

The `uantwerpendocs` classes^{*†}

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

2016/01/07

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 `uantwerpencoursetext` and `uantwerpenmasterthesis` classes are an extension of the standard `LATEX` `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` 1.4, dated 2016/01/07.

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

The `uantwerpenletter` 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.

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 \LaTeX compiler.

3 Portability

This class file should be ready to use with all common \LaTeX compilers (\PDF\LaTeX , \LaTeX , \Xe\LaTeX , ...) from the major \TeX -distributions (TeXTeX, TexLive, MikTeX). If you experience problems, please inform the authors.

4 Usage

4.1 Basic Usage

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

4.1.1 uantwerpencoursetext class

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

```
\documentclass[a4paper]{uantwerpencoursetext}

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

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

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

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

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

\academicyear{<XXXX-YYYY>}

\begin{document}

    \maketitle

    % put your LaTeX code here

    \finalpage

\end{document}
```

The available faculty acronyms are listed in a table on page 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>}
```

```

\supervisor{i}{<put the first supervisor's name(s) here>}
\supervisor{ii}{<put the first supervisor's name(s) here>}
\supervisor{iii}{<put the first supervisor's name(s) here>}
\supervisor{iv}{<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`).

<code>copyright</code>	[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;
<code>filled</code>	[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 <code>\raggedright</code> cannot be undone. The <code>filled</code> option prevents the <code>\raggedright</code> from being issued. However, if you care about the readability of your text, you shouldn't use this option.
<code>titlepagenoartwork</code>	[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;
<code>titlepagetableonly</code>	[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 Ontwerpwetenschappen
SW	Faculteit Sociale Wetenschappen
REC	Faculteit Rechten
TEW	Faculteit Toegepaste Economische Wetenschappen
TI	Faculteit Toegepaste Ingenieurswetenschappen
WET	Faculteit Wetenschappen

4.3.2 Macros for the coursetext and masterthesis classes

<code>\title</code>	[coursetext / masterthesis] (mandatory) This macro sets the title of the document. It also sets the <code>pdftitle</code> tag of the <code>hyperref</code> package, so that the PDF-document meta-information is correct.
<code>\subtitle</code>	[coursetext] (optional) This macro sets the title of the document. You may use this <ul style="list-style-type: none">• 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 <code>subject</code> tag of the <code>hyperref</code> package, so that the PDF-document meta-information is correct.
<code>\author</code>	[coursetext / masterthesis] (mandatory) This macro sets the author of the document. It also sets the <code>pdfauthor</code> tag of the <code>hyperref</code> package, so that the PDF-document meta-information is correct.
<code>\publisher</code>	[coursetext] (mandatory) This macro sets the publisher information of the document. It is printed on the front page. It defaults to the repographic service of campus Groenenborger, one of the standard printing services of Universiteit Antwerpen.
<code>\publishercode</code>	[coursetext] (mandatory) This macro sets the publisher code of the document. It is printed on the front page. This is code that the publisher uses for its internal administration. It may be a proprietary code, or an ISBN number.
<code>\courseversion</code>	[coursetext] (optional) This macro indicates which version of the course this is.
<code>\versionyear</code>	[coursetext] (mandatory) This is to be the year in which you published the current version of the course in the form YYYY.
<code>\lecturer</code>	[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 <code>\lectureri</code> , <code>\lecturerii</code> , <code>\lectureriii</code> , <code>\lectureriv</code> .
<code>\programme</code>	[coursetext] (mandatory) This macro takes three arguments (for the time being, only applicable to the faculty of applied engineering): <ul style="list-style-type: none">• 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 **\supervisor*i***, **\supervisor*ii***, **\supervisor*iii***, **\supervisor*iv***.

\course [coursetext] (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 [coursetext / 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!)
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

<code>\defensedate</code>	[masterthesis] (mandatory) Date of the defense in Dutch, in the form 'month year', e.g. "juni 2012".
<code>\defenselocation</code>	[masterthesis] (optional) Location of the defense. Defaults to "Antwerpen".
<code>\copyrightnotices</code>	[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

<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 <p>Newlines are not allowed in the arguments.</p>
<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 will be used.

<code>\unit</code>	[letter] (optional) Name of the unit to which the person belongs. This can be a research group, a laboratory, an administrative division, etc. Newlines are allowed.
<code>\address</code>	[letter] (mandatory) Address of the sending unit (or faculty). This can be different from the return address. Newlines are allowed and encouraged.
<code>\email</code>	[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
<code>\phone</code>	[letter] (optional) Phone number of the sending person. See also <code>\email</code> .
<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>\mobile</code>	[letter] (optional) Mobile 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>\to</code>	[letter] (mandatory) Name of the addressee. Newlines are allowed. Preferably name and role are split over two lines.
<code>\toorganization</code>	[letter] (optional) Name of the organization that employs the addressee.
<code>\toaddress</code>	[letter] (mandatory) Address of the addressee. Newlines are allowed. The address should fit on max. 3 lines.
<code>\date</code>	[letter] (optional) Date of the letter. If not specified today's date (at the time of running <code>L^AT_EX</code>) will be used.
<code>\subject</code>	[letter] (mandatory) Short descriptive subject that describes the contents of the letter.

<code>\opening</code>	[letter] (mandatory) Opening address of the letter. E.g. 'Dear X,'.
<code>\closing</code>	[letter] (mandatory) Closing clause of the letter. E.g. 'Best regards,'.
<code>\carboncopy</code>	[letter] (optional) List of persons receiving a copy of this letter. Format at will.
<code>\enclosed</code>	[letter] (optional) List of enclosed documents. Format at will.

4.4 Examples

4.4.1 uantwerpencoursetext

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

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

\usepackage[english,dutch]{babel}

\title{Z\'agen, zoeken en zuchten}
\qrtitle{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{2023FTIZZ}{5-Zoekmachines in een zaagperspectief}
\courseii{2045FTIIII}{6-Zaagmachines in \'e\'en zuchtperspectief}
\qrcourseii{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 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.

```
\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 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?

