examgroupnumber</code> . .	<u>711</u>		1549, 1560, 1713
	1122, 1124,	<code>\examlength</code>	<u>719</u>	<code>\footrulewidth</code>	
	1147, 1182,	<code>\exampart</code>	703, 709		. . . 842, 847, 1602
	1196, 1199,	<code>\ExecuteOptions</code> . . .		<code>\foreach</code>	883, 1514,
	1219, 1225,		. . . . 208, 215, 223		1525, 1535, 2081
	1226, 1251,	<code>\expandafter</code> 90, 1255,		<code>\fselector</code>	22, 29,
	1256, 1283,		1444, 1446, 2132		35, 42, 49, 55,
	1285, 1308,	<code>\ExplSyntaxOff</code>			61, 67, 73, 79,
	1350, 1353,		. 336, 372, 429,		85, 90, 101, 103,
	1367, 1404,		477, 506, 569, 754		105, 107, 187, 188
	1406, 1429,	<code>\ExplSyntaxOn</code>		G	
	1449, 1554,		. 295, 364, 407,	<code>\getlength</code>	2040,
	1584, 1594,		446, 492, 555, 732		2051, 2115–2117
	1621, 1630,	<code>\extra</code>	<u>431</u>	<code>\global</code>	1006–1012,
	1635, 1636,	<code>\extractcurrent</code> . . .	2744		1099–1105,
	1651, 1652,	<code>\extractloleft</code>			1259–1265,
	1663, 1668,		. . . . . 2742, 2749		1380–1386
	1669, 1690,	<code>\extractupright</code> . . .		H	
	1710, 1726,		. . . . . 2743, 2750	<code>\headheight</code>	840
	2066, 2073,	<code>\extrainfo</code>	<u>756</u>	<code>\heading</code>	2095
	2086, 2088,	F		<code>\headrulewidth</code>	
	2247, 2255,				. . . . 841, 846, 850
	2258, 2259,	<code>\facindutch</code>	13, 32,	<code>\hfill</code>	986, 1220,
	2266, 2269,		38, 46, 52, 58,		1228, 1229,
	2270, 2277,		64, 70, 76, 82, 88		1231, 1232,
	2280, 2281,	<code>\facinenglish</code> 12, 31,			1234, 1235,
	2288, 2291,		37, 44, 51, 57,		1237, 1252,
	2292, 2298,		63, 69, 75, 81, 87		1498, 1646, 1657
	2304, 2336,	<code>\facultyacronym</code> . . .	<u>354</u>	<code>\hline</code>	1618, 1620
	2346, 2358,	<code>\fax</code>	<u>639</u>	<code>\hskip</code>	2672, 2676, 2720
	2359, 2375,	<code>\flushright</code>	1222	<code>\hspace</code>	890, 1616
	2376, 2394,	<code>\fontfamily</code>	833,	<code>\hypersetup</code>	1733
	2395, 2412,		1477, 1487,	I	
	2413, 2430,		1496, 1503,	<code>\iconfile</code>	107, 2092
	2431, 2448,		1510, 1520,	<code>\iconfileua</code>	108
	2449, 2466,		1531, 1542,	<code>\if@bhtext</code>	2127, 2708
	2467, 2496,		1549, 1560, 1713	<code>\if@cmymk</code>	7, 112
	2504, 2512,	<code>\fontseries</code>	833,	<code>\if@copyright</code>	
	2514, 2528,		1477, 1487,		. . . . 193, 270, 998
	2535, 2543,		1496, 1503,	<code>\if@examiner</code>	203, 829
	2545, 2564,		1510, 1520,	<code>\if@filled</code>	198, 854
	2572, 2580,		1531, 1542,	<code>\if@lhtext</code>	2121, 2699
	2582, 2595,		1549, 1560, 1713	<code>\if@lqttext</code>	2125, 2704
	2597, 2610,	<code>\fontshape</code>	833,	<code>\if@neutralcolors</code> 2, 182	
	2618, 2620,		1478, 1488,	<code>\if@nofonts</code>	1762, 1888
	2633, 2635,		1497, 1504,	<code>\if@noround</code>	
	2648, 2656,		1511, 1521,		. . . 2036, 2043, 2054
	2658, 2673,		1532, 1543,		
	2678, 2733, 2753		1550, 1561, 1713		

\if@rhtext .. 2119, 2689	\interlinepenalty . 892	\logunitheight ...
