

The `uantwerpendocs` classes^{*}[†]

Walter Daems (`walter.daems@uantwerpen.be`)

2016/05/01

1 Introduction

This package implements the house style of Universiteit Antwerpen for course texts, master's theses and letters. Using these class files will make it easy for you to make and keep your course texts and master's theses compliant to this version and future versions of the UAntwerpen house style.

If you think

- there's an error in compliancy w.r.t. the house style,
- there's a feature missing in this class file,
- there's a bug in this class file,

please, contact us through e-mail (`walter.daems@uantwerpen.be`). We'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 `uantwerpencourse` and `uantwerpenmasterthesis` classes are an extension of the standard L^AT_EX book class. They are intended to be used for writing course texts and master's theses. They provides a title page that is compliant to the UAntwerpen house style, and they also typeset the rest of your document appropriately.

^{*}This document corresponds to `uantwerpendocs` 1.7, dated 2016/05/01.

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

The `uantwerpenletter` class is derived from the standard L^AT_EX `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.

They require (and use) the following packages:

- the `ifthen` package
- the `mtarg` package
- the `geometry` package
- the `atbegshi` package
- the `hyperref` package
- the `graphicx` package
- the `background` package
- the `color` package
- the `tikz` package
- the `fancyhdr` package
- the `pst-barcode` package
- the `auto-pst-pdf` package

and optionally

- the `varioref` package.

So make sure these packages are available to your L^AT_EX compiler.

3 Portability

This class file should be ready to use with all common L^AT_EX compilers (PDFL^AT_EX, L^AT_EX, XeL^AT_EX,...) from the major T_EX-distributions (TeTeX, TexLive, MikTeX). If you experience problems, please inform the authors.

4 Usage

4.1 Basic Usage

Use the templates provided below. Remember to L^AT_EX your source file twice in order to have the title and final page correctly aligned.

4.1.1 uantwerpcoursestext class

Use the following harness for your L^AT_EX course text:

```
\documentclass[a4paper]{uantwerpcoursestext}

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

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

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

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

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

\academicyear{<XXXX-YYYY>}

\begin{document}

\maketitle

% put your LaTeX code here

\finalpage

\end{document}}
```

The available faculty acronyms are listed in a table on page 6.

4.1.2 uantwerpenmasterthesis class

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

```
\documentclass[a4paper]{uantwerpenmasterthesis}

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

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

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

```

\supervisorI{<put the first supervisor's name(s) here>}
\supervisorII{<put the first supervisor's name(s) here>}
\supervisorIII{<put the first supervisor's name(s) here>}
\supervisorIV{<put the first supervisor's name(s) here>}

% classmarker
\academicyear{<XXXX-YYYY>}

\begin{document}

\maketitle

% put your LaTeX code here

\finalpage

\end{document}

```

The available faculty acronyms are listed in a table on page 6.

4.1.3 uantwerpenletter class

Use the following harness for your L^AT_EX letter:

```

\documentclass[a4paper]{uantwerpenletter}

% setup fonts according to your specific TeX compiler setup

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

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

\sender{<put your name here>}{<put your title/role here>}
\facultyacronym{<put your faculty's acronym here>}
\unit{<put your unit here>}
\address{<put your multi-line address here>}
\email{<user name>}{<domain name>}
\phone{<put your phone number here, start with +32>}
\fax{<put your fax number here, start with +32>}
\mobile{<put your mobile number here, start with +32>}
\returnaddress{<put your single-line return address here>}

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

\date{<specify date - otherwise today>}

```

```

\subject{<specify subject>}

\begin{document}

\maketitle % generates top of the letter

\opening{Dear <name>}

<write your letter here>

\closing{Kind regards,}

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

\end{document}

```

The available faculty acronyms are listed in a table on page 6. You may use lists in the \carboncopy and \enclosed commands. The spacing will be compact.

4.2 The class options explained

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

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;

filled [letter / coursetext / masterthesis]

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 readability of your text, you shouldn't use this option.

titlepagenoartwork [coursetext / masterthesis]

This option forces the title pages to be typeset without circle graphics and logo. This allows for printing on a pre-printed color sheet that already contains circle graphics and logo;

titlepagetableonly [coursetext / masterthesis]

This option forces the title-page data to be printed in table form as first page. Some publishers require the manuscript to be delivered in this form. They perform the entire typesetting of the title page.

qr [coursetext]

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

Common sets of options depend on the purpose:

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

4.3 The macros explained

4.3.1 Common macros

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

\facultyacronym [coursetext / masterthesis] (mandatory)

This macro sets the acronym of the faculty. This macro also sets the faculty name according to the specified acronym. If you're missing a faculty or institute, please ask the authors to complete the list.

The available acronyms are:

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

4.3.2 Macros for the `coursetext` and `masterthesis` classes

`\title` [coursetext / masterthesis] (mandatory)

This macro sets the title of the document. It also sets the `pdftitle` tag of the `hyperref` package, so that the PDF-document meta-information is correct.

`\subtitle` [coursetext] (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, so that the PDF-document meta-information is correct.

`\author` [coursetext / masterthesis] (mandatory)

This macro sets the author of the document. It also sets the `pdfauthor` tag of the `hyperref` package, so that the PDF-document meta-information is correct.

`\publisher` [coursetext] (mandatory)

This macro sets the publisher information of the document. It is printed on the front page. It defaults to the reprographic service of campus Groenenborger, one of the standard printing services of Universiteit Antwerpen.

`\publishercode` [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.

`\courseversion` [coursetext] (optional)

This macro indicates which version of the course this is.

`\versionyear` [coursetext] (mandatory)

This is to be the year in which you published the current version of the course in the form YYYY.

`\lecturer` [coursetext] (mandatory)

This is the name of the person that actually teaches the course (in Dutch: titularis). If there are multiple persons, please, use the macros `\lectureri`, `\lecturerii`, `\lectureriii`, `\lectureriv`.

`\programme` [coursetext] (mandatory)

This macro takes three arguments (for the time being, only applicable to the faculty of applied engineering):

- the type of the programme: BA, SP, VP or MA

- the domain of the programme: IW
- the qualifier of the programme: BK, CH, BCH, EM, EI

If you need more programme classes or qualifiers, ask the authors to complete the available codes. Correct usage of the macro will result in error-free descriptions on your title page. You can overrule the standard descriptions, by specifying 'FREE' as first argument and a free text description as second, leaving the third one empty. However, we strongly advise against taking this route. Instead, ask the authors to complete the available codes.

`\supervisor` [masterthesis] (mandatory)

This is the name of the person that promotes the thesis. If there are multiple persons, please, use the macros `\supervisorI`, `\supervisorII`, `\supervisorIII`, `\supervisorIV`.

`\course` [coursename] (mandatory)

Code (first argument) and name (second argument) of the curriculum course this coursematerial belongs to. The code should be of the form:
`TNNNFFFAAA`, with:

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

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

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

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

`\academicyear` [coursename / masterthesis] (mandatory)

Use this macro to specify the academic year in full, i.e. in the form `XXXX-YYYY`.

`\diploma` [masterthesis] (mandatory)

This must be the official title, in Dutch. To avoid errors, we chose to use specific codes, that will expand to the correct description. These codes are specific for the Faculty of Applied Engineering. If you want the author of the package to add codes for your faculty, just ask!

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

\defensedate	[masterthesis] (mandatory) Date of the defense in Dutch, in the form 'month year', e.g. "juni 2012".
\defenselocation	[masterthesis] (optional) Location of the defense. Defaults to "Antwerpen".
\copyrightnotices	[coursetext] (optional) Use this macro to specify additional copyright notice messages to appear in the copyright notice on the bottom of page 2 of your course text.

4.3.3 Macros for the letter class

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

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

Newlines are not allowed in the arguments.

\logo	[letter] (optional) file name of an alternative logo to use. The file name must be the name of a file in the search path of type PDF. If this macro is not used, The default logo of the university will be used.
\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.
\address	[letter] (mandatory) Address of the sending unit (or faculty). This can be different from the return address. Newlines are allowed and encouraged.
\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. <ul style="list-style-type: none"> • first argument: user name • second argument: domain name
\phone	[letter] (optional) Phone number of the sending person. See also \email.
\fax	[letter] (optional) Probably facsimile is not used anymore, but anyway: fax number of the sending person. See also \email.
\mobile	[letter] (optional) Mobile phone number of the sending person. See also \email.
\returnaddress	[letter] (mandatory) This is a short return address (listed in small font on top of the destination address (such that it is visible in a windowed envelope (European format)). It should fit on a single line. Typically we list an acronym for the unit, a room number, a campus name and address. The goal is to get the undelivered letter back to the person that can take action accordingly.
\to	[letter] (mandatory) Name of the addressee. Newlines are allowed. Preferably name and role are split over two lines.
\toorganization	[letter] (optional) Name of the organization that employs the addressee.

- \toaddress** [letter] (mandatory)
 Address of the addressee. Newlines are allowed. The address should fit on max. 3 lines.
- \date** [letter] (optional)
 Date of the letter. If not specified today's date (at the time of running L^AT_EX) will be used.
- \subject** [letter] (mandatory)
 Short descriptive subject that describes the contents of the letter.
- \opening** [letter] (mandatory)
 Opening address of the letter. E.g. 'Dear X,'.
- \closing** [letter] (mandatory)
 Closing clause of the letter. E.g. 'Best regards,'.
- \carboncopy** [letter] (optional)
 List of persons receiving a copy of this letter. Format at will.
- \enclosed** [letter] (optional)
 List of enclosed documents. Format at will.

4.4 Examples

4.4.1 uantwerpencoursestext

This example uses the qr option (that invokes the auto-pst-pdf package) so enable 'write18' or 'shell-escape' for your L^AT_EX compiler.