```
\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{Referentielijst}`

`\makefinalpage`

`\end{document}`

`</ct-example>`

4.4.2 uantwerpenmasterthesis

`<*mt-example>`

`\documentclass[a4paper,11pt,twoside,openright,english]{uantwerpenmasterthesis}`

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

```

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

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

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

\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{Onderzoeksvraag}

\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}
% and not (as we should):

```



```

% \usepackage{fontspec}
% \setmainfont{Calibri}

\usepackage[english]{babel}

\sender{Prof. Walter Daems}{Senior Lecturer}
\facultyacronym{TI}
\unit{CoSys-Lab}
\address{
  Campus Groenenborger\\
  Groenenborgerlaan 171\\
  B-202 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.

  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 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.

\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-202 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 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=1.34in, 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 Universiteit Antwerpen, 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 \LaTeX 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{uacorpbord}{cmyk}{0.00,1.00,0.60,0.37}
70 \definecolor{uacorpblue}{cmyk}{1.00,0.25,0.00,0.50}
71 \definecolor{uacorpplightblue}{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{\logoname}{UA_HOR_ENG_CMYK}
79 \newcommand{\orname}{of}
80 \newcommand{\domainname}{uantwerp.be}
81 \newcommand{\datename}{Date}
82 \newcommand{\subjectname}{Subject}
83 \AtBeginDocument{
84   \ifpackageloaded{babel}{
85     \addto\captionsdutch{%
86       \renewcommand{\logoname}{UA_HOR_NED_CMYK}

```

```

87     \renewcommand{\orname}{van}
88     \renewcommand{\domainname}{uantwerpen.be}
89     \renewcommand{\subjectname}{Onderwerp}%
90     \renewcommand{\datename}{Datum}%
91 }
92 \addto\captionsgerman{%
93     \renewcommand{\logoname}{UA_HOR_DUI_CMYK}
94     \renewcommand{\orname}{von}
95     \renewcommand{\domainname}{uantwerpen.be}
96     \renewcommand{\subjectname}{Betreff}%
97     \renewcommand{\datename}{Datum}%
98 }
99 \addto\captionsfrench{%
100     \renewcommand{\logoname}{UA_HOR_FRA_CMYK}
101     \renewcommand{\orname}{de}
102     \renewcommand{\domainname}{uanvers.be}
103     \renewcommand{\subjectname}{Objet}%
104     \renewcommand{\datename}{Date}%
105 }
106 \addto\captionsspanish{%
107     \renewcommand{\logoname}{UA_HOR_SPA_CMYK}
108     \renewcommand{\orname}{de}
109     \renewcommand{\domainname}{uantwerp.be}
110     \renewcommand{\subjectname}{Asunto}%
111     \renewcommand{\datename}{Fecha}%
112 }
113 }
114 {}
115 }
116 </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.

```

117 <*ct | mt | le>
118 \newcommand{\@facultyacronym}{}
119 \newcommand{\@faculty}{< Specify faculty using \tbs{}facultyacronym\{ABC\} >}
120 \newcommand{\facultyacronym}[1]{
121     \renewcommand{\@facultyacronym}{#1}
122     \ifthenelse{\equal{#1}{CPG}}{\renewcommand\@faculty{Centrum
123         Pieter Gillis}}{
124     \ifthenelse{\equal{#1}{FBD}}{\renewcommand\@faculty{Faculteit
125         Farmaceutische, Biomedische en Diergeneeskundige Wetenschappen}}{
126     \ifthenelse{\equal{#1}{GGW}}{\renewcommand\@faculty{Faculteit
127         Geneeskunde en Gezondheidswetenschappen}}{
128     \ifthenelse{\equal{#1}{IOB}}{\renewcommand\@faculty{Instituut

```

```

129     voor Ontwikkelingsbeleid- en beheer}}{
130 \ifthenelse{\equal{#1}{IOIW}}{\renewcommand\@faculty{Instituut
131     voor Onderwijs- en Informatiewetenschappen}}{
132 \ifthenelse{\equal{#1}{LW}}{\renewcommand\@faculty{Faculteit
133     Letteren en Wijsbegeerte}}{
134 \ifthenelse{\equal{#1}{OW}}{\renewcommand\@faculty{Faculteit
135     Ontwerpwetenschappen}}{
136 \ifthenelse{\equal{#1}{SW}}{\renewcommand\@faculty{Faculteit
137     Sociale Wetenschappen}}{
138 \ifthenelse{\equal{#1}{REC}}{\renewcommand\@faculty{Faculteit
139     Rechten}}{
140 \ifthenelse{\equal{#1}{TEW}}{\renewcommand\@faculty{Faculteit
141     Toegepaste Economische Wetenschappen}}{
142 \ifthenelse{\equal{#1}{TI}}{\renewcommand\@faculty{Faculteit
143     Toegepaste Ingenieurswetenschappen}}{
144 \ifthenelse{\equal{#1}{WET}}{\renewcommand\@faculty{Faculteit
145     Wetenschappen}}{
146 \errmessage{Error: wrong faculty acronym; choose one of FBD, GGW,
147     LW, OW, PSW, REC, TEW, TI, WET}}}}}}}}}}}}}}}}
148 </ct | mt | le)

```

`\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.)

```

149 <*ct>
150 \newcommand{\@qrtitle}{}
151 \renewcommand{\title}[1]{%
152     \renewcommand\@title{#1}
153     \ifx\@qrtitle\@emptymacro
154     \renewcommand\@qrtitle{#1}
155     \fi
156 }
157 \newcommand{\qrtitle}[1]{%
158     \renewcommand\@qrtitle{#1}
159 }
160 </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.

```

161 <*ct>
162 \newcommand{\@subtitle}{}
163 \newcommand{\@qrs subtitle}{}
164 \newcommand{\subtitle}[1]{%
165     \renewcommand\@subtitle{#1}
166     \ifx\@qrs subtitle\@emptymacro
167     \renewcommand\@qrs subtitle{#1}

```



```

168 \fi
169 }
170 \newcommand{\qrsubtitle}[1]{%
171 \renewcommand\@qrsubtitle{#1}
172 }
173 \</ct>

```

\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.)

```

174 \<ct>
175 \newcommand{\@qrauthor}{}
176 \renewcommand{\author}[1]{%
177 \renewcommand\@author{#1}
178 \ifx\@qrauthor\@emptymacro
179 \renewcommand\@qrauthor{#1}
180 \fi
181 }
182 \newcommand{\qrauthor}[1]{%
183 \renewcommand\@qrauthor{#1}
184 }
185 \</ct>

```

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

```

186 \<ct>
187 \newcommand{\@courseversion}{}
188 \newcommand{\courseversion}[1]{\renewcommand{\@courseversion}{#1}}
189 \</ct>