\if@rqttext .. 2123, 2695	\ior . 319, 321, 322, 328	.... 24, 25, 30,
\if@tempswa 2732	\isbn 601	36, 43, 50, 56,
\if@twoside .. 783, 800	\it 2098	62, 68, 74, 80,
\ifdefempty	\itshape 2005, 2007	86, 2487, 2554, 2671
.. 1249, 1250, 1253		\lselector
\ifdefvoid ... 789, 1230	J	... 23, 96, 101–106
\IfFileExists 258	\jointcourseswithcodes	
\ifluatex ... 1892, 1897	..... 563, 965	M
\iftutex 1898	\jointjurymembers .	\macrocode 700
\includegraphics 935,	..... 500, 1236	\makeatletter
991, 1091, 1143,	\jointlecturers ...	.. 19, 99, 218, 351
1195, 1203,	... 415, 979, 1583	\makeatother
1304, 1349,	\jointrooms .. 740, 1562	.. 15, 93, 218, 341
1357, 1416,	\jointsupervisors .	\makebox 879
1593, 2092,	..... 457,	\makefinalpage <u>1017</u> ,
2177, 2184,	1077, 1181, 1224	<u>1110</u> , <u>1271</u> , <u>1392</u>
2192, 2200,	\jointsupervisorswithaffiliation	\maketitle
2208, 2216,	..... 460, 1233	<u>918</u> , <u>1034</u> , <u>1127</u> ,
2224, 2232,	\jurychairman <u>479</u>	<u>1288</u> , <u>1409</u> , <u>1463</u>
2487, 2554, 2671	\jurymember <u>491</u>	
\input 207, 214, 222, 1766		\maybeinverse . 2095,
\insertauthor	L	2097, 2129,
.. 2503, 2534, 2571	\label 1460, 1723	2140, 2157,
\insertdate	\leavevmode 2667	2158, 2166,
.. 2511, 2542, 2579	\lecturer <u>406</u>	2167, 2179,
\insertframenumber	\lecturersname	2180, 2186,
... 1776, 2325,	... 418, 978, 1582	2187, 2194,
2367, 2385,	\leftmark	2202, 2210,
2404, 2422,	. 786, 791, 803, 808	2218, 2226,
2440, 2458, 2477	\lfoot 787, 794,	2234, 2239,
\insertframesubtitle	804, 811, 820, 1599	2249, 2364,
..... 2723, 2730	\lhead 784, 791,	2382, 2401,
\insertframetitle 2722	801, 808, 817, 826	2419, 2437,
\insertsection 2594,	\linewidth .. 1248, 1254	2455, 2474,
2609, 2632, 2647	\LoadClassWithOptions	2526, 2675,
\insertsectionnumber	.... 210, 217, 225	2721, 2725, 2729
..... 2594,	\logo <u>623</u>	\mc <u>1644</u>
2609, 2632, 2647	\logomonowhite	\medskip 1214
\insertsolutionspage	... 105, 2323, 2554	\mobile <u>643</u>
..... <u>1697</u>	\logomonowhiteua .. 106	\mode 1779, 1799, 1812,
\insertsolutionspagepartial	\logoneg 103, 2341	1873, 1908,
..... <u>1673</u>	\logonegua 104	2012, 2025,
\insertsubsection .	\logopos 101,	2100, 2113,
..... 2617, 2655	339, 991, 1349,	2143, 2151,
\insertsubsubtitle ...	1357, 1593,	2154, 2174, 2756
.. 2495, 2527, 2563	1773, 2331,	\mycradius ... 2040,