```
<*>
\documentclass[a4paper,11pt,oneside,openright,english,qr,copyright]{uantwerpencoursestext}

\usepackage[english,dutch]{babel}

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

\courseversion{1.3}
\versionyear{2016}

\lectureri{Zoltan Zo\"ekers}
\qrlectureri{Zoltan Zokers}
\lecturerii{Siana Sigh}
\lectureriii{Zeger de Z\`ager}
\qrlectureriii{Zeger de Zger}
```

```

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

\academicyear{2015-2016}

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

\publishercode{C11111102}

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

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

\maketitle

\frontmatter

\tableofcontents

\mainmatter
\chapter*{Inleiding}
Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

\chapter{Onzin voor dummies}

\section{Een beetje Cicero}
Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae

```

ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt. Neque porro quisquam est, qui dolorem ipsum quia dolor sit amet, consectetur, adipisci velit, sed quia non numquam eius modi tempora incident ut labore et dolore magnam aliquam quaerat voluptatem. Ut enim ad minima veniam, quis nostrum exercitationem ullam corporis suscipit laboriosam, nisi ut aliquid ex ea commodi consequatur? Quis autem vel eum iure reprehenderit qui in ea voluptate velit esse quam nihil molestiae consequatur, vel illum qui dolorem eum fugiat quo voluptas nulla pariatur?

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

At vero eos et accusamus et iusto odio dignissimos ducimus qui blanditiis praesentium voluptatum deleniti atque corrupti quos dolores et quas molestias excepturi sint occaecati cupiditate non provident, similique sunt in culpa qui officia deserunt mollitia animi, id est laborum et dolorum fuga. Et harum quidem rerum facilis est et expedita distinctio. Nam libero tempore, cum soluta nobis est eligendi optio cumque nihil impedit quo minus id quod maxime placeat facere possimus, omnis voluptas assumenda est, omnis dolor repellendus. Temporibus autem quibusdam et aut officiis debitis aut rerum necessitatibus saepe eveniet ut et voluptates repudiandae sint et molestiae non recusandae. Itaque earum rerum hic tenetur a sapiente delectus, ut aut reiciendis voluptatibus maiores alias consequatur aut perferendis doloribus asperiores repellat.

\section{En waartoe het geleid heeft}

 Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

\subsection{Herhaling}

 Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt. Neque porro quisquam est, qui dolorem ipsum quia dolor sit amet, consectetur, adipisci velit, sed quia non numquam eius modi tempora incident ut labore et dolore magnam aliquam quaerat voluptatem. Ut enim ad minima veniam, quis nostrum

exercitationem ullam corporis suscipit laboriosam, nisi ut aliquid ex ea commodi consequatur? Quis autem vel eum iure reprehenderit qui in ea voluptate velit esse quam nihil molestiae consequatur, vel illum qui dolorem eum fugiat quo voluptas nulla pariatur?

```
\subsection{Begint vervelend te worden}

At vero eos et accusamus et iusto odio dignissimos ducimus qui blanditiis praesentium voluptatum deleniti atque corrupti quos dolores et quas molestias excepturi sint occaecati cupiditate non provident, similique sunt in culpa qui officia deserunt mollitia animi, id est laborum et dolorum fuga. Et harum quidem rerum facilis est et expedita distinctio. Nam libero tempore, cum soluta nobis est eligendi optio cumque nihil impedit quo minus id quod maxime placeat facere possimus, omnis voluptas assumenda est, omnis dolor repellendus. Temporibus autem quibusdam et aut officiis debitis aut rerum necessitatibus saepe eveniet ut et voluptates repudiandae sint et molestiae non recusandae. Itaque earum rerum hic tenetur a sapiente delectus, ut aut reiciendis voluptatibus maiores alias consequatur aut perferendis doloribus asperiores repellat.
```

```
\newpage
```

```
\subsection{Begint echt vervelend te worden}

At vero eos et accusamus et iusto odio dignissimos ducimus qui blanditiis praesentium voluptatum deleniti atque corrupti quos dolores et quas molestias excepturi sint occaecati cupiditate non provident, similique sunt in culpa qui officia deserunt mollitia animi, id est laborum et dolorum fuga. Et harum quidem rerum facilis est et expedita distinctio. Nam libero tempore, cum soluta nobis est eligendi optio cumque nihil impedit quo minus id quod maxime placeat facere possimus, omnis voluptas assumenda est, omnis dolor repellendus. Temporibus autem quibusdam et aut officiis debitis aut rerum necessitatibus saepe eveniet ut et voluptates repudiandae sint et molestiae non recusandae. Itaque earum rerum hic tenetur a sapiente delectus, ut aut reiciendis voluptatibus maiores alias consequatur aut perferendis doloribus asperiores repellat.
```

```
\chapter{Besluit}
```

```
\backmatter
\appendix
```

```
\chapter{Symbolen}
\chapter{Romeinse sprekers}
\chapter{Referentielijs}
```

```
\makefinalpage
```

```
\end{document}
```

```
</ct-example>
```

4.4.2 Uantwerpenmasterthesis

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

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

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

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

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

\begin{document}

\maketitle

\frontmatter

\tableofcontents

\mainmatter
\chapter*{Inleiding}
Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

\chapter{Onderzoeksvergadering}

\section{Een beetje Cicero}
Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos
```

qui ratione voluptatem sequi nesciunt. Neque porro quisquam est, qui dolorem ipsum quia dolor sit amet, consectetur, adipisci velit, sed quia non numquam eius modi tempora incidunt ut labore et dolore magnam aliquam quaerat voluptatem. Ut enim ad minima veniam, quis nostrum exercitationem ullam corporis suscipit laboriosam, nisi ut aliquid ex ea commodi consequatur? Quis autem vel eum iure reprehenderit qui in ea voluptate velit esse quam nihil molestiae consequatur, vel illum qui dolorem eum fugiat quo voluptas nulla pariatur?

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

At vero eos et accusamus et iusto odio dignissimos ducimus qui blanditiis praesentium voluptatum deleniti atque corrupti quos dolores et quas molestias excepturi sint occaecati cupiditate non provident, similique sunt in culpa qui officia deserunt mollitia animi, id est laborum et dolorum fuga. Et harum quidem rerum facilis est et expedita distinctio. Nam libero tempore, cum soluta nobis est eligendi optio cumque nihil impedit quo minus id quod maxime placeat facere possimus, omnis voluptas assumenda est, omnis dolor repellendus. Temporibus autem quibusdam et aut officiis debitis aut rerum necessitatibus saepe eveniet ut et voluptates repudiandae sint et molestiae non recusandae. Itaque earum rerum hic tenetur a sapiente delectus, ut aut reiciendis voluptatibus maiores alias consequatur aut perferendis doloribus asperiores repellat.

```
\chapter{Literatuurstudie}
\chapter{Theoretische achtergrond}
\chapter{Eigen realisatie}
\chapter{Besluit}

\backmatter
\appendix

\chapter{Symbolen}
\chapter{Referentielijst}

\makefinalpage

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

4.4.3 uantwerpenletter

Plain example

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

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

\usepackage[english]{babel}

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

\to{Prof. B. Bonette}
\toorganization{Mumford University}
\toaddress{
    450 Morning Mall\\
    Mumford, TX 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.

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt. Neque porro quisquam est, qui dolorem ipsum quia dolor sit amet, consectetur, adipisci velit, sed quia non numquam eius modi tempora incidunt ut labore et dolore magnam aliquam quaerat voluptatem. Ut enim ad minima veniam, quis nostrum exercitationem ullam corporis suscipit laboriosam, nisi ut aliquid ex ea commodi consequatur? Quis autem vel eum iure reprehenderit qui in ea voluptate velit esse quam nihil molestiae consequatur, vel illum qui dolorem eum fugiat quo voluptas nulla pariatur?

At vero eos et accusamus et iusto odio dignissimos ducimus qui blanditiis praesentium voluptatum deleniti atque corrupti quos dolores et quas molestias excepturi sint occaecati cupiditate non provident, similique sunt in culpa qui officia deserunt mollitia animi, id est laborum et dolorum fuga. Et harum quidem rerum facilis est et expedita distinctio. Nam libero tempore, cum soluta nobis est eligendi optio cumque nihil impedit quo minus id quod maxime placeat facere possimus, omnis voluptas assumenda est, omnis dolor repellendus. Temporibus autem quibusdam et aut officiis debitis aut rerum necessitatibus saepe eveniet ut et voluptates repudianda sint et molestiae non recusandae. Itaque earum rerum hic tenetur a sapiente delectus, ut aut reiciendis voluptatibus maiores alias consequatur aut perferendis doloribus asperiores repellat.

\closing{Kind regards,}

\carboncopy{Prof. S. Mariotte, Mumford University}
\enclosed{

```

\begin{enumerate}
\item list of course numbers that are most frequently viewed at
      our university (1pp)
\item a list of students desiring to take an internship at
      Mumford University (2pp)
\end{enumerate}
}

\end{document}
</le-example>

```

Example with configuration file

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

```

<*le-cfg>
% configuration file for uantwerpenletter class
\usepackage{fontspec} % XeLaTeX/LaTeX specific, replace by e.g.
\setmainfont{Calibri} % \usepackage{cmbright}
\sender{Prof. Walter Daems}{Senior Lecturer}
\facultyacronym{TI}
\unit{CoSys-Lab}
\address{
    Campus Groenenborger\\
    Groenenborgerlaan 171\\
    B-2020 Antwerpen\\
    BELGIUM}
\email{walter.daems}{uantwerpen.be}
\phone{+32 3 265 98 43}
\mobile{+32 499 355 115}
\returnaddress{FTI - U.301 -- Groenenborgerlaan 171, 2020 Antwerpen, BELGIUM}
</le-cfg>

```

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

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

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

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

5 Implementation

5.1 Class inheritance

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

Before loading the class, we provide the extra options.

```
1 <*ct>
2 \newif\if@copyright
3 \DeclareOption{copyright}{\@copyrighttrue}
4 \newif\if@qr
5 \DeclareOption{qr}{\@qrtrue}
6 </ct>

7 <*ct | mt>
8 \newif\if@titlepagenoartwork
9 \DeclareOption{titlepagenoartwork}{\@titlepagenoartworktrue}
10 \newif\if@titlepagetableonly
11 \DeclareOption{titlepagetableonly}{\@titlepagetableonlytrue}
12 </ct | mt>
13 <*ct | mt | le>
14 \newif\if@filled
15 \DeclareOption{filled}{\@filledtrue}
16 </ct | mt | le>
```

We execute some standard options: We load the `book` class.