```

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

```

190 \<ct>
191 \newcommand{\@versionyear}{}
192 \newcommand{\versionyear}[1]{\renewcommand{\@versionyear}{#1}}
193 \</ct>

```

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

```

194 \<ct>
195 \newcommand{\@publisher}{Universiteit Antwerpen\
196 Cursusdienst en reprografie\
197 Campus Groenenborger, G.U.027\
198 Groenenborgerlaan 171\

```

```

199 2020 Antwerpen\\
200 T +32 3 265 32 15\\
201 F + 32 3 233 32 27\\
202 E cursusdienst.cgb@uantwerpen.be}
203 \newcommand{\publisher}[1]{\renewcommand{\@publisher}{#1}}
204 \</ct>

```

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

```

205 \< *ct>
206 \newcommand{\@publishercode}{}
207 \newcommand{\publishercode}[1]{\renewcommand{\@publishercode}{#1}}
208 \</ct>

```

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

```

209 \< *ct>
210 \newcommand{\@lectureri}{}
211 \newcommand{\@lecturerii}{}
212 \newcommand{\@lectureriii}{}
213 \newcommand{\@lectureriv}{}
214 \newcommand{\@qrlectureri}{}
215 \newcommand{\@qrlecturerii}{}
216 \newcommand{\@qrlectureriii}{}
217 \newcommand{\@qrlectureriv}{}
218 \newcommand{\lecturer}[1]{
219   \renewcommand{\@lectureri}{#1}
220   \ifx\@qrlectureri\emptymacro
221     \renewcommand{\@qrlectureri}{#1}
222   \fi
223 }
224 \newcommand{\qrlecturer}[1]{
225   \renewcommand{\@qrlectureri}{#1}
226 }
227 \newcommand{\lectureri}[1]{
228   \renewcommand{\@lectureri}{#1}
229   \ifx\@qrlectureri\emptymacro
230     \renewcommand{\@qrlectureri}{#1}
231   \fi
232 }
233 \newcommand{\qrlectureri}[1]{
234   \renewcommand{\@qrlectureri}{#1}
235 }
236 \newcommand{\lecturerii}[1]{
237   \renewcommand{\@lecturerii}{#1}

```

```

238 \ifx\@qrlecturerii\@emptymacro
239 \renewcommand\@qrlecturerii{#1}
240 \fi
241 }
242 \newcommand{\qrlecturerii}[1]{
243 \renewcommand\@qrlecturerii{#1}
244 }
245 \newcommand{\lectureriii}[1]{
246 \renewcommand\@lectureriii{#1}
247 \ifx\@qrlectureriii\@emptymacro
248 \renewcommand\@qrlectureriii{#1}
249 \fi
250 }
251 \newcommand{\qrlectureriii}[1]{
252 \renewcommand\@qrlectureriii{#1}
253 }
254 \newcommand{\lectureriv}[1]{
255 \renewcommand\@lectureriv{#1}
256 \ifx\@qrlectureriv\@emptymacro
257 \renewcommand\@qrlectureriv{#1}
258 \fi
259 }
260 \newcommand{\qrlectureriv}[1]{
261 \renewcommand\@qrlectureriv{#1}
262 }
263 \</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.

```

264 \<*mt>
265 \newcommand{\@supervisor}{ }
266 \newcommand{\@supervisorii}{ }
267 \newcommand{\@supervisoriii}{ }
268 \newcommand{\@supervisoriv}{ }
269 \newcommand{\supervisor}[1]{\renewcommand{\@supervisor}{#1}}
270 \newcommand{\supervisorii}[1]{\renewcommand{\@supervisorii}{#1}}
271 \newcommand{\supervisoriii}[1]{\renewcommand{\@supervisoriii}{#1}}
272 \newcommand{\supervisoriv}[1]{\renewcommand{\@supervisoriv}{#1}}
273 \newcommand{\supervisoriv}[1]{\renewcommand{\@supervisoriv}{#1}}
274 \</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.

```

275 \<*ct>
276 \newcommand{\@programmet}{ } % type

```

```

277 \newcommand{\@programme}{ } % class
278 \newcommand{\@programmeqr}{ } % class for qr code
279 \newcommand{\@programmes}{ } % class
280 \newcommand{\@programmeq}{ } % qualifier
281 \newcommand{\programme}[3]{%
282   \ifthenelse{\equal{#1}{BA}}{%
283     {\renewcommand{\@programmet}{Bachelor of Science in de }}{%
284     \ifthenelse{\equal{#1}{MA}}{%
285       {\renewcommand{\@programmet}{Master of Science in de }}{%
286       \ifthenelse{\equal{#1}{VP}}{%
287         {\renewcommand{\@programmet}{Voorbereidingsprogramma voor Master of Science in de }}{%
288         \ifthenelse{\equal{#1}{SP}}{%
289           {\renewcommand{\@programmet}{Schakelprogramma voor Master of Science in de }}{%
290           \ifthenelse{\equal{#1}{FREE}}{%
291             {}{
292             \errmessage{Error in 1st arg of macro programme[3]: invalid
293               programme type!}}}}}%
294       %
295       \ifthenelse{\equal{#2}{IW}}{%
296         {\renewcommand{\@programme}{industri\ "ele wetenschappen}
297         \renewcommand{\@programmeqr}{industriële wetenschappen}}{
298         \ifthenelse{\equal{#2}{}}{%
299           {}{
300           \errmessage{{Error in 2nd arg of macro programme[3]: invalid
301             programme class! }}}}%
302       %
303       \ifthenelse{\equal{#3}{BK}}{%
304         {\renewcommand{\@programmeq}{bouwkunde}}{%
305         \ifthenelse{\equal{#3}{CH}}{%
306         {\renewcommand{\@programmeq}{chemie}}{%
307         \ifthenelse{\equal{#3}{BCH}}{%
308         {\renewcommand{\@programmeq}{biochemie}}{%
309         \ifthenelse{\equal{#3}{EM}}{%
310         {\renewcommand{\@programmeq}{elektromechanica}}{%
311         \ifthenelse{\equal{#3}{EI}}{%
312         {\renewcommand{\@programmeq}{elektronica-ICT}}{%
313         \ifthenelse{\equal{#3}{}}{%
314           {}{%
315           \ifthenelse{\equal{#1}{FREE}}
316           {\renewcommand{\@programmeq}{#3}}{
317           \errmessage{Error in 3rd arg to macro programme[3]: invalid
318             programme qualifier}}}}}}}%
319       %
320       \ifthenelse{\equal{#2}{IW}\and\not\equal{#3}{}}
321       {\renewcommand{\@programmes}{: }}{ }
322 }
323 \</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.