\insertttitle	2351, 2365,	2046, 2047,
.. 2493, 2525, 2561	2383, 2402,	2051, 2057, 2058
\inserttotalframenumber	2420, 2438,	N
... 1776, 2325,	2456, 2475, 2487	\newcounter 1606
2367, 2385,	\logoposua 102,	\newdimen ... 2736–2741
2404, 2422,	1091, 1195, 1203	\NewDocumentCommand
2440, 2458, 2477		..... 299, 302,

271, 278,	1925–1927,	<code>\strip@pt</code> 2115
281, 1770,	1929–1931,	<code>\strut</code> 1443,
1781–1784,	1933, 1934,	1445, 1447,
1814, 1890	1936, 1937,	1448, 2725, 2730
<code>\returnaddress</code> <u>647</u>	1939–1943,	<code>\studentnr</code> <u>778</u>
<code>\rfoot</code> 789, 796,	1946, 1947,	<code>\subheading</code> 2096
806, 813, 822, 1600	1949–1952,	<code>\subject</code> <u>665</u>
<code>\rhead</code> . 786, 793, 803,	1954–1957,	<code>\subsection</code> 1728
810, 819, 830, 836	1959, 1960,	<code>\subtitle</code> <u>363</u>
<code>\rightmark</code> . . . 784, 801	1962, 1964,	<code>\supervisor</code> <u>445</u>
<code>\rmfamily</code> 2005	1966, 1967,	<code>\supervisorsname</code> . .
<code>\room</code> <u>731</u>	1969,	. . . . 463, 1076,
<code>\roomsname</code> . . . 743, 1562	1971–1976,	1180, 1223, 1232
<code>\rotatebox</code> . . . 832, 1712	1978–1980,	
<code>\rule</code> 879,	1982–1984,	T
893, 896, 906, 908	1986–1988,	<code>\tat</code> 218, 1436
	1990–1992,	<code>\tend</code> <u>727</u>
	1994–1996,	<code>\textcolor</code>
S	1998, 2000,	. 820, 822, 823,
<code>\selectfont</code> 834, 885,	2002, 2003,	832, 879, 893,
888, 1478, 1488,	2005, 2007,	906, 1424, 1431,
1497, 1504,	2008, 2010	1444, 1446, 1712
1511, 1521,	<code>\setbeamersize</code> . . . 1786	<code>\textheight</code> . . 2185,
1532, 1543,	<code>\setbeamertemplate</code>	2193, 2201,
1550, 1561, 1713	. . . . . 1796,	2209, 2217,
<code>\selectlanguage</code> 1627,	1797, 2031,	2225, 2233, 2711
1632, 1637,	2032, 2034,	<code>\thanks</code> 1006,
1660, 1665, 1670	2136–2139,	1099, 1259, 1380
<code>\sender</code> <u>617</u>	2159–2162,	<code>\thechapter</code> 885, 888, 914
<code>\seq</code> . . 408, 410, 416,	2168–2171,	<code>\thepage</code> . . 784, 786,
419, 426, 448,	2181, 2188,	793, 801, 803,
449, 451, 452,	2195, 2203,	810, 822, 823, 828
458, 461, 464,	2211, 2219,	<code>\thequestion</code> 1608, 1611
467, 474, 475,	2227, 2235,	<code>\theta</code> 883, 884
493, 495, 501,	2240–2243, 2317	<code>\thispagestyle</code> . . .