```
17 <*le>
18 \ExecuteOptions{a4paper,10pt,final,oneside,openright}
19 \ProcessOptions
20 \LoadClassWithOptions{letter}
21 \newcommand\tat{\makeatletter @\makeatother}
22 \newcommand\tbs{\textbackslash}
23 </le>
24 <*ct | mt>
25 \ExecuteOptions{a4paper,11pt,final,oneside,openright}
26 \ProcessOptions
27 \LoadClassWithOptions{book}
28 </ct | mt>
```

5.2 Modern typesetting

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

```
29 <*ct | mt | le>
30 \setlength{\parindent}{0pt}
```

```

31 \addtolength{\parskip}{0.75\baselineskip}
32 \setcounter{secnumdepth}{3}
33 </ct | mt | le>

```

5.3 Auxiliary packages

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

5.3.1 Geometry

Let's reduce the margins to 1 inch each.

```

34 <*ct | mt>
35 \RequirePackage[top=1in, bottom=1in, left=1in, right=1in]{geometry}
36 </ct | mt>
37 <*le>
38 \RequirePackage[top=1in, bottom=1in, left=1.34in, right=1in]{geometry}
39 \RequirePackage[normalem]{ulem}
40 \RequirePackage{atbegshi}
41 </le>

```

5.3.2 Font packages

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

```

42 <*ct | mt | le>
43 % no more font code
44 </ct | mt | le>

```

5.3.3 Boilerplate packages

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

```

45 <*ct | mt | le>
46 \RequirePackage{ifthen}
47 \newcommand{\@emptymacro}{}%
48 </ct | mt | le>

```

5.3.4 Graphics packages

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

Some packages for coursetext and masterthesis:

```
49 <*ct | mt | le>
50 \RequirePackage{graphicx}
51 \RequirePackage{color}
52 \RequirePackage{tikz}
53 </ct | mt | le>
54 <*ct>
55 \if@copyright
56 \RequirePackage[firstpage=false,contents={Copyright University of Antwerp, All Rights Reserved}]
57 \fi
58 </ct>
```

In uantwerpencoursetext we also want to generate a qr code. Therefore we load the **pst-barcode** and **auto-pst-pdf** package. In this case you must enable 'write18' or 'shell-escape' for your L^AT_EX compiler. Check your documentation on how to do so!

```
59 <*ct>
60 \if@qr
61 \RequirePackage{auto-pst-pdf}
62 \RequirePackage{pst-barcode}
63 \fi
64 </ct>
```

5.3.5 Header/Footer

The de-facto standard for headers and footers:

```
65 <*ct | mt | le>
66 \RequirePackage{fancyhdr}
67 </ct | mt | le>
```

5.4 Colors

```
68 <*ct | mt | le>
69 \definecolor{uacorpborder}{cmyk} {0.00,1.00,0.60,0.37}
70 \definecolor{uacorpblue}{cmyk} {1.00,0.25,0.00,0.50}
71 \definecolor{uacorplightblue}{cmyk} {1.00,0.00,0.08,0.13}
72 \definecolor{uacorporange}{cmyk} {0.00,0.32,1.00,0.09}
73 \definecolor{uaftifresh}{cmyk} {0.34,1.00,0.00,0.00}
74 \definecolor{uaftisober}{cmyk} {0.10,1.00,0.00,0.49}
75 \definecolor{lightgray}{cmyk} {0.00,0.00,0.00,0.05}
```

76 ⟨/ct | mt | le⟩

5.5 Babel provisions

```
77 ⟨*ct | mt | le⟩
78 \newcommand{\uname}{University of Antwerp}
79 \newcommand{\logoname}{UA_HOR_ENG_CMYK}
80 \newcommand{\footername}{4E_PMS302_BR_ENG_RGB}
81 \newcommand{\orname}{of}
82 \newcommand{\domainname}{uantwerp.be}
83 \newcommand{\datename}{Date}
84 \newcommand{\subjectname}{Subject}
85 \newcommand{\academicyearname}{Academic year}
86 \newcommand{\masterthesisname}{Master's thesis}
87 \newcommand{\promotorsname}{Promoters}
88 \newcommand{\thesisname}{Thesis to obtain the degree of}
89 \AtBeginDocument{
90   \@ifpackageloaded{babel}{
91     \addto\captionsdutch{%
92       \renewcommand{\uname}{Universiteit Antwerpen}
93       \renewcommand{\logoname}{UA_HOR_NED_CMYK}
94       \renewcommand{\footername}{4E_PMS302_BR_NED_RGB}
95       \renewcommand{\orname}{van}
96       \renewcommand{\domainname}{uantwerpen.be}
97       \renewcommand{\subjectname}{Onderwerp}%
98       \renewcommand{\datename}{Datum}%
99       \renewcommand{\academicyearname}{Academiejaar}
100      \renewcommand{\masterthesisname}{Masterproef}
101      \renewcommand{\promotorsname}{Promotoren}
102      \renewcommand{\thesisname}{Proefschrift tot het behalen van de
103        graad van}
104    }
105    \addto\captionsgerman{%
106      \renewcommand{\uname}{Universit\"at Antwerpen}
107      \renewcommand{\logoname}{UA_HOR_DUI_CMYK}
108      \renewcommand{\footername}{4E_PMS302_BR_NED_RGB}
109      \renewcommand{\orname}{von}
110      \renewcommand{\domainname}{uantwerpen.be}
111      \renewcommand{\subjectname}{Betreff}%
112      \renewcommand{\datename}{Datum}%
113      \renewcommand{\academicyearname}{Akademisches Jahr}
114      \renewcommand{\masterthesisname}{Masterdissertation}
115      \renewcommand{\promotorsname}{Veranstalter}
116      \renewcommand{\thesisname}{Dissertation zur Erreichung des
117        Grades der}
118    }
119    \addto\captionsfrench{%
120      \renewcommand{\uname}{Universit\'e d'Anvers}
121      \renewcommand{\logoname}{UA_HOR_FRA_CMYK}
```

```

122 \renewcommand{\footernumber}{4E_PMS302_BR_ENG_RGB}
123 \renewcommand{\orname}{de}
124 \renewcommand{\domainname}{uanvers.be}
125 \renewcommand{\subjectname}{Objet}%
126 \renewcommand{\datename}{Date}%
127 \renewcommand{\academicyearname}{Année académique}
128 \renewcommand{\masterthesisname}{Thèse de master}
129 \renewcommand{\promotorsname}{Promoteurs}
130 \renewcommand{\thesisname}{Thèse à l'atteinte du degré de}
131 }
132 \addto\captionsspanish{%
133   \renewcommand{\uaname}{Universidad de Amberes}
134   \renewcommand{\logoname}{UA_HOR_SPA_CMYK}
135   \renewcommand{\footernumber}{4E_PMS302_BR_ENG_RGB}
136   \renewcommand{\orname}{de}
137   \renewcommand{\domainname}{uantwerp.be}
138   \renewcommand{\subjectname}{Asunto}%
139   \renewcommand{\datename}{Fecha}%
140   \renewcommand{\academicyearname}{Año académico}
141   \renewcommand{\masterthesisname}{Tesis de maestría}
142   \renewcommand{\promotorsname}{Promotores}
143   \renewcommand{\thesisname}{Disertación a la consecución del
144     grado de}
145 }
146 }
147 {}
148 }
149 </ct | mt | le>

```

5.6 Tags

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

```

150 <*ct | mt | le>
151 \newcommand{\@facultyacronym}{}
152 \newcommand{\@faculty}{< Specify faculty using \tbs{}facultyacronym\{ABC\} >}
153 \newcommand{\facultyacronym}[1]{%
154   \renewcommand{\@facultyacronym}{#1}%
155   \ifthenelse{\equal{#1}{CPG}}{\renewcommand{\@faculty}{Centrum
156     Pieter Gillis}}{%
157     \ifthenelse{\equal{#1}{FBD}}{\renewcommand{\@faculty}{Faculteit
158       Farmaceutische, Biomedische en Diergeneeskundige Wetenschappen}}{%
159       \ifthenelse{\equal{#1}{GGW}}{\renewcommand{\@faculty}{Faculteit
160         Geneeskunde en Gezondheidswetenschappen}}{%
161           \ifthenelse{\equal{#1}{IOB}}{\renewcommand{\@faculty}{Instituut
162             voor Ontwikkelingsbeleid- en beheer}}{%
163               \ifthenelse{\equal{#1}{IOIW}}{\renewcommand{\@faculty}{Instituut

```

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

```
182 <*ct>
183 \newcommand{\@qrttitle}={}
184 \renewcommand{\title}[1]{%
185   \renewcommand{\@title{#1}}%
186   \ifx\@qrttitle\@emptymacro
187   \renewcommand{\qrttitle{#1}}%
188   \fi
189 }
190 \newcommand{\qrttitle}[1]{%
191   \renewcommand{\qrttitle{#1}}%
192 }
193 </ct>
```

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

```
194 <*ct>
195 \newcommand{\@subtitle}={}
196 \newcommand{\@qrsubtitle}{}
197 \newcommand{\subtitle}[1]{%
198   \renewcommand{\@subtitle}{#1}%
199   \ifx\@qrsubtitle\emptymacro
200     \renewcommand{\@qrsubtitle}{#1}%
201   \fi
202 }
```

```

203 \newcommand{\qrsubtitle}[1]{%
204   \renewcommand{\qrsubtitle{\#1}}
205 }
206 
```

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

```

207 <*ct>
208 \newcommand{\@qrauthor}{}
209 \renewcommand{\author}[1]{%
210   \renewcommand{\author{\#1}}
211   \ifx\@qrauthor\emptymacro
212   \renewcommand{\@qrauthor{\#1}}
213   \fi
214 }
215 \newcommand{\qrauthor}[1]{%
216   \renewcommand{\@qrauthor{\#1}}
217 }
218 
```

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

```

219 <*ct>
220 \newcommand{\@courseversion}{}
221 \newcommand{\courseversion}[1]{\renewcommand{\@courseversion{\#1}}}
222 
```

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

```

223 <*ct>
224 \newcommand{\@versionyear}{}
225 \newcommand{\versionyear}[1]{\renewcommand{\@versionyear{\#1}}}
226 
```

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

```

227 <*ct>
228 \newcommand{\@publisher}{\uaname \\
229 Cursusdienst en reprografie \\
230 Campus Groenenborger, G.U.027 \\
231 Groenenborgerlaan 171 \\
232 2020 Antwerpen \\
233 T +32 3 265 32 15 \\
```

```

234 F + 32 3 233 32 27\\
235 E cursusdienst.cgb@uantwerpen.be}
236 \newcommand{\publisher}{[1]{\renewcommand{\@publisher}{#1}}}
237 
```

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

```

238 {*ct}
239 \newcommand{\@publisher}{}
240 \newcommand{\publisher}{[1]{\renewcommand{\@publisher}{#1}}}
241 
```

\lecturer This macro sets many `\@lecturer` tags (max. 4) that later will be used on the title page. If there is only one teaching lecturer one can use the convenient shorthand without counter. In case the lecturer's name contains accented characters, you also need to provide a qr version in full unicode (so without the traditional L^AT_EX accented characters.)

