The `uantwerpendocs` classes*†

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

2017/01/08

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` 1.8, dated 2017/01/08.

†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 `ifmtarg` package
- the `geometry` package
- teh `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 (PDFLaTeX, LaTeX, XeLaTeX,...) from the major TeX-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 LaTeX your source file twice in order to have the title and final page correctly aligned.

4.1.1 `uantwerpencoursetext` class

Use the following harness for your LaTeX course text:

```
\documentclass[a4paper]{uantwerpencoursetext}

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

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

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

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

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

\academicyear{<XXXX-YYYY>}

\begin{document}

  \maketitle

  % put your LaTeX code here

  \finalpage

\end{document}
```

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

4.1.2 `uantwerpenmasterthesis` class

Use the following harness for your LaTeX 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 LaTeX 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 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

`\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 repographic 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` [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!)
	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: handelsingenieur
MA-TEW-HIBI	Master of Science in de toegepaste economische wetenschappen: handelsingenieur in de beleidsinformatica
MA-TEW-EB	Master of Science in de toegepaste economische wetenschappen: economische beleid
MA-TEW-BK	Master of Science in de toegepaste economische wetenschappen: bedrijfskunde

`\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.

- 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 LaTeX) 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,'.

`\signature` [letter] (optional)
Add a signature (in between the closing statement of the letter and the sender's name. This might be a text message or a picture of your signature.

`\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 `uantwerpencoursetext`

This example uses the `qr` option (that invokes the `auto-pst-pdf` package) so enable 'write18' or 'shell-escape' for your LaTeX 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{2023FTIZZZ}{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]{babel} % or dutch if your text is in Dutch

\title{Minimax optimisatie 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}

\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}
% 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, 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,}
% you might want to insert a signature picture or text:
% \signature{\includegraphics{signature.jpg}}
\carboncopy{Prof. S. Mariotte, Mumford University}
```

```
  \enclosed{
    \begin{enumerate}
    \item list of course numbers that are most fequently 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/LauTeX 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 LaTeX `book` and `letter` class.

Before loading the class, we provide the extra options.

```
⟨*ct⟩
\newif\if@copyright
\DeclareOption{copyright}{\@copyrighttrue}
\newif\if@qr
\DeclareOption{qr}{\@qrtrue}
⟨/ct⟩

⟨*ct | mt⟩
\newif\if@titlepagenoartwork
\DeclareOption{titlepagenoartwork}{\@titlepagenoartworktrue}
\newif\if@titlepagetableonly
\DeclareOption{titlepagetableonly}{\@titlepagetableonlytrue}
⟨/ct | mt⟩
⟨*ct | mt | le⟩
\newif\if@filled
\DeclareOption{filled}{\@filledtrue}
⟨/ct | mt | le⟩
```

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

```
⟨*le⟩
\ExecuteOptions{a4paper,10pt,final,oneside,openright}
\ProcessOptions
\LoadClassWithOptions{letter}
\newcommand\tat{\makeatletter @\makeatother}
\newcommand\tbs{\textbackslash}
⟨/le⟩
⟨*ct | mt⟩
\ExecuteOptions{a4paper,11pt,final,oneside,openright}
\ProcessOptions
\LoadClassWithOptions{book}
⟨/ct | mt⟩
```

5.2 Modern typesetting

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

```
⟨*ct | mt | le⟩
\setlength{\parindent}{0pt}
```

```
\addtolength{\parskip}{0.75\baselineskip}
\setcounter{secnumdepth}{3}
⟨/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.