```

324 <*ct>
325 \newcommand{\@coursecodei}{ }
326 \newcommand{\@coursecodeii}{ }
327 \newcommand{\@coursecodeiii}{ }
328 \newcommand{\@coursecodeiv}{ }
329 \newcommand{\@coursei}{ }
330 \newcommand{\@courseii}{ }
331 \newcommand{\@courseiii}{ }
332 \newcommand{\@courseiv}{ }
333 \newcommand{\@qrcoursei}{ }
334 \newcommand{\@qrcourseii}{ }
335 \newcommand{\@qrcourseiii}{ }
336 \newcommand{\@qrcourseiv}{ }
337 \newcommand{\course}[2]{
338   \renewcommand{\@coursecodei}{#1}
339   \renewcommand{\@coursei}{#2}
340   \ifx\@qrcoursei\@emptymacro
341     \renewcommand{\@qrcoursei}{#2}
342   \fi
343 }
344 \newcommand{\qrcourse}[1]{
345   \renewcommand{\@qrcoursei}{#1}
346 }
347 \newcommand{\coursei}[2]{
348   \renewcommand{\@coursecodei}{#1}
349   \renewcommand{\@coursei}{#2}
350   \ifx\@qrcoursei\@emptymacro
351     \renewcommand{\@qrcoursei}{#2}
352   \fi
353 }
354 \newcommand{\qrcoursei}[1]{
355   \renewcommand{\@qrcoursei}{#1}
356 }
357 \newcommand{\courseii}[2]{
358   \renewcommand{\@coursecodeii}{#1}
359   \renewcommand{\@courseii}{#2}
360   \ifx\@qrcourseii\@emptymacro
361     \renewcommand{\@qrcourseii}{#2}
362   \fi
363 }
364 \newcommand{\qrcourseii}[1]{
365   \renewcommand{\@qrcourseii}{#1}
366 }
367 \newcommand{\courseiii}[2]{
368   \renewcommand{\@coursecodeiii}{#1}
369   \renewcommand{\@courseiii}{#2}
370   \ifx\@qrcourseiii\@emptymacro

```

```

371 \renewcommand{\@qrcourseiii}{#2}
372 \fi
373 }
374 \newcommand{\qrcourseiii}[1]{
375 \renewcommand{\@qrcourseiii}{#1}
376 }
377 \newcommand{\courseiv}[2]{
378 \renewcommand{\@coursecodeiv}{#1}
379 \renewcommand{\@courseiv}{#2}
380 \ifx\@qrcourseiv\@emptymacro
381 \renewcommand{\@qrcourseiv}{#2}
382 \fi
383 }
384 \newcommand{\qrcourseiv}[1]{
385 \renewcommand{\@qrcourseiv}{#1}
386 }
387 </ct>

```

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

```

388 <*mt>
389 \newcommand{\@diploma}{ERROR}
390 \newcommand{\diploma}[1]{
391 \newcommand{\MoSIW}{Master of Science in de industri\"ele wetenschappen}
392 \renewcommand{\@diploma}{
393 \ifthenelse{\equal{#1}{MA-IW-BK}}{
394 \MoSIW: bouwkunde}{
395 \ifthenelse{\equal{#1}{MA-IW-BCH}}{
396 \MoSIW: biochemie}{
397 \ifthenelse{\equal{#1}{MA-IW-CH}}{
398 \MoSIW: chemie}{
399 \ifthenelse{\equal{#1}{MA-IW-EI}}{
400 \MoSIW: elektronica-ICT}{
401 \ifthenelse{\equal{#1}{MA-IW-EI-AE}}{
402 \MoSIW:\\elektronica-ICT, afstudeerrichting automotive engineering}{
403 \ifthenelse{\equal{#1}{MA-IW-EI-ICT}}{
404 \MoSIW:\\elektronica-ICT, afstudeerrichting ICT}{
405 \ifthenelse{\equal{#1}{MA-IW-EM-AE}}{
406 \MoSIW:\\elektromechanica, afstudeerrichting automotive engineering}{
407 \ifthenelse{\equal{#1}{MA-IW-EM-AU}}{
408 \MoSIW\\elektromechanica, afstudeerrichting automatisering}{
409 \ifthenelse{\equal{#1}{MA-IW-EM-EM}}{
410 \MoSIW\\elektromechanica, afstudeerrichting elektromechanica}
411 {\errmessage{Error in argument to macro diploma: must be one of MA-IW-XXX with XXX one of B
412 }
413 }
414 </mt>

```

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

```
415 <*mt>
416 \newcommand{\@defensedate}{ERROR}
417 \newcommand{\defensedate}[1]{\renewcommand{\@defensedate}{#1}}
418 </mt>
```

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

```
419 <*mt>
420 \newcommand{\@defenselocation}{Antwerpen}
421 \newcommand{\defenselocation}[1]{\renewcommand{\@defenselocation}{#1}}
422 </mt>
```

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

```
423 <*ct | mt>
424 \newcommand{\@academicyear}{XXX-YYYY}
425 \newcommand{\academicyear}[1]{\renewcommand{\@academicyear}{#1}}
426 </ct | mt>
```

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

```
427 <*ct>
428 \newcommand{\@copyrightnotices}{}
429 \newcommand{\copyrightnotices}[1]{\renewcommand{\@copyrightnotices}{#1}}
430 </ct>
```

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

```
431 <*le>
432 \newcommand{\@sender}{< Specify sender using
433   \tbs{}sender\{name\}\{role\} >}
434 \newcommand{\@senderrole}{~}
435 \newcommand{\sender}[2]{\renewcommand{\@sender}{#1}\renewcommand{\@senderrole}{#2}}
436 </le>
```

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

```
437 <*le>
438 \newcommand{\@logo}{\logoname}
439 \newcommand{\logo}[1]{\renewcommand{\@unit}{#1}}
440 </le>
```

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

```
441 <*e>
442 \newcommand{\@unit}{}
443 \newcommand{\unit}[1]{\renewcommand{\@unit}{#1}}
444 </e>
```

`\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.