```

242 {*ct}
243 \newcommand{\@lectureri}{}
244 \newcommand{\@lecturerii}{}
245 \newcommand{\@lectureriii}{}
246 \newcommand{\@lectureriv}{}
247 \newcommand{\@qrlectureri}{}
248 \newcommand{\@qrlecturerii}{}
249 \newcommand{\@qrlectureriii}{}
250 \newcommand{\@qrlectureriv}{}
251 \newcommand{\lecturer}{[1]{}
252   \renewcommand{\@lectureri}{#1}
253   \ifx\@qrlectureri\@emptymacro
254     \renewcommand{\@qrlectureri}{#1}
255   \fi
256 }
257 \newcommand{\qrlecturer}{[1]{}
258   \renewcommand{\@qrlectureri}{#1}
259 }
260 \newcommand{\lectureri}{[1]{}
261   \renewcommand{\@lectureri}{#1}
262   \ifx\@qrlectureri\@emptymacro
263     \renewcommand{\@qrlectureri}{#1}
264   \fi
265 }
266 \newcommand{\qrlectureri}{[1]{}
267   \renewcommand{\@qrlectureri}{#1}
268 }
269 \newcommand{\lecturerii}{[1]{}
270   \renewcommand{\@lecturerii}{#1}
271   \ifx\@qrlecturerii\@emptymacro
272     \renewcommand{\@qrlecturerii}{#1}
273   \fi
274 }
```

```

273   \fi
274 }
275 \newcommand{\qrlecturerii}[1]{
276   \renewcommand{\qrlecturerii}{#1}
277 }
278 \newcommand{\lectureriii}[1]{
279   \renewcommand{\@lectureriii}{#1}
280   \ifx\@qrlectureriii\emptymacro
281   \renewcommand{\qrlectureriii}{#1}
282   \fi
283 }
284 \newcommand{\qrlectureriii}[1]{
285   \renewcommand{\qrlectureriii}{#1}
286 }
287 \newcommand{\lectureriv}[1]{
288   \renewcommand{\@lectureriv}{#1}
289   \ifx\@qrlectureriv\emptymacro
290   \renewcommand{\qrlectureriv}{#1}
291   \fi
292 }
293 \newcommand{\qrlectureriv}[1]{
294   \renewcommand{\qrlectureriv}{#1}
295 }
296 </ct>

```

\supervisor This macro sets many `\@supervisor` tags (max. 4) that later will be used on the title page. If there is only one supervisor one can use the convenient shorthand without counter.

```

297 <*mt>
298 \newcommand{\@supervisor}{}
299 \newcommand{\@supervisorii}{}
300 \newcommand{\@supervisoriii}{}
301 \newcommand{\@supervisoriv}{}
302 \newcommand{\supervisor}[1]{\renewcommand{\@supervisor}{#1}}
303 \newcommand{\supervisori}[1]{\renewcommand{\@supervisor}{#1}}
304 \newcommand{\supervisorii}[1]{\renewcommand{\@supervisorii}{#1}}
305 \newcommand{\supervisoriii}[1]{\renewcommand{\@supervisoriii}{#1}}
306 \newcommand{\supervisoriv}[1]{\renewcommand{\@supervisoriv}{#1}}
307 </mt>

```

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

```

308 <*ct>
309 \newcommand{\@programmet}{} % type
310 \newcommand{\@programmec}{} % class
311 \newcommand{\@programmecqr}{} % class for qr code

```

```

312 \newcommand{\@programmes}{} % class
313 \newcommand{\@programmeq}{} % qualifier
314 \newcommand{\programme}[3]{%
315   \ifthenelse{\equal{#1}{BA}}{%
316     {\renewcommand{\@programmet}{Bachelor of Science in de }}{%
317       \ifthenelse{\equal{#1}{MA}}{%
318         {\renewcommand{\@programmet}{Master of Science in de }}{%
319           \ifthenelse{\equal{#1}{VP}}{%
320             {\renewcommand{\@programmet}{Voorbereidingsprogramma voor Master of Science in de }}{%
321               \ifthenelse{\equal{#1}{SP}}{%
322                 {\renewcommand{\@programmet}{Schakelprogramma voor Master of Science in de }}{%
323                   \ifthenelse{\equal{#1}{FREE}}{%
324                     {}{%
325                       \errmessage{Error in 1st arg of macro programme[3]: invalid
326                         programme type!}}}}}}}}}}{%
327 %
328 \ifthenelse{\equal{#2}{IW}}{%
329   {\renewcommand{\@programmec}{industri\"ele wetenschappen}
330    \renewcommand{\@programmecqr}{industriele wetenschappen}}{%
331      \ifthenelse{\equal{#2}{}}{%
332        {}{%
333          \errmessage{{Error in 2nd arg of macro programme[3]: invalid
334            programme class! }}}}}}}{%
335 %
336 \ifthenelse{\equal{#3}{BK}}{%
337   {\renewcommand{\@programmeq}{bouwkunde}}{%
338     \ifthenelse{\equal{#3}{CH}}{%
339       {\renewcommand{\@programmeq}{chemie}}{%
340         \ifthenelse{\equal{#3}{BCH}}{%
341           {\renewcommand{\@programmeq}{biochemie}}{%
342             \ifthenelse{\equal{#3}{EM}}{%
343               {\renewcommand{\@programmeq}{elektromechanica}}{%
344                 \ifthenelse{\equal{#3}{EI}}{%
345                   {\renewcommand{\@programmeq}{elektronica-ICT}}{%
346                     \ifthenelse{\equal{#3}{}}{%
347                       {}{%
348                         \ifthenelse{\equal{#1}{FREE}}{%
349                           {\renewcommand{\@programmeq}{#3}}{%
350                             \errmessage{Error in 3rd arg to macro programme[3]: invalid
351                               programme qualifier}}}}}}}}}}}}}}{%
352 %
353 \ifthenelse{\equal{#2}{IW}\and\not\equal{#3}{}}{%
354   {\renewcommand{\@programmes}{: }}}{%
355 }%
356 </ct>

```

- \course This macro sets many \coursecode and \course tags (max. 4) that later will be used on the title page. If there is only one course code one can use the convenient shorthand without counter.

```

357 <*ct>
358 \newcommand{\@coursecodei}{}
359 \newcommand{\@coursecodeii}{}
360 \newcommand{\@coursecodeiii}{}
361 \newcommand{\@coursecodeiv}{}
362 \newcommand{\@coursei}{}
363 \newcommand{\@courseii}{}
364 \newcommand{\@courseiii}{}
365 \newcommand{\@courseiv}{}
366 \newcommand{\@qrcoursei}{}
367 \newcommand{\@qrcourseii}{}
368 \newcommand{\@qrcourseiii}{}
369 \newcommand{\@qrcourseiv}{}
370 \newcommand{\course}[2]{
371   \renewcommand{\@coursecodei}{\#1}
372   \renewcommand{\@coursei}{\#2}
373   \ifx\@qrcoursei\@emptymacro
374     \renewcommand{\@qrcoursei}{\#2}
375   \fi
376 }
377 \newcommand{\qrcourse}[1]{
378   \renewcommand{\@qrcoursei}{\#1}
379 }
380 \newcommand{\coursei}[2]{
381   \renewcommand{\@coursecodei}{\#1}
382   \renewcommand{\@coursei}{\#2}
383   \ifx\@qrcoursei\@emptymacro
384     \renewcommand{\@qrcoursei}{\#2}
385   \fi
386 }
387 \newcommand{\qrcoursei}[1]{
388   \renewcommand{\@qrcoursei}{\#1}
389 }
390 \newcommand{\courseii}[2]{
391   \renewcommand{\@coursecodeii}{\#1}
392   \renewcommand{\@courseii}{\#2}
393   \ifx\@qrcourseii\@emptymacro
394     \renewcommand{\@qrcourseii}{\#2}
395   \fi
396 }
397 \newcommand{\qrcourseii}[1]{
398   \renewcommand{\@qrcourseii}{\#1}
399 }
400 \newcommand{\courseiii}[2]{
401   \renewcommand{\@coursecodeiii}{\#1}
402   \renewcommand{\@courseiii}{\#2}
403   \ifx\@qrcourseiii\@emptymacro
404     \renewcommand{\@qrcourseiii}{\#2}
405   \fi
406 }

```

```

407 \newcommand{\qrcourseiii}[1]{
408   \renewcommand{\qrcourseiii}{#1}
409 }
410 \newcommand{\courseiv}[2]{
411   \renewcommand{\@coursecodeiv}{#1}
412   \renewcommand{\@courseiv}{#2}
413   \ifx\qrcourseiv\emptymacro
414     \renewcommand{\qrcourseiv}{#2}
415   \fi
416 }
417 \newcommand{\qrcourseiv}[1]{
418   \renewcommand{\@qrcourseiv}{#1}
419 }
420 
```

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