```
⟨*ct | mt⟩
\RequirePackage[top=1in, bottom=1in, left=1in, right=1in]{geometry}
⟨/ct | mt⟩
⟨*le⟩
\RequirePackage[top=1in, bottom=1in, left=1.34in, right=1in]{geometry}
\RequirePackage[normalem]{ulem}
\RequirePackage{atbegshi}
⟨/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.

```
⟨*ct | mt | le⟩
% no more font code
⟨/ct | mt | le⟩
```

5.3.3 Boilerplate packages

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

```
⟨*ct | mt | le⟩
\RequirePackage{ifthen}
\RequirePackage{ifmtarg}
\RequirePackage{shellesc}
\newcommand{\@emptymacro}{}
⟨/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:

```
⟨∗ct | mt | le⟩
\RequirePackage{graphicx}
\RequirePackage{color}
\RequirePackage{tikz}
⟨/ct | mt | le⟩
⟨∗ct⟩
\if@copyright
\RequirePackage[firstpage=false,contents={Copyright University of Antwerp, All Rights Reserved}
\fi
⟨/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 documention on how to do so!

```
⟨∗ct⟩
\if@qr
\RequirePackage{auto-pst-pdf}
\RequirePackage{pst-barcode}
\fi
⟨/ct⟩
```

5.3.5 Header/Footer

The de-facto standard for headers and footers:

```
⟨∗ct | mt | le⟩
\RequirePackage{fancyhdr}
⟨/ct | mt | le⟩
```

5.4 Colors

```
⟨∗ct | mt | le⟩
\definecolor{uacorpbord}{cmyk}     {0.00,1.00,0.60,0.37}
\definecolor{uacorpblue}{cmyk}     {1.00,0.25,0.00,0.50}
\definecolor{uacorplightblue}{cmyk}{1.00,0.00,0.08,0.13}
\definecolor{uacorporange}{cmyk}   {0.00,0.32,1.00,0.09}
\definecolor{uaftifresh}{cmyk}     {0.34,1.00,0.00,0.00}
\definecolor{uaftisober}{cmyk}     {0.10,1.00,0.00,0.49}
\definecolor{lightgray}{cmyk}      {0.00,0.00,0.00,0.05}
```

78 ⟨/ct | mt | le⟩

5.5 Babel provisions

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

```
      \renewcommand{\footername}{4E_PMS302_BR_ENG_RGB}
      \renewcommand{\orname}{de}
      \renewcommand{\domainname}{uanvers.be}
      \renewcommand{\subjectname}{Objet}%
      \renewcommand{\datename}{Date}%
      \renewcommand{\academicyearname}{Ann\'ee acad\'emique}
      \renewcommand{\masterthesisname}{Th\‘ese de master}
      \renewcommand{\promotorsname}{Promoteurs}
      \renewcommand{\thesisname}{Th\‘ese \‘a l'atteinte du degr\'e de}
    }
    \addto\captionsspanish{%
      \renewcommand{\uaname}{Universidad de Amberes}
      \renewcommand{\logoname}{UA_HOR_SPA_CMYK}
      \renewcommand{\footername}{4E_PMS302_BR_ENG_RGB}
      \renewcommand{\orname}{de}
      \renewcommand{\domainname}{uantwerp.be}
      \renewcommand{\subjectname}{Asunto}%
      \renewcommand{\datename}{Fecha}%
      \renewcommand{\academicyearname}{A\~no acad\'emico}
      \renewcommand{\masterthesisname}{Tesis de maestr\'\i{}a}
      \renewcommand{\promotorsname}{Promotores}
      \renewcommand{\thesisname}{Disertaci\'on a la consecuci\'on del
        grado de}
    }
  }
  {}
}
⟨/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.

```
⟨*ct | mt | le⟩
\newcommand{\@facultyacronym}{}
\newcommand{\@faculty}{< Specify faculty using \tbs{}facultyacronym\{ABC\} >}
\newcommand{\facultyacronym}[1]{
  \renewcommand{\@facultyacronym}{#1}
  \ifthenelse{\equal{#1}{CPG}}{\renewcommand\@faculty{Centrum
      Pieter Gillis}}{
  \ifthenelse{\equal{#1}{FBD}}{\renewcommand\@faculty{Faculteit
      Farmaceutische, Biomedische en Diergeneeskundige Wetenschappen}}{
  \ifthenelse{\equal{#1}{GGW}}{\renewcommand\@faculty{Faculteit
      Geneeskunde en Gezondheidswetenschappen}}{
  \ifthenelse{\equal{#1}{IOB}}{\renewcommand\@faculty{Instituut
      voor Ontwikkelingsbeleid- en beheer}}{
  \ifthenelse{\equal{#1}{IOIW}}{\renewcommand\@faculty{Instituut
```