```
445 <*e>
446 \newcommand{\@emailuser}{}
447 \newcommand{\@emaildomain}{}
448 \newcommand{\email}[2]{\renewcommand{\@emailuser}{#1}\renewcommand{\@emaildomain}{#2}}
449 </e>
```

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

```
450 <*e>
451 \newcommand{\@phone}{}
452 \newcommand{\phone}[1]{\renewcommand{\@phone}{#1}}
453 </e>
```

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

```
454 <*e>
455 \newcommand{\@fax}{}
456 \newcommand{\fax}[1]{\renewcommand{\@fax}{#1}}
457 </e>
```

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

```
458 <*e>
459 \newcommand{\@mobile}{}
460 \newcommand{\mobile}[1]{\renewcommand{\@mobile}{#1}}
461 </e>
```

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

```
462 <*e>
463 \newcommand{\@returnaddress}{<specify return-address using \tbs\{single-line-return-address\}>}
464 \renewcommand{\returnaddress}[1]{\renewcommand{\@returnaddress}{#1}}
465 </e>
```

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


```

466 <*\e>
467 \newcommand{\@to}{<Specify addressee using \tbs to{name}>}
468 \renewcommand{\to}[1]{\renewcommand{\@to}{#1}}
469 </\e>

```

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

```

470 <*\e>
471 \newcommand{\@toorganization}{<Specify organization using
472 \tbs toorganization>}
473 \newcommand{\toorganization}[1]{\renewcommand{\@toorganization}{#1}}
474 </\e>

```

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

```

475 <*\e>
476 \newcommand{\@toaddress}{<Specify (multiline) destination address\\using \tbs toaddress>}
477 \newcommand{\toaddress}[1]{\renewcommand{\@toaddress}{#1}}
478 </\e>

```

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

```

479 <*\e>
480 \newcommand{\@subject}{-}
481 \newcommand*{\subject}[1]{\renewcommand{\@subject}{#1}}
482 </\e>

```

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

```

483 <*\e>
484 \renewcommand*{\opening}[1]{#1}
485 </\e>

```

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

```

486 <*\e>
487 \newcommand{\@closing}{<specify a closing formula using \tbs closing>}
488 \renewcommand*{\closing}[1]{\renewcommand{\@closing}{#1}}
489 </\e>

```

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

```

490 <*\e>
491 \newcommand{\@carboncopy}{}

```

```

492 \newcommand{\carboncopy}[1]{\renewcommand{\@carboncopy}{#1}}
493 \le

```

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

```

494 \le
495 \newcommand{\@enclosed}{}
496 \newcommand{\enclosed}[1]{\renewcommand{\@enclosed}{#1}}
497 \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).

```

498 \le
499 \newcommand{\@address}{< Put your multi-line address here\\using
500 \tbs address\{\} >}
501 \renewcommand{\address}[1]{\renewcommand{\@address}{#1}}
502 \le

```

\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 `LATEX`) 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 `uantwerpencoursetext` package are defined to be:

```

503 \ct
504 \if@twoside
505 \lhead[\thepage]{\slshape\rightmark}
506 \chead[]{}
507 \rhead[\slshape\leftmark]{\thepage}
508 \lfoot[Universiteit Antwerpen -- \@facultyacronym]{\@courseversion}
509 \cfoot[]{}
510 \rfoot[]{\@title{}\@ifmtarg{\@subtitle}{}{ --- \@subtitle}}
511 \else
512 \lhead[]{\leftmark}
513 \chead[]{}
514 \rhead[]{\thepage}
515 \lfoot[]{\@courseversion}
516 \cfoot[]{\@Antwerpen--\@facultyacronym}
517 \rfoot[]{\@title{}}

```

```

518 \fi
519 \</ct>

```

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

```

520 \< *mt>
521 \if@twoside
522   \lhead[\thepage]{\slshape\rightmark}
523   \chead[]{}
524   \rhead[\slshape\leftmark]{\thepage}
525   \lfoot[Universiteit Antwerpen -- \@facultyacronym]{}
526   \cfoot[]{}
527   \rfoot[]{\@title{}}
528 \else
529   \lhead[]{\leftmark}
530   \chead[]{}
531   \rhead[]{\thepage}
532   \lfoot[]{}
533   \cfoot[]{\UAntwerpen--\@facultyacronym}
534   \rfoot[]{\@title{}}
535 \fi
536 \</mt>

```

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

```

537 \< *le>
538 \lhead[]{}
539 \chead[]{}
540 \rhead[]{}
541 \lfoot[\small\textcolor{gray}{\@date}]{\textcolor{gray}{\@date}}
542 \cfoot[]{}
543 \rfoot[\small\textcolor{gray}{\pagename~\thepage~\orname~\pageref{lastpage}}]{\small\textcolor{gray}{\@date}}
544 \</le>

```

Some common code remains:

```

545 \< *ct | mt>
546 \setlength{\headheight}{13.7pt}
547 \renewcommand{\headrulewidth}{1pt}
548 \renewcommand{\footrulewidth}{1pt}
549 \pagenumbering{arabic}
550 \</ct | mt>
551 \< *le>
552 \renewcommand{\headrulewidth}{0pt}
553 \renewcommand{\footrulewidth}{0pt}
554 \</le>

```

Remains to take care of filling

```

555 \< *ct | mt | le>

```

```

556 \if@filled\else
557   \raggedright
558 \fi
559 \raggedbottom
560 \onecolumn
561 \</ct | mt | le>

```

5.8 Copyright notice

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

```

562 \<*ct>
563 \newcommand{\@crnotice}{
564   This document has been typeset using \LaTeX{} and the
565   \texttt{uantwerpencoursetext} class.\@
566   \@copyrightnotices
567
568   \@courseversion
569
570   CONFIDENTIAL AND PROPRIETARY.
571
572   \copyright{} \@versionyear{} Universiteit Antwerpen, All rights reserved.
573 }
574 \</ct>

```

5.9 Title page for the masterthesis and coursetext clases

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

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

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

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

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

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

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

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

```

575 <*ct | mt>
576 \pgfmithsetmacro{\ua@Wh}{\paperwidth}
577 \pgfmithsetmacro{\ua@Xh}{0.2\paperheight}
578 \pgfmithsetmacro{\ua@Yh}{0.125\paperheight}
579 \pgfmithsetmacro{\ua@XMyh}{\ua@Xh-\ua@Yh}
580 \pgfmithsetmacro{\ua@Rh}{0.5*\ua@Wh/\ua@XMyh*\ua@Wh+0.5*\ua@XMyh}
581 \pgfmithsetmacro{\ua@Qh}{\ua@Rh-\ua@Xh+\paperheight}
582 </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:

```

583 <*ct | mt>
584 \pgfmithsetmacro{\ua@Wba}{0.4*\paperwidth}
585 \pgfmithsetmacro{\ua@Sba}{0.125*\paperheight}
586 \pgfmithsetmacro{\ua@XMyba}{0.02\paperheight}
587 \pgfmithsetmacro{\ua@Rba}{0.5*\ua@Wba/\ua@XMyba*\ua@Wba+0.5*\ua@XMyba}
588 \pgfmithsetmacro{\ua@Qba}{\ua@Rba+\ua@Sba}
589 </ct | mt>

```

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

```

590 <*ct | mt>
591 \pgfmithsetmacro{\ua@Wbb}{0.65*\paperwidth}
592 \pgfmithsetmacro{\ua@Sbb}{0.14*\paperheight}
593 \pgfmithsetmacro{\ua@XMYbb}{0.06*\paperheight}
594 \pgfmithsetmacro{\ua@Rbb}{0.5*\ua@Wbb/\ua@XMYbb*\ua@Wbb+0.5*\ua@XMYbb}
595 \pgfmithsetmacro{\ua@Qbb}{\ua@Rbb+\ua@Sbb}
596 </ct | mt>

```

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

```

597 <*ct | mt>
598 \pgfmithsetmacro{\ua@ll}{0.15*\paperwidth}
599 \pgfmithsetmacro{\ua@l}{0.4*\paperwidth}
600 \pgfmithsetmacro{\ua@d}{0.1in}
601 \pgfmithsetmacro{\ua@rr}{0.85*\paperwidth}
602 </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.

```

603 <*ct>
604 \newcommand\sprtr{ / }
605 \newcommand\myqrdata{
606 I: Universiteit Antwerpen\string\n
607 F: \@faculty\string\n
608 P: \@programmet\ \@programmecqr\ \@programmeq\string\n
609 C: \@coursecodei\ \@qrcoursei
610 \sprtr
611 \@coursecodeii\ \@qrcourseii
612 \sprtr
613 \@coursecodeiii\ \@qrcourseiii
614 \sprtr
615 \@coursecodeiv\ \@qrcourseiv
616 \string\n
617 Y: \@academicyear\string\n
618 T: \@qrtitle\string\n
619 S: \@qrsubtitle\string\n
620 A: \@qrauthor\string\n
621 L: \@qrlectureri
622 \sprtr
623 \@qrlecturerii
624 \sprtr
625 \@qrlectureriii
626 \sprtr
627 \@qrlectureriv}

```

```

628 \newsavebox{\myqrcode}
629 \end{ct}

```

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

```

630 \begin{ct}
631 \renewcommand{\maketitle}{%
632   \pagestyle{empty}
633   \if@qr
634     \savebox{\myqrcode}[2.7in][t]{
635       \begin{pspicture}(2.7in,2.7in)
636         \psbarcode{\myqrdata}{version=22 encoding=byte eclevel=M}{qrcode}
637       \end{pspicture}
638     }
639   \fi
640   \begin{titlepage}
641     \if@titlepagetableonly
642       Dit is een cursustekst van Universiteit Antwerpen.\
643       Het titelblad dient opgemaakt te worden met de volgende gegevens:
644       \begin{center}
645         \begin{tabular}{|l|l|l|}
646           \hline
647           \bfseries I & Universiteit Antwerpen & \\\hline
648           \bfseries F & \@faculty & \\\hline
649           \bfseries P & \parbox[t]{14cm}{\@programmet} & \\\hline
650           \bfseries C & \parbox[t]{14cm}{\@programme} & \\\hline
651           \bfseries Y & \@academicyear & \\\hline
652           \bfseries T & \parbox[t]{14cm}{\@title} & \\\hline
653           \bfseries S & \parbox[t]{14cm}{\@subtitle} & \\\hline
654           \bfseries A & \parbox[t]{14cm}{\@author} & \\\hline
655           \bfseries L & \parbox[t]{14cm}{\@lectureri} & \\\hline
656           & \parbox[t]{14cm}{\@lecturerii} & \\\hline
657           & \parbox[t]{14cm}{\@lectureriii} & \\\hline
658           & \parbox[t]{14cm}{\@lectureriv} & \\\hline
659         \end{tabular}
660       \end{center}
661       ~\
662       Waarbij: I = instelleng, F = faculteit, P = programma, C =
663       cursusmodule, T = titel, S = subtitel, A = auteur(s), L =
664       lesgever(s)\~\
665     \if@qr
666       Deze informatie is ook gecodeerd in de onderstaande QR-code.\
667       \vspace*{1cm}
668       \usebox{\myqrcode}
669     \fi
670   \end{titlepage}
671 \end{ct}