```

421 {*mt}
422 \newcommand{\@diploma}{ERROR}
423 \newcommand{\diploma}[1]{
424   \newcommand{\MoSIW}{Master of Science in de industriële wetenschappen}
425   \newcommand{\MoSTEW}{Master of Science in de toegepaste economische wetenschappen}
426   \renewcommand{\@diploma}{
427     \ifthenelse{\equal{#1}{MA-IW-BK}}{\\MoSIW: bouwkunde}{}
428     \ifthenelse{\equal{#1}{MA-IW-BCH}}{\\MoSIW: biochemie}{}
429     \ifthenelse{\equal{#1}{MA-IW-CH}}{\\MoSIW: chemie}{}
430     \ifthenelse{\equal{#1}{MA-IW-EI}}{\\MoSIW: elektronica-ICT}{}
431     \ifthenelse{\equal{#1}{MA-IW-EI-AE}}{\\MoSIW:\\elektronica-ICT, afstudeerrichting automotive engineering}{}
432     \ifthenelse{\equal{#1}{MA-IW-EI-ICT}}{\\MoSIW:\\elektronica-ICT, afstudeerrichting ICT}{}
433     \ifthenelse{\equal{#1}{MA-IW-EM-AE}}{\\MoSIW:\\elektromechanica, afstudeerrichting automotive engineering}{}
434     \ifthenelse{\equal{#1}{MA-IW-EM-AU}}{\\MoSIW:\\elektromechanica, afstudeerrichting automatisering}{}
435     \ifthenelse{\equal{#1}{MA-IW-EM-EM}}{\\MoSIW:\\elektromechanica, afstudeerrichting elektromechanica}{}
436     \ifthenelse{\equal{#1}{MA-IW-EM-EN}}{\\MoSIW:\\elektromechanica, afstudeerrichting energie}{}
437     \ifthenelse{\equal{#1}{MA-TEW-HI}}{\\MoSTEW: handelingenieur}{}
438     \ifthenelse{\equal{#1}{MA-TEW-HIBI}}{\\MoSTEW:\\handelingenieur in de beleidsinformatica}{}
439     \ifthenelse{\equal{#1}{MA-TEW-EB}}{\\MoSTEW: economisch beleid}{}
440     \ifthenelse{\equal{#1}{MA-TEW-BK}}{\\MoSTEW:\\techniek en bedrijfsvoering}{}

```

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

```
461 <*mt>
462 \newcommand{\@defensedate}{ERROR}
463 \newcommand{\defensedate}[1]{\renewcommand{\@defensedate}{#1}}
464 </mt>
```

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

```
465 {*mt}
466 \newcommand{\@defenselocation}{Antwerpen}
467 \newcommand{\defenselocation}[1]{\renewcommand{\@defenselocation}{#1}}
468 
```

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

```
469 {*ct | mt}  
470 \newcommand{\@academicyear}{XXX-YYYY}  
471 \newcommand{\academicyear}[1]{\renewcommand{\@academicyear}{#1}}  
472 
```

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

```
473 {*ct}
474 \newcommand{\@copyrightnotices}={}
475 \newcommand{\copyrightnotices}[1]{\renewcommand{\@copyrightnotices}{#1}}
476 //ct}
```

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

```
477 {*le}
478 \newcommand{\@sender}{< Specify sender using
479   \tbs{}sender\{name\}\{role\} >}
480 \newcommand{\@senderrole}{\~}
481 \newcommand{\sender}[2]{\renewcommand{\@sender}{#1}\renewcommand{\@senderrole}{#2}}
482 
```

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

```
483 <*le>
484 \newcommand{\@logo}{\logoname}
485 \newcommand{\logo}[1]{\renewcommand{\@unit}{#1}}
486 </le>
```

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

```
487 <*le>
488 \newcommand{\@unit}{}
489 \newcommand{\unit}[1]{\renewcommand{\@unit}{#1}}
490 </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.

```
491 <*le>
492 \newcommand{\@emailuser}{}
493 \newcommand{\@emaildomain}{}
494 \newcommand{\email}[2]{\renewcommand{\@emailuser}{#1}\renewcommand{\emaildomain}{#2}}
495 </le>
```

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

```
496 <*le>
497 \newcommand{\@phone}{}
498 \newcommand{\phone}[1]{\renewcommand{\@phone}{#1}}
499 </le>
```

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

```
500 <*le>
501 \newcommand{\@fax}{}
502 \newcommand{\fax}[1]{\renewcommand{\@fax}{#1}}
503 </le>
```

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

```
504 <*le>
505 \newcommand{\@mobile}{}
506 \newcommand{\mobile}[1]{\renewcommand{\@mobile}{#1}}
507 </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).

```

508 <*le>
509 \newcommand{\@returnaddress}{<specify return-address using \tbs\{single-line-return-address\}>}
510 \renewcommand{\returnaddress}[1]{\renewcommand{\@returnaddress}{#1}}
511 </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).

```

512 <*le>
513 \newcommand{\@to}{<Specify addressee using \tbs to\{name\}>}
514 \renewcommand{\to}[1]{\renewcommand{\@to}{#1}}
515 </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).

```

516 <*le>
517 \newcommand{\@toorganization}{<Specify organization using
518   \tbs toorganization\{\}>}
519 \newcommand{\toorganization}[1]{\renewcommand{\@toorganization}{#1}}
520 </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).

```

521 <*le>
522 \newcommand{\@toaddress}{<Specify (multiline) destination address\using \tbs toaddress\{\}>}
523 \newcommand{\toaddress}[1]{\renewcommand{\@toaddress}{#1}}
524 </le>

```

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

```

525 <*le>
526 \newcommand{\@subject}{-}
527 \newcommand*\@subject[1]{\renewcommand{\@subject}{#1}}
528 </le>

```

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

```

529 <*le>
530 \renewcommand*\@opening[1]{#1}
531 </le>

```

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

```

532 <*le>
533 \newcommand{\@closing}{<specify a closing formula using \tbs closing\{\}>}

```

```
534 \renewcommand*\closing{[1]{\renewcommand{\@closing}{#1}}}
535 
```

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

```
536 
```

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

```
540 
```

\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).

```
544 
```

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

\date [uantwerpenletter] (optional)
Date of the letter. If not specified today's date (at the time of running L^AT_EX) will be used.

5.7 Header and Footer

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

```
549 
```

```

555 \cfoot[]{}
556 \rfoot[]{\@title{} \@ifmtarg{\@subtitle}{}{ --- \@subtitle}}
557 \else
558 \lhead[]{\leftmark}
559 \chead[]{}
560 \rhead[]{\thepage}
561 \lfoot[]{\courseversion}
562 \cfoot[]{UAntwerpen--\facultyacronym}
563 \rfoot[]{\@title{}}
564 \fi
565 
```

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

```

566 <*mt>
567 \if@twoside
568   \lhead[\thepage]{\slshape\rightmark}
569   \chead[]{}
570   \rhead[\slshape\leftmark]{\thepage}
571   \lfoot[\uname{} -- \facultyacronym]{}
572   \cfoot[]{}
573   \rfoot[]{\@title{}}
574 \else
575   \lhead[]{\leftmark}
576   \chead[]{}
577   \rhead[]{\thepage}
578   \lfoot[]{}
579   \cfoot[]{UAntwerpen--\facultyacronym}
580   \rfoot[]{\@title{}}
581 \fi
582 
```

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

```

583 <*le>
584 \lhead[]{}
585 \chead[]{}
586 \rhead[]{}
587 \lfoot[\small\textrmcolor{gray}{\@date}]{\textrmcolor{gray}{\@date}}
588 \cfoot[]{}
589 \rfoot[\small\textrmcolor{gray}{\pagename~\thepage~\orname~\pageref{lastpage}}]{\small\textrmcolor{gray}{\@date}}
590 
```

Some common code remains:

```

591 <*ct | mt>
592 \setlength{\headheight}{13.7pt}
593 \renewcommand{\headrulewidth}{1pt}
594 \renewcommand{\footrulewidth}{1pt}
595 \pagenumbering{arabic}

```

```

596 </ct | mt>
597 <*le>
598 \renewcommand{\headrulewidth}{0pt}
599 \renewcommand{\footrulewidth}{0pt}
600 </le>

```

Remains to take care of filling

```

601 <*ct | mt | le>
602 \if@filled\else
603   \raggedright
604 \fi
605 \raggedbottom
606 \onecolumn
607 </ct | mt | le>

```

5.8 Copyright notice

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

```

608 <*ct>
609 \newcommand{\@crnotice}{%
610   This document has been typeset using \LaTeX{} and the
611   \texttt{uantwerpencourse} class.\\
612   \copyrightnotices
613
614   \courseversion
615
616   CONFIDENTIAL AND PROPRIETARY.
617
618   \copyright{} \versionyear{} University of Antwerp, All rights reserved.
619 }
620 </ct>

```

5.9 Title page for the masterthesis and coursetext classes

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

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

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

- the fact that the center point is above the page's left edge;

- the distance of the intersection points at the left and right edge of the page with respect to the top of the page, X and Y respectively;
- the width of the page W .