```
      voor Onderwijs- en Informatiewetenschappen}}{
  \ifthenelse{\equal{#1}{LW}}{\renewcommand\@faculty{Faculteit
      Letteren en Wijsbegeerte}}{
  \ifthenelse{\equal{#1}{OW}}{\renewcommand\@faculty{Faculteit
      Ontwerpwetenschappen}}{
  \ifthenelse{\equal{#1}{SW}}{\renewcommand\@faculty{Faculteit
      Sociale Wetenschappen}}{
  \ifthenelse{\equal{#1}{REC}}{\renewcommand\@faculty{Faculteit
      Rechten}}{
  \ifthenelse{\equal{#1}{TEW}}{\renewcommand\@faculty{Faculteit
      Toegepaste Economische Wetenschappen}}{
  \ifthenelse{\equal{#1}{TI}}{\renewcommand\@faculty{Faculteit
      Toegepaste Ingenieurswetenschappen}}{
  \ifthenelse{\equal{#1}{WET}}{\renewcommand\@faculty{Faculteit
      Wetenschappen}}{
    \errmessage{Error: wrong faculty acronym; choose one of FBD, GGW,
      LW, OW, PSW, REC, TEW, TI, WET}}}}}}}}}}}}}
⟨/ct | mt | le⟩
```

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

```
⟨*ct⟩
\newcommand{\@qrtitle}{}
\renewcommand{\title}[1]{%
  \renewcommand\@title{#1}
  \ifx\@qrtitle\@emptymacro
  \renewcommand\@qrtitle{#1}
  \fi
}
\newcommand{\qrtitle}[1]{%
  \renewcommand\@qrtitle{#1}
}
⟨/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.

```
⟨*ct⟩
\newcommand{\@subtitle}{}
\newcommand{\@qrsubtitle}{}
\newcommand{\subtitle}[1]{%
  \renewcommand\@subtitle{#1}
  \ifx\@qrsubtitle\@emptymacro
    \renewcommand\@qrsubtitle{#1}
  \fi
}
```

```
\newcommand{\qrsubtitle}[1]{%
  \renewcommand\@qrsubtitle{#1}
}
⟨/ct⟩
```

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

```
⟨*ct⟩
\newcommand{\@qrauthor}{}
\renewcommand{\author}[1]{%
  \renewcommand\@author{#1}
  \ifx\@qrauthor\@emptymacro
  \renewcommand\@qrauthor{#1}
  \fi
}
\newcommand{\qrauthor}[1]{%
  \renewcommand\@qrauthor{#1}
}
⟨/ct⟩
```

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

```
⟨*ct⟩
\newcommand{\@courseversion}{}
\newcommand{\courseversion}[1]{\renewcommand{\@courseversion}{#1}}
⟨/ct⟩
```

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

```
⟨*ct⟩
\newcommand{\@versionyear}{}
\newcommand{\versionyear}[1]{\renewcommand{\@versionyear}{#1}}
⟨/ct⟩
```

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

```
⟨*ct⟩
\newcommand{\@publisher}{\uaname\\
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}
\newcommand{\publisher}[1]{\renewcommand{\@publisher}{#1}}
⟨/ct⟩
```

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

```
⟨*ct⟩
\newcommand{\@publishercode}{}
\newcommand{\publishercode}[1]{\renewcommand{\@publishercode}{#1}}
⟨/ct⟩
```