```

```

675 \else
676 \begin{tikzpicture}[remember picture,overlay]
677 \node at (current page.center) {
678 \begin{tikzpicture}[inner sep=0pt]
679 \clip (0,0) rectangle(\paperwidth,\paperheight);
680 \if@titlepagenoartwork\else
681 \filldraw [uacorpbord] (0.55\paperwidth,\ua@Qba pt) circle (\ua@Rba pt);
682 \filldraw [white] (0.35\paperwidth,\ua@Qbb pt) circle (\ua@Rbb pt);
683 \filldraw [uacorpblue] (0,\ua@Qh pt) circle (\ua@Rh pt);
684 \path
685 (0.95\paperwidth,0.1\paperheight)
686 node [anchor=north east] {
687 \includegraphics[width=0.25\paperwidth]{\logoname}};
688 \fi
689 \path
690 (\ua@l pt -\ua@d pt,0.77\paperheight)
691 node [anchor=north east, text width=0.35\paperwidth] {
692 \begin{flushright}
693 UNIVERSITEIT ANTWERPEN\\~\\
694 Academiejaar \@academicyear
695 \end{flushright}}
696 (\ua@l pt +\ua@d pt,0.65\paperheight)
697 node [anchor = north west, text width = 0.55\paperwidth] {
698 {\large \@faculty{}}\\[0.05\paperheight]
699 {\huge \bf \@title{}}\\[2ex]
700 {\Large \bf \@subtitle{}}\\[3ex]
701 {\Large \bf \@author{}}}
702 (\ua@l pt +\ua@d pt,0.45\paperheight)
703 node [anchor = north west, text width = 0.55\paperwidth] {
704 \@lectureri~\\
705 \@lecturerii~\\
706 \@lectureriii~\\
707 \@lectureriv}
708 (\ua@l pt +\ua@d pt,0.35\paperheight)
709 node [anchor = north west, text width = 0.55\paperwidth] {
710 {\bf \@programmet \\\@programmec\@programmes \@programmeq}}
711 (\ua@l pt +\ua@d pt,0.30\paperheight)
712 node [anchor = north west, text width = 0.55\paperwidth] {
713 \texttt{\@publishercode}~\\~\\
714 \texttt{\@coursecodei{}} \@coursei~\\
715 \texttt{\@coursecodeii{}} \@courseii~\\
716 \texttt{\@coursecodeiii{}} \@courseiii~\\
717 \texttt{\@coursecodeiv{}} \@courseiv}
718 (\ua@l pt - 2\ua@d pt, 0.368\paperheight)
719 node [anchor = north east, text width = 0.35\paperwidth] {
720 {\normalsize\begin{flushright}
721 \@publisher{
722 \end{flushright}}};
723 \end{tikzpicture}
724 };

```



```

725 \end{tikzpicture}
726 \fi
727 \end{titlepage}%
728 \clearpage
729 \vspace*{\stretch{1}}
730 \@crnotice
731 \clearpage
732 \setcounter{footnote}{0}%
733 \global\let\thanks\relax
734 \global\let\maketitle\relax
735 \global\let\@thanks\@empty
736 \global\let\title\relax
737 \global\let\author\relax
738 \global\let\date\relax
739 \global\let\and\relax
740 \pagestyle{fancy}
741 \thispagestyle{empty}
742 }
743 </ct>

```

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

```

744 <*ct>
745 \newcommand\makefinalpage{
746 \if@titlepagetableonly
747 \else
748 \cleardoublepage
749 \thispagestyle{empty}
750 \begin{tikzpicture}[remember picture,overlay]
751 \node at (current page.center) {
752 \begin{tikzpicture}[inner sep=0pt]
753 \clip (0,0) rectangle(\paperwidth,\paperheight);
754 \if@titlepagenoartwork\else
755 \filldraw [uacorpblue] (\paperwidth,\ua@Qh pt) circle (\ua@Rh pt);
756 \fi
757 \path
758 (0.1\paperwidth,0.1\paperheight)
759 node [anchor = south west, text width = 0.6\paperwidth] {
760 CONFIDENTIAL AND PROPRIETARY\\~\\
761
762 \copyright{} \@versionyear{} Universiteit Antwerpen,
763 All rights reserved.}
764 (0.9\paperwidth,0.1\paperwidth)
765 node [anchor = south east] {
766 \usebox{\myqrcode}
767 };
768 \end{tikzpicture}
769 };
770 \end{tikzpicture}

```

```

771 \fi
772 }
773 \end{ct}

```

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

```

774 \begin{mt}
775 \renewcommand\maketitle{%
776 \pagestyle{empty}
777 \begin{titlepage}
778 \begin{tikzpicture}[remember picture,overlay]
779 \node at (current page.center) {
780 \begin{tikzpicture}[inner sep=0pt]
781 \clip (0,0) rectangle(\paperwidth,\paperheight);
782 \if@titlepagenoartwork\else
783 \filldraw [lightgray] (0.55\paperwidth,\ua@Qba pt) circle (\ua@Rba pt);
784 \filldraw [white] (0.35\paperwidth,\ua@Qbb pt) circle (\ua@Rbb pt);
785 \filldraw [lightgray] (0,\ua@Qh pt) circle (\ua@Rh pt);
786 \path
787 (0.95\paperwidth,0.1\paperheight)
788 node [anchor=north east] {
789 \includegraphics[width=0.25\paperwidth]{\logoname}};
790 \fi
791 \path
792 (\ua@ll pt,0.77\paperheight)
793 node [anchor=north west, text width=0.7\paperwidth] {
794 UNIVERSITEIT ANTWERPEN\~\
795 Academiejaar \@academicyear\~\
796 {\large \@faculty}}\~\
797 Masterproef\|[0.05\paperheight]
798 {\Large \bf \@title{}}
799 (\ua@ll pt,0.55\paperheight)
800 node [anchor = north west, text width = 0.7\paperwidth] {
801 {\large \bf \@author{}}\~\~\
802 \begin{tabular}{@{}p{2.5cm}p{11cm}}
803 \textbf{Promotoren:}
804 & \@supervisor i \
805 & \@supervisor ii \
806 & \@supervisor iii \
807 & \@supervisor iv
808 \end{tabular}
809 }
810 (\ua@ll pt,0.3\paperheight) node [anchor=north west, text width = 0.7\paperwidth]{%
811 Proefschrift tot het behalen van de graad van\
812 \@diploma\
813 \@defenselocation, \@defensedate
814 };
815 \end{tikzpicture}
816 };
817 \end{tikzpicture}

```

```

818 \end{titlepage}%
819 \clearpage
820 \setcounter{footnote}{0}%
821 \global\let\thanks\relax
822 \global\let\maketitle\relax
823 \global\let\@thanks\@empty
824 \global\let\title\relax
825 \global\let\author\relax
826 \global\let\date\relax
827 \global\let\and\relax
828 \pagestyle{fancy}
829 \thispagestyle{empty}
830 }
831 </mt>

```

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

```

832 <*mt>
833 \newcommand\makefinalpage{
834 \cleardoublepage
835 \thispagestyle{empty}
836 \begin{tikzpicture}[remember picture,overlay]
837 \node at (current page.center) {
838 \begin{tikzpicture}[inner sep=0pt]
839 \clip (0,0) rectangle(\paperwidth,\paperheight);
840 \if@titlepagenoartwork\else
841 \filldraw [lightgray] (\paperwidth,\ua@Qh pt) circle (\ua@Rh pt);
842 \fi
843 \end{tikzpicture}
844 };
845 \end{tikzpicture}
846 }
847 </mt>

```

5.10 Letter

5.10.1 Bottom cords

The bottom circles have diameters close to the following invariant: the extreme distance from a chord with length X to the arc it covers is $X/40$. X represents the page width. Using the Pythagorean theorem, this leads to an indicative arc radius R of:

$$R^2 = \left(\frac{X}{2}\right)^2 + \left(R - \frac{X}{40}\right)^2 \quad (5)$$

Solving for R yields:

$$R = \left(5 + \frac{1}{80}\right) X \quad (6)$$

For a page width of 21cm, this yields:

$$R = 105\text{cm} \quad (7)$$

The rest of the positioning data is based on guessing/trial-and-error/retrofitting, due to lack of data in the house style specification.