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

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

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

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

```

621 {*ct | mt}
622 \pgfmathsetmacro{\ua@Wh}{\paperwidth}
623 \pgfmathsetmacro{\ua@Xh}{0.2\paperheight}
624 \pgfmathsetmacro{\ua@Yh}{0.125\paperheight}
625 \pgfmathsetmacro{\ua@XMyh}{\ua@Xh-\ua@Yh}
626 \pgfmathsetmacro{\ua@Rh}{0.5*\ua@Wh/\ua@XMyh*\ua@Wh+0.5*\ua@XMyh}
627 \pgfmathsetmacro{\ua@Qh}{\ua@Rh-\ua@Xh+\paperheight}
628 {/ct | mt}

```

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

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

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

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

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

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

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

```

629 <*ct | mt>
630 \pgfmathsetmacro{\ua@Wba}{0.4*\paperwidth}
631 \pgfmathsetmacro{\ua@Sba}{0.125*\paperheight}
632 \pgfmathsetmacro{\ua@XMYba}{0.02\paperheight}
633 \pgfmathsetmacro{\ua@Rba}{0.5*\ua@Wba/\ua@XMYba*\ua@Wba+0.5*\ua@XMYba}
634 \pgfmathsetmacro{\ua@Qba}{\ua@Rba+\ua@Sba}
635 </ct | mt>

```

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

```

636 <*ct | mt>
637 \pgfmathsetmacro{\ua@Wbb}{0.65*\paperwidth}
638 \pgfmathsetmacro{\ua@Sbb}{0.14*\paperheight}
639 \pgfmathsetmacro{\ua@XMYbb}{0.06\paperheight}
640 \pgfmathsetmacro{\ua@Rbb}{0.5*\ua@Wbb/\ua@XMYbb*\ua@Wbb+0.5*\ua@XMYbb}
641 \pgfmathsetmacro{\ua@Qbb}{\ua@Rbb+\ua@Sbb}
642 </ct | mt>

```

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

```

643 <*ct | mt>
644 \pgfmathsetmacro{\ua@l1}{0.15*\paperwidth}
645 \pgfmathsetmacro{\ua@l}{0.4*\paperwidth}
646 \pgfmathsetmacro{\ua@d}{0.1in}
647 \pgfmathsetmacro{\ua@rr}{0.85*\paperwidth}
648 </ct | mt>

```

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

```

649 <*ct>
650 \newcommand{\sprtr}{ / }
651 \newcommand{\myqrdata}{%
652 I: Universiteit Antwerpen\string\n
653 F: \@faculty\string\n
654 P: \@programmet\ \@programmecqr\ \@programmeq\string\n
655 C: \@coursecodei\ \@qrcoursei
656 \sprtr
657 \@coursecodeii\ \@qrcourseii
658 \sprtr
659 \@coursecodeiii\ \@qrcourseiii
660 \sprtr
661 \@coursecodeiv\ \@qrcourseiv
662 \string\n
663 Y: \@academicyear\string\n
664 T: \@qrttitle\string\n

```

```

665 S: \@qrssubtitle\string\n
666 A: \@qrauthor\string\n
667 L: \@qrlectureri
668 \sprtr
669 \@qrlecturerii
670 \sprtr
671 \@qrlectureriii
672 \sprtr
673 \@qrlectureriv}
674 \newsavebox{\myqrcode}
675 </ct>

```

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

```

676 <*ct>
677 \renewcommand{\maketitle}{%
678   \pagestyle{empty}
679   \if@qr
680     \savebox{\myqrcode}[2.7in][t]{%
681       \begin{pspicture}(2.7in,2.7in)
682         \psbarcode{\myqrdata}{width=1.0 height=1.0 encoding=byte eclevel=M}{qrcode}
683       \end{pspicture}
684     }
685   \fi
686   \begin{titlepage}
687     \if@titlepagetableonly
688       Dit is een cursustekst van Universiteit Antwerpen.\\
689       Het titelblad dient opgemaakt te worden met de volgende gegevens:
690     \begin{center}
691       \begin{tabular}{|l|l|l|}
692         \hline
693         \bfseries I & Universiteit Antwerpen \\ \hline
694         \bfseries F & \@faculty \\ \hline
695         \bfseries P & \parbox[t]{14cm}{\@programmet
696           \@programmec \@programmes \@programmeq} \\ \hline
697         \bfseries C & \parbox[t]{14cm}{%
698           \texttt{\@coursecodei} \@coursei \\
699           \texttt{\@coursecodeii} \@courseii \\
700           \texttt{\@coursecodeiii} \@courseiii \\
701           \texttt{\@coursecodeiv} \@courseiv} \\ \hline
702         \bfseries Y & \@academicyear \\ \hline
703         \bfseries T & \parbox[t]{14cm}{\@title} \\ \hline
704         \bfseries S & \parbox[t]{14cm}{\@subtitle} \\ \hline
705         \bfseries A & \parbox[t]{14cm}{\@author} \\ \hline
706         \bfseries L & \parbox[t]{14cm}{\@lectureri
707           \@lecturerii \\
708           \@lectureriii \\
709           \@lectureriv} \\ \hline
710       \end{tabular}
711     \end{center}

```

```

712 ~\\
713 Waarbij: I = instelleng, F = faculteit, P = programma, C =
714 cursusmodule, T = titel, S = subtitel, A = auteur(s), L =
715 lesgever(s)\\~\\
716 \if@qr
717 Deze informatie is ook gecodeerd in de onderstaande QR-code.\\
718 \vspace*{1cm}
719 \usebox{\myqrcode}
720 \fi
721 \else
722 \begin{tikzpicture}[remember picture,overlay]
723 \node at (current page.center) {
724 \begin{tikzpicture}[inner sep=0pt]
725 \clip (0,0) rectangle(\paperwidth,\paperheight);
726 \if@titlepagenoartwork\else
727 \filldraw [uacorp bord] (0.55\paperwidth,\ua@Qba pt) circle (\ua@Rba pt);
728 \filldraw [white] (0.35\paperwidth,\ua@Qbb pt) circle (\ua@Rbb pt);
729 \filldraw [uacorp blue] (0,\ua@Qh pt) circle (\ua@Rh pt);
730 \path
731 (0.95\paperwidth,0.1\paperheight)
732 node [anchor=north east] {
733 \includegraphics[width=0.25\paperwidth]{\logoname}};
734 \fi
735 \path
736 (\ua@l pt -\ua@d pt,0.77\paperheight)
737 node [anchor=north east, text width=0.35\paperwidth] {
738 \begin{flushright}
739 \uppercase\expandafter{\uaname}\\~\\
740 \academicyearname{} \@academicyear
741 \end{flushright}
742 (\ua@l pt +\ua@d pt,0.65\paperheight)
743 node [anchor = north west, text width = 0.55\paperwidth] {
744 {\large \@faculty{}}\\[0.05\paperheight]
745 {\huge \bf \@title{}}\\[2ex]
746 {\Large \bf \@subtitle{}}\\[3ex]
747 {\Large \bf \@author{}}\\
748 (\ua@l pt +\ua@d pt,0.45\paperheight)
749 node [anchor = north west, text width = 0.55\paperwidth] {
750 \@lectureri}\\
751 \@lecturerii}\\
752 \@lectureriii}\\
753 \@lectureriv}\\
754 (\ua@l pt +\ua@d pt,0.35\paperheight)
755 node [anchor = north west, text width = 0.55\paperwidth] {
756 {\bf \@programmet \\ \@programmec\@programmes \@programmeq}\\
757 (\ua@l pt +\ua@d pt,0.30\paperheight)
758 node [anchor = north west, text width = 0.55\paperwidth] {
759 \texttt{\@publishercode}\\
760 \texttt{\@coursecodei} \@coursei\\
761 \texttt{\@coursecodeii} \@courseii\\

```

```

762     \texttt{\@coursecodeiii{} \@courseiii``\\}
763     \texttt{\@coursecodeiv{} \@courseiv}
764     (\ua@l pt - 2\ua@d pt, 0.368\paperheight)
765     node [anchor = north east, text width = 0.35\paperwidth] {
766         \normalsize\begin{flushright}
767             \@publisher{}
768             \end{flushright}\};
769     \end{tikzpicture}
770 };
771 \end{tikzpicture}
772 \fi
773 \end{titlepage}%
774 \clearpage
775 \vspace*{\stretch{1}}
776 \crnotice
777 \clearpage
778 \setcounter{footnote}{0}%
779 \global\let\thanks\relax
780 \global\let\maketitle\relax
781 \global\let\@thanks\empty
782 \global\let\title\relax
783 \global\let\author\relax
784 \global\let\date\relax
785 \global\let\and\relax
786 \pagestyle{fancy}
787 \thispagestyle{\empty}
788 }
789 </ct>

```

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

```

790 <*ct>
791 \newcommand\makefinalpage{
792   \if@titlepagetableonly
793   \else
794   \cleardoublepage
795   \thispagestyle{\empty}
796   \begin{tikzpicture}[remember picture,overlay]
797     \node at (current page.center) {
798       \begin{tikzpicture}[inner sep=0pt]
799         \clip (0,0) rectangle(\paperwidth,\paperheight);
800         \if@titlepagenoartwork\else
801           \filldraw [uacorpbblue] (\paperwidth,\ua@Qh pt) circle (\ua@Rh pt);
802         \fi
803         \path
804           (0.1\paperwidth,0.1\paperheight)
805           node [anchor = south west, text width = 0.6\paperwidth] {
806               CONFIDENTIAL AND PROPRIETARY``\\
807

```

```

808     \copyright{} \@versionyear{} \uaname,
809     All rights reserved.}
810     (0.9\paperwidth,0.1\paperwidth)
811     node [anchor = south east] {
812         \usebox{\myqrcode}
813     };
814     \end{tikzpicture}
815 };
816 \end{tikzpicture}
817 \fi
818 }
819 </ct>