504, 556, 558,	<code>\setcounter</code> . . . 230,	. . . 1014, 1020,
564, 567, 733,	913, 1005, 1098,	1023, 1107,
735, 741, 744, 751	1258, 1379, 1607	1113, 1116,
<code>\setbeamercolor</code> . . .	<code>\setlength</code> 25,	1267, 1274,
. . . 1817–1820,	30, 36, 43, 50,	1277, 1388,
1822–1825,	56, 62, 68, 74,	1395, 1398,
1827–1830,	80, 86, 228, 840,	1412, 2483, 2550
1832, 1833,	1457, 2027, 2028	<code>\titeplageimage</code> . . . <u>597</u>
1835–1840,	<code>\setmainfont</code> 1902	<code>\title</code> . . . <u>363</u> , 1009,
1842–1845,	<code>\setmcsymbol</code> <u>1640</u>	1102, 1262, 1383
1847–1854,	<code>\shorttitle</code> <u>380</u>	<code>\titlepageimage</code> . . . 599
1856, 1857,	<code>\signature</code> <u>677</u>	<code>\tl</code> . . . 311–314, 366–369
1859–1862,	<code>\slshape</code>	<code>\to</code> <u>651</u>
1864–1867,	. 784, 786, 801, 803	<code>\toaddress</code> <u>660</u>
1869–1872, 2316	<code>\smallskip</code> . . 1240, 1371	<code>\toorganization</code> . . . <u>655</u>
<code>\setbeamerfont</code>	<code>\square</code> 1641	<code>\tstart</code> <u>723</u>
. . . 1910–1912,	<code>\stepcounter</code> 1610	
1914, 1915,	<code>\str</code> 303	U
1917–1919,	<code>\stretch</code> 1002	<code>\uantwerpencallout</code> 2069
1921, 1923,		

<code>\uantwerpendocsPROP</code>	302	<code>\uline</code>	1424	<code>\vfill</code>	1204,
<code>\uantwerpendocsprop</code>		<code>\unit</code>	<u>626</u>		1207, 1210,
. 299, 368–370,		<code>\uppercase</code> 90, 1444, 1446			1216, 1238,
420, 422, 465,		<code>\usebeamercolor</code> . . .			1244, 1247,
468, 745, 747,		. . . 1775, 2095,			1358, 1361,
787, 822, 823,		2097, 2158,			1364, 1366,
872, 1084,		2167, 2180,			1369, 1375, 1378
1188, 1211,		2187, 2244,		<code>\vrule</code>	2326
1213, 1228,		2324, 2366,		<code>\vskip</code> . .	2679, 2688,
1229, 1235,		2384, 2403,			2711, 2726, 2732
1246, 1377,		2421, 2439,		<code>\vspace</code> . . .	678, 877,
1444, 1446,		2457, 2476,			897, 904, 909, 1002
1498, 1505,		2494, 2526,			
1512, 1522,		2562, 2725, 2729			
1533, 1544,		<code>\usebeamerfont</code> 2676,		X	
1552, 1553, 1619		2722, 2724, 2728		<code>\x</code>	2081, 2082
<code>\uantwerpendocspropread</code>		<code>\usecolortheme</code> . . .	1791	<code>\xcurrent</code> . . .	2740, 2744
. . . . 305, 344, 347		<code>\usefonttheme</code> 1792, 1900		<code>\xlleft</code> 2736, 2742, 2752	
<code>\uantwerpenicon</code> . .	2091	<code>\useinnertheme</code> . . .	1793	<code>\xupright</code>	
<code>\uantwerpenleftshape</code>		<code>\useoutertheme</code> . . .	1794	. . 2738, 2743, 2752	
. 2039,		<code>\usepackage</code> 275, 1899,			
2071, 2335,		1901, 1903, 1906		Y	
2356, 2373,		<code>\usetikzlibrary</code> . . .		<code>\ycurrent</code> . . .	2741, 2744
2391, 2446, 2464		. . . . . 266, 1886		<code>\ylleft</code> 2737, 2742, 2752	
<code>\uantwerpenrightshape</code>		V		<code>\yupright</code>	
. . 2050, 2410, 2428		<code>\versionyear</code>	<u>390</u>	. . 2739, 2743, 2752	