5.10.2 Title Page

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

```

848 <|e>
849 \newcommand\maketitle{%
850   \pagestyle{fancy}
851   \thispagestyle{empty}
852   \begin{tikzpicture}[overlay,remember picture]
853     \path (current page.north west) +(1.8cm,-1.2cm)
854     node[anchor=north west] {
855       \includegraphics[height=1.1cm]{\@logo}
856     };
857     \draw (current page.north west)
858     +(1cm,-98mm) -- +(1.5cm,-98mm);
859     % 90 x 45
860     % pos: 20mm van kant, 15mm van onderkant
861     \path (current page.north east) +(-100mm,-65mm)
862     node[anchor=west,text width=80mm,align=left] {
863       \scriptsize\textcolor{gray}{\uline{\@returnaddress}}\\*
864       \normalsize\@to\\*
865       \@toorganization\\*
866       \@toaddress
867     };
868   \end{tikzpicture}
869   % \begin{tikzpicture}[overlay,remember picture]
870   %   \draw[fill,uacorpblue] (current page.south)
871   %   ++(+2cm,+108cm)
872   %   ++(-2cm*1.002,-2cm*28*1.002)
873   %   circle (49cm);
874   %   \draw[fill,white] (current page.south)
875   %   ++(+2cm,+108cm)
876   %   circle (105cm);
877   % \end{tikzpicture}
878   \begin{tikzpicture}[overlay,remember picture]
879     \coordinate (bordcirclecenter) at (-8cm,+107cm);
880     \begin{pgfinterruptboundingbox}
881       \path[clip,insert path={\reset cm}]

```

```

882      (-16383.9999pt,-16383.9999pt) rectangle
883      (16383.9999pt,16383.9999pt)}}]
884      (current page.south)
885      ++(bordcirclecenter)
886      circle (105cm);
887      \end{pgfinterruptboundingbox}
888      \draw[fill,uacorpbord]
889      (current page.south)
890      ++(bordcirclecenter)
891      ++(2cm*1.002,-2cm*14*1.002)
892      circle (77cm);
893      \end{tikzpicture}
894      \begin{tikzpicture}[overlay,remember picture]
895      \coordinate (bluecirclecenter) at (+2cm,+107cm);
896      \begin{pgfinterruptboundingbox}
897      \path[clip, insert path={{[reset cm]
898      (-16383.9999pt,-16383.9999pt) rectangle
899      (16383.9999pt,16383.9999pt)}}]
900      (current page.south)
901      ++(bluecirclecenter)
902      circle (105cm);
903      \end{pgfinterruptboundingbox}
904      \draw[fill,uacorpblue] (current page.south)
905      ++(bluecirclecenter)
906      ++(-2cm*1.002,-2cm*24*1.002)
907      circle (57cm);
908      \end{tikzpicture}
909      \begin{tikzpicture}[overlay,remember picture]
910      \path (current page.south east)
911      ++(-1in,+2.2cm) node[left,align=right] {\textcolor{uacorpblue}{\LARGE \domainname}};
912      \end{tikzpicture}
913      ~\\[3ex]
914      \textcolor{uacorpblue}{\bf \@sender}\\*
915      \@senderrole\\[1.75ex]
916      \@faculty
917      \ifx\@unit\@emptymacro\else\\* \@unit\fi~\\[1.75ex]
918      \@address\\[1.75ex]
919      \ifx\@email\@emptymacro\else E \@emailuser\tat{}\@emaildomain\\fi
920      \ifx\@phone\@emptymacro\else T \@phone\\fi
921      \ifx\@fax\@emptymacro\else F \@fax\\fi
922      \ifx\@mobile\@emptymacro\else M \@mobile\\fi
923      ~\\[4ex]
924      \begin{tikzpicture}[anchor=north west,align=left,outer sep=0,inner sep=0]
925      \path
926      (0,0) node { \scriptsize \strut
927      \textcolor{gray}{\uppercase\expandafter{\datename} } }
928      (4cm,0) node { \scriptsize \strut
929      \textcolor{gray}{\uppercase\expandafter{\subjectname} } }
930      (0,-2.5ex) node { \strut \@date }
931      (4cm,-2.5ex) node[align=left] { \strut \@subject };

```

```

932 \end{tikzpicture}~\[4ex]
933 % dirty but effective hack to enlarge the page after the first one
934 \makeatletter
935 \AtBeginShipoutNext{%
936   \global\addtolength{\textheight}{0.34in}%
937   \global\setlength{\@colht}{\textheight}}
938 \makeatother
939 }
940 </le>

```

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

```

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

```

5.11 References

```

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

```

```

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

```

Change History

v1.0		Added lmodern package to please	
General: Consolidated uacourse-		MikTeX	21
text class and uamasterthesis		Increased headheight to please	
class	1	Fancyhdr	35
Added option qr	19	v1.3	
Added option titlepagenoart-		General: Minor bugfixes, abandon-	
work	19	ment of a few packages, font	
Added option titlepagetableonly	19	freedom	1
v1.1		Abandoned use of cmbright - no	
General: Small bugfixes and 'filled'		more font dictatorship for the-	
option	1	ses and courses	21
Added option user documenta-		Added inclusion of background	
tion	5	package	21
Made raggedright conditional on		Changed eso-pic for tikz and	
option 'filled', because it can't		background	38
be undone	35	\makefinalpage: Changed eso-pic	
\diploma: Fixed typo on pro-		for tikz	41, 43
gramme's name (e-umlaut) . .	30	\maketitle: Changed eso-pic for	
v1.2		tikz	42
General: Added lmodern pack-		v1.4	
age and increased headheight to		General: Implemented uantwerpen-	
13.7pt to please Fancyhdr	1	letter class	1
		Implemented letter class	19

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