```

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

```

820 <*mt>
821 \renewcommand\maketitle{%
822   \pagestyle{empty}
823   \begin{titlepage}
824     \begin{tikzpicture}[remember picture,overlay]
825       \node at (current page.center) {
826         \begin{tikzpicture}[inner sep=0pt]
827           \clip (0,0) rectangle(\paperwidth,\paperheight);
828           \if@titlepagenoartwork\else
829             \filldraw [lightgray] (0.55\paperwidth,\ua@Qba pt) circle (\ua@Rba pt);
830             \filldraw [white] (0.35\paperwidth,\ua@Qbb pt) circle (\ua@Rbb pt);
831             \filldraw [lightgray] (0,\ua@Qh pt) circle (\ua@Rh pt);
832           \path
833             (0.95\paperwidth,0.1\paperheight)
834             node [anchor=north east] {
835               \includegraphics[width=0.25\paperwidth]{\logoname}};
836           \fi
837           \path
838             (\ua@ll pt,0.77\paperheight)
839             node [anchor=north west, text width=0.7\paperwidth] {
840               \uppercase\expandafter{\uename}\~\
841               \academicyearname{} \@academicyear\~\
842               {\large \@faculty{}}\~\
843               \masterthesisname{}\~[0.05\paperheight]
844               {\Large \bf \@title{}}\~\
845               (\ua@ll pt,0.55\paperheight)
846               node [anchor = north west, text width = 0.7\paperwidth] {
847                 {\large \bf \@author{}}\~\~\
848                 \begin{tabular}{@{}p{2.7cm}p{10.8cm}}
849                   \textbf{\@promotorsname{}}:\\
850                   & \@supervisor{}} \\
851                   & \@supervisorii \\
852                   & \@supervisoriii \\
853                   & \@supervisoriv
854                 \end{tabular}

```

```

855      }
856      (\ua@ll pt,0.3\paperheight) node [anchor=north west, text width = 0.7\paperwidth]{%
857          \thesisname\\
858          \@diploma\\
859          \@defensedate, \@defensedate
860      };
861      \end{tikzpicture}
862  };
863  \end{tikzpicture}
864 \end{titlepage}%
865 \clearpage
866 \setcounter{footnote}{0}%
867 \global\let\thanks\relax
868 \global\let\maketitle\relax
869 \global\let\@thanks\empty
870 \global\let\title\relax
871 \global\let\author\relax
872 \global\let\date\relax
873 \global\let\and\relax
874 \pagestyle{fancy}
875 \thispagestyle{\empty}
876 }
877 </mt>

```

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

```

878 <*mt>
879 \newcommand\makefinalpage{
880   \cleardoublepage
881   \thispagestyle{\empty}
882   \begin{tikzpicture}[remember picture,overlay]
883     \node at (current page.center) {
884       \begin{tikzpicture}[inner sep=0pt]
885         \clip (0,0) rectangle(\paperwidth,\paperheight);
886         \if@titlepagenoartwork\else
887           \filldraw [lightgray] (\paperwidth,\ua@Qh pt) circle (\ua@Rh pt);
888         \fi
889       \end{tikzpicture}
890     };
891   \end{tikzpicture}
892 }
893 </mt>

```

5.10 Letter

5.10.1 Bottom cords

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

5.10.2 Title Page

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

```
894 <*le>
895 \newcommand\maketitle{%
896   \pagestyle{fancy}
897   \thispagestyle{empty}
898   \begin{tikzpicture}[overlay,remember picture]
899     \path (current page.north west) +(1.8cm,-1.2cm)
900     node[anchor=north west] {
901       \includegraphics[height=1.1cm]{\@logo}
902     };
903     \draw (current page.north west)
904     +(1cm,-98mm) -- +(1.5cm,-98mm);
905     % 90 x 45
906     % pos: 20mm van kant, 15mm van onderkant
907     \path (current page.north east) +(-100mm,-65mm)
908     node[anchor=west,text width=80mm,align=left] {
909       \scriptsize\textcolor{gray}{\uline{\@returnaddress}}\\*
910       \normalsize\@to\\*
911       \@toorganization\\*
912       \@toaddress
913     };
914   \end{tikzpicture}
915   \begin{tikzpicture}[overlay,remember picture]
916     \path (current page.south west) +(0,-0.7cm)
917     node[anchor=south west,inner sep=0pt, outer sep=0pt]
918     {\includegraphics{\footername}};
919   \end{tikzpicture}
~\\[3ex]
921 \textcolor{uacorpblue}{\bf \@sender}\\*
922 \@senderrrole\\[1.75ex]
923 \@faculty
924 \ifx\@unit\@emptymacro\else\\* \@unit\fi~\\[1.75ex]
925 \@address\\[1.75ex]
926 \ifx\@email\@emptymacro\else E \@emailuser\tat{}@\emaildomain\\\fi
927 \ifx\@phone\@emptymacro\else T \@phone\\fi
928 \ifx\@fax\@emptymacro\else F \@fax\\fi
929 \ifx\@mobile\@emptymacro\else M \@mobile\\fi
930 ~\\[4ex]
```

```

931 \begin{tikzpicture}[anchor=north west,align=left,outer sep=0,inner sep=0]
932   \path
933   (0,0) node { \scriptsize \strut
934     \textcolor{gray}{\uppercase\expandafter{\datename}} }
935   (4cm,0) node { \scriptsize \strut
936     \textcolor{gray}{\uppercase\expandafter{\subjectname}} }
937   (0,-2.5ex) node { \strut \@date }
938   (4cm,-2.5ex) node[align=left] { \strut \@subject };
939 \end{tikzpicture}~\|[4ex]
940 }
941 </le>

```

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

```

942 </le>
943 \AtEndDocument{
944   \@closing\*[12ex]
945   \@sender\*\*
946   \@senderrole
947   \setlength{\parskip}{0em}
948   \ifx\@carboncopy\@emptymacro\else ~\|[4ex] CC: \@carboncopy\fi
949   \ifx\@enclosed\@emptymacro\else ~\|[4ex] ENCL: \@enclosed\fi
950   \label{lastpage}
951 }
952 </le>

```

5.11 References

```

953 <*ct | mt>
954 \IfFileExists{varioref.sty}{\RequirePackage{varioref}}{}
955 </ct | mt>
956 %
957 <*ct>
958 \IfFileExists{hyperref.sty}{
959   \RequirePackage{hyperref}
960   \hypersetup{
961     backref=true,
962     breaklinks=true,
963     colorlinks=true,
964     citecolor=black,
965     filecolor=black,
966     hyperindex=true,
967     linkcolor=black,
968     pageanchor=true,
969     pagebackref=true,
970     pagecolor=black,
971     pdfpagemode=UseOutlines,
972     urlcolor=black
973   }

```

```

974     \AtBeginDocument{
975         \hypersetup{
976             pdftitle={\@title},
977             pdfsubject={\@subtitle},
978             pdfauthor={\@author}
979         }
980     }
981 }{}
982 </ct>
983 %
984 %
985 <*mt>
986 \IfFileExists{hyperref.sty}{
987     \RequirePackage{hyperref}
988     \hypersetup{
989         backref=true,
990         breaklinks=true,
991         colorlinks=true,
992         citecolor=black,
993         filecolor=black,
994         hyperindex=true,
995         linkcolor=black,
996         pageanchor=true,
997         pagebackref=true,
998         pagecolor=black,
999         pdfpagemode=UseOutlines,
1000         urlcolor=black
1001     }
1002     \AtBeginDocument{
1003         \hypersetup{
1004             pdftitle={\@title},
1005             pdfsubject={Master's Thesis},
1006             pdfauthor={\@author}
1007         }
1008     }
1009 }{}
1010 </mt>

```

Change History

v1.0	
General:	Consolidated uacourse- text class and uamasterthesis class 1
Added option qr	20
Added option titlepagenoart- work	20
Added option titlepagetableonly	20
v1.1	
General:	Small bugfixes and 'filled' option 1
Added option user documenta- tion	5
Made raggedright conditional on option 'filled', because it can't be undone	36
\diploma:	Fixed typo on pro- gramme's name (e-umlaut) .. 31
v1.2	
General:	Added lmodern pack- age and increased headheight to 13.7pt to please Fancyhdr .. 1
Added lmodern package to please MikTeX	21
Increased headheight to please Fancyhdr	36
v1.3	
General:	Minor bugfixes, abondon- ment of a few packages, font freedom
Abandoned use of cmbright - no more font dictatorship for the- ses and courses	21
v1.4	
Added inclusion of background package	22
Changed eso-pic for tikz and background	39
\makefinalpage:	Changed eso-pic for tikz 42, 44
\maketitle:	Changed eso-pic for tikz 43
v1.5	
General:	Replaced bottom arcs in footer of letter by official PDF versions
Removed documentation	45
\maketitle:	Implemented new footer
v1.6	
General:	Added diploma codes for Faculty of Applied Economics . 1
Added diploma code documen- tation	8
\diploma:	Added diploma codes . 31
v1.7	
General:	Added babel translations of elements of master's thesis ti- tle page
Added babel tags of elements of master's thesis title page	23
\maketitle:	Embedded babel translations of keywords into title page

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		
\\"	106, 329, 424	\@emaildomain
\'	120, 127, 130, 140, 141, 143	\@emailuser 492, 494, 926 \empty
\@academicyear	470, 471, 663, 702, 740, 841	\emptymacro
\@address ..	545, 547, 925	47, 186, 199, 211, 253, 262, 271, 280, 289, 373, 383, 393, 403, 413, 924, 926–929, 948, 949
\@author ..	210, 705, 747, 847, 978, 1006	\enclosed 541, 542, 949 \faculty . 152, 155, 157, 159, 161, 163, 165, 167, 169, 171, 173, 175, 177, 653, 694, 744, 842, 923
\@carboncopy	537, 538, 948	\facultyacronym .. 151, 154, 554, 562, 571, 579
\@closing ..	533, 534, 944	\fax .. 501, 502, 928 \filledtrue
\@copyrightnotices ..	474, 475, 612	\ifmtarg
\@copyrighttrue ..	3	\ifpackageloaded . 90 \lectureri .. 243, 252, 261, 706, 750
\@coursecodei	358, 371, 381, 655, 698, 760	\lecturerii .. 244, 270, 707, 751 \lectureriii .. 245, 279, 708, 752
\@coursecodeii ..	359, 391, 657, 699, 761	\lectureriv .. 246, 288, 709, 753 \logo .. 484, 901 \mobile .. 505, 506, 929 \phone ... 497, 498, 927 \programmec
\@coursecodeiii ..	360, 401, 659, 700, 762	310, 329, 696, 756 \programmecqr .. 311, 330, 654 \programmeq
\@coursecodeiv ..	361, 411, 661, 701, 763	313, 337, 339, 341, 343, 345, 349, 654, 696, 756 \programmet .. 309, 316, 318, 320, 322, 654, 695, 756 \publisher 228, 236, 767 \publishercode ... 239, 240, 759 \qrauthor ... 208, 211, 212, 216, 666 \qrcoursei ... 366, 373, 374, 378, 383, 384, 388, 655 \qrcourseii ... 367, 393, 394, 398, 657 \qrcourseiii . 368, 403, 404, 408, 659 \qrcourseiv .. 369, 413, 414, 418, 661 \qrlectureri . 247, 253, 254, 258, 262, 263, 267, 667 \qrlecturerii 248, 271, 272, 276, 669 \qrlectureriii 249, 280, 281, 285, 671 \qrlectureriv 250, 289, 290, 294, 673 \qrsubtitle .. 196, 199, 200, 204, 665 \qrtitle .. 183, 186, 187, 191, 664 \qrtrue 5 \returnaddress ... 509, 510, 909 \sender 478, 481, 921, 945 \senderrole 480, 481, 922, 946 \subject .. 526, 527, 938
\@courseversion ..	220, 221, 554, 561, 614	
\@crnotice ..	608, 776	
\@date	587, 937	
\@defensedate	462, 463, 859	
\@defenselocation ..	466, 467, 859	
\@diploma ..	422, 426, 858	
\@email	926	

	A	D
\@subtitle	195, 198, 556, 704, 746, 977	\academicyear 469 \academicyearname 85, 99, 113, 127, 140, 740, 841
\@supervisor	.... . 298, 302, 303, 850	\date 784, 872 \datename 83, 98, 112, 126, 139, 934
\@supervisorii	.... . 299, 304, 851	\DeclareOption 3, 5, 9, 11, 15
\@supervisoriii	.... . 300, 305, 852	\addto . . 91, 105, 119, 132 \addtolength 31
\@supervisoriv	.... . 301, 306, 853	\and 353, 785, 873 \AtBeginDocument 89, 974, 1002
\@thanks	.... . 781, 869	\AtEndDocument 943 \author 207, 783, 871
\@title	185, 556, 563, 573, 580, 703, 745, 844, 976, 1004	\domainname 82, 96, 110, 124, 137 \draw 903
\@titlepagenoartworktrue	.... . . . . . 9	
\@titlepagetableonlytrue	.... . . . . . 11	
\@to	.... . 513, 514, 910	\begin{ 681, 686, 690, 691, 722, 724, 738, 766, 796, 798, 823, 824, 826, 848, 882, 884, 898, 915, 931
\@toaddress	522, 523, 912	\else 557, 574, 602, 721, 726, 793, 800, 828, 886, 924, 926–929, 948, 949
\@toorganization	.... . 517, 519, 911	\email 491 \enclosed 540
\@unit	485, 488, 489, 924	\bf 745–747, 756, 844, 847, 921 \bfseries . . 693–695, 697, 702–706
\@versionyear	.... . 224, 225, 618, 808	\end 683, 710, 711, 741, 768, 769, 771, 773, 814, 816, 854, 861, 863, 864, 889,
\`	.... . 228–234, 436, 438, 440, 442, 444, 446, 450, 522, 545, 611, 688, 693, 694, 696, 698–709, 712, 715, 717, 739, 744–746, 750–752, 756, 759–762, 806, 840–843, 847, 850–852, 857, 858, 909–911, 920–922, 924–930, 939, 944, 945, 948, 949	\captionsdutch 91 \captionsfrench 119 \captionsgerman 105 \captionsspanish 132 \carboncopy 536 \cfoot 555, 562, 572, 579, 588 \chead 552, 559, 569, 576, 585 \cleardoublepage 794, 880 \clearpage 774, 777, 865 \clip 725, 799, 827, 885 \closing 532 \copyright 618, 808 \copyrightnotices 473 \course 357 \coursei 380 \courseii 390 \courseiii 400 \courseiv 410 \courseversion 219
\`	.... . 128, 130	\errmessage 179, 325, 333, 350, 455 \ExecuteOptions 18, 25
\`	.... . 140	\expandafter 739, 840, 934, 936
\`	.... . 654, 655, 657, 659, 661	
		F
		\facultyacronym 150

\fax	500	342, 344, 346, 348, 353, 427, 429, 431, 433, 435, 437, 439, 441, 443, 445, 447, 449, 451, 453	434, 436, 438, 440, 442, 444, 446
\fi	57, 63, 188, 201, 213, 255, 264, 273, 282, 291, 375, 385, 395, 405, 415, 564, 581, 604, 685, 720, 734, 772, 802, 817, 836, 888, 924, 926–929, 948, 949	\ifx 186, 199, 211, 253, 262, 271, 280, 289, 373, 383, 393, 403, 413, 924, 926–929, 948, 949	\MoSTEW 425, 448, 450, 452, 454
\filldraw .	727–729, 801, 829–831, 887	\includegraphics 733, 835, 901, 918	\myqrcode 674, 680, 719, 812
\footername	80, 94, 108, 122, 135, 918	\myqrdata 651, 682	
\footrulewidth	594, 599		
			N
			\n 652–654, 662–666
			\newif 2, 4, 8, 10, 14
			\newsavebox 674
			\node 723, 797, 825, 883
			\normalsize 766, 910
			\not 353
		L	
		\label 950	
		\Large 746, 747, 844	
		\large 744, 842, 847	
		\LaTeX 610	
		\lecturer 242	
		\lectureri 260	
		\lecturerii 269	
		\lectureriii 278	
		\lectureriv 287	
		\leftmark 553, 558, 570, 575	
		\let 779–785, 867–873	
		\lfoot 554, 561, 571, 578, 587	
		\lhead 551, 558, 568, 575, 584	
		\LoadClassWithOptions 20, 27	
		\logo 483	
		\logoname 79, 93, 107, 121, 134, 484, 733, 835	
		M	
		\makeatletter 21	
		\makeatother 21	
		\makefinalpage 790, 878	
		\maketitle 676, 820, 894	
		\masterthesisname 86, 100, 114, 128, 141, 843	
		\mobile 504	
		\MoSIW 424, 428, 430, 432,	
			O
			\onecolumn 606
			\opening 529
			\orname 81, 95, 109, 123, 136, 589
			P
			\pagename 589
			\pagenumbering 595
			\pageref 589
			\pagestyle 678, 786, 822, 874, 896
			\paperheight 623, 624, 627, 631, 632, 638, 639, 725, 731, 736, 742, 744, 748, 754, 757, 764, 799, 804, 827, 833, 838, 843, 845, 856, 885
			\paperwidth 622, 630, 637, 644, 645, 647, 725, 727, 728, 731, 733, 737, 743, 749, 755, 758, 765, 799, 801, 804, 805, 810, 827, 829, 830, 833, 835, 839, 846, 856, 885, 887
			\parbox 695, 697, 703–706
			\parindent 30

\parskip	31, 947	212, 216, 221,	\stretch	775
\path	730, 735,	225, 236, 240,	\string	652–654, 662–666
	803, 832, 837,	252, 254, 258,	\strut	933, 935, 937, 938
	899, 907, 916, 932	261, 263, 267,	\subject	525
\pgfmathsetmacro	622–627,	270, 272, 276,	\subjectname	84, 97,
	630–634,	279, 281, 285,		111, 125, 138, 936
	637–641, 644–647	288, 290, 294,	\subtitle	194
\phone	496	302–306, 316,	\supervisor	297
\ProcessOptions	19, 26	318, 320, 322,	\supervisori	303
\programme	308	329, 330, 337,	\supervisorii	304
\promotorsname		339, 341, 343,	\supervisoriii	305
	87, 101,	345, 349, 354,	\supervisoriv	306
	115, 129, 142, 849	371, 372, 374,		
\psbarcode	682	378, 381, 382,	T	
\publisher	227	384, 388, 391,	\tat	21, 926
\publishercode	238	392, 394, 398,	\tbs	22, 152,
		401, 402, 404,		479, 509, 513,
		408, 411, 412,		518, 522, 533, 546
		414, 418, 426,	\textbackslash	22
		463, 467, 471,	\textbf	849
		475, 481, 485,	\textcolor	587, 589,
		489, 494, 498,		909, 921, 934, 936
		502, 506, 510,	\texttt	611,
		514, 519, 523,		698–701, 759–763
		527, 530, 534,	\thanks	779, 867
		538, 542, 547,	\thepage	551, 553, 560,
		593, 594, 598,		568, 570, 577, 589
		599, 677, 821	\thesisname	88, 102,
				116, 130, 143, 857
			\thispagestyle	787,
				795, 875, 881, 897
			\title	182, 782, 870
			\to	512
			\toaddress	521
			\toorganization	516
			U	
			\ua@d	646, 736, 742,
				748, 754, 757, 764
			\ua@l	645, 736, 742,
				748, 754, 757, 764
			\ua@ll	644, 838, 845, 856
			\ua@Qba	634, 727, 829
			\ua@Qbb	641, 728, 830
			\ua@Qh	627,
				729, 801, 831, 887
			\ua@Rba	633, 634, 727, 829
			\ua@Rbb	640, 641, 728, 830
			\ua@Rh	626, 627,
				729, 801, 831, 887
			S	
			\savebox	680
			\scriptsize	909, 933, 935
			\sender	477
			\setcounter	32, 778, 866
			\setlength	30, 592, 947
			\slshape	
				. 551, 553, 568, 570
			\small	587, 589
			\sprtr	650, 656, 658,
				660, 668, 670, 672

\ua@rr	647	\ua@XMYbb	639, 640	\unit	<u>487</u>
\ua@Sba	631, 634	\ua@XMYh	625, 626	\uppercase	
\ua@Sbb	638, 641	\ua@Yh	624, 625		. 739, 840, 934, 936
\ua@Wba	630, 633	\uname		\usebox	719, 812
\ua@Wbb	637, 640		78, 92, 106, 120,		
\ua@Wh	622, 626		133, 228, 554,		V
\ua@Xh	623, 625, 627		571, 739, 808, 840	\versionyear	223
\ua@XMYba	632, 633	\underline	909	\vspace	718, <u>775</u>