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

```
⟨*ct⟩
\newcommand{\@lectureri}{}
\newcommand{\@lecturerii}{}
\newcommand{\@lectureriii}{}
\newcommand{\@lectureriv}{}
\newcommand{\@qrlectureri}{}
\newcommand{\@qrlecturerii}{}
\newcommand{\@qrlectureriii}{}
\newcommand{\@qrlectureriv}{}
\newcommand{\lecturer}[1]{
  \renewcommand{\@lectureri}{#1}
  \ifx\@qrlectureri\@emptymacro
  \renewcommand\@qrlectureri{#1}
  \fi
}
\newcommand{\qrlecturer}[1]{
  \renewcommand\@qrlectureri{#1}
}
\newcommand{\lectureri}[1]{
  \renewcommand{\@lectureri}{#1}
  \ifx\@qrlectureri\@emptymacro
  \renewcommand\@qrlectureri{#1}
  \fi
}
\newcommand{\qrlectureri}[1]{
  \renewcommand\@qrlectureri{#1}
}
\newcommand{\lecturerii}[1]{
  \renewcommand{\@lecturerii}{#1}
  \ifx\@qrlecturerii\@emptymacro
  \renewcommand\@qrlecturerii{#1}
```

```
  \fi
}
\newcommand{\qrlecturerii}[1]{
  \renewcommand\@qrlecturerii{#1}
}
\newcommand{\lectureriii}[1]{
  \renewcommand{\@lectureriii}{#1}
  \ifx\@qrlectureriii\@emptymacro
  \renewcommand\@qrlectureriii{#1}
  \fi
}
\newcommand{\qrlectureriii}[1]{
  \renewcommand\@qrlectureriii{#1}
}
\newcommand{\lectureriv}[1]{
  \renewcommand{\@lectureriv}{#1}
  \ifx\@qrlectureriv\@emptymacro
  \renewcommand\@qrlectureriv{#1}
  \fi
}
\newcommand{\qrlectureriv}[1]{
  \renewcommand\@qrlectureriv{#1}
}
⟨/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.

```
⟨*mt⟩
\newcommand{\@supervisori}{}
\newcommand{\@supervisorii}{}
\newcommand{\@supervisoriii}{}
\newcommand{\@supervisoriv}{}
\newcommand{\supervisor}[1]{\renewcommand{\@supervisori}{#1}}
\newcommand{\supervisori}[1]{\renewcommand{\@supervisori}{#1}}
\newcommand{\supervisorii}[1]{\renewcommand{\@supervisorii}{#1}}
\newcommand{\supervisoriii}[1]{\renewcommand{\@supervisoriii}{#1}}
\newcommand{\supervisoriv}[1]{\renewcommand{\@supervisoriv}{#1}}
⟨/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.

```
⟨*ct⟩
\newcommand{\@programmet}{} % type
\newcommand{\@programmec}{} % class
\newcommand{\@programmecqr}{} % class for qr code
```

```
\newcommand{\@programmes}{} % class
\newcommand{\@programmeq}{} % qualifier
\newcommand{\programme}[3]{%
    \ifthenelse{\equal{#1}{BA}}%
    {\renewcommand{\@programmet}{Bachelor of Science in de }}{%
    \ifthenelse{\equal{#1}{MA}}%
    {\renewcommand{\@programmet}{Master of Science in de }}{%
    \ifthenelse{\equal{#1}{VP}}%
    {\renewcommand{\@programmet}{Voorbereidingsprogramma voor Master of Science in de }}{%
    \ifthenelse{\equal{#1}{SP}}%
    {\renewcommand{\@programmet}{Schakelprogramma voor Master of Science in de }}{%
    \ifthenelse{\equal{#1}{FREE}}%
    {}{
    \errmessage{Error in 1st arg of macro programme[3]: invalid
      programme type!}}}}}}%
    %
    \ifthenelse{\equal{#2}{IW}}%
    {\renewcommand{\@programmec}{industri\"ele wetenschappen}
     \renewcommand{\@programmecqr}{industrile wetenschappen}}{
    \ifthenelse{\equal{#2}{}}%
    {}{
    \errmessage{{Error in 2nd arg of macro programme[3]: invalid
      programme class! }}}}%
    %
    \ifthenelse{\equal{#3}{BK}}%
    {\renewcommand{\@programmeq}{bouwkunde}}{%
    \ifthenelse{\equal{#3}{CH}}%
    {\renewcommand{\@programmeq}{chemie}}{%
    \ifthenelse{\equal{#3}{BCH}}%
    {\renewcommand{\@programmeq}{biochemie}}{%
    \ifthenelse{\equal{#3}{EM}}%
    {\renewcommand{\@programmeq}{elektromechanica}}{%
    \ifthenelse{\equal{#3}{EI}}%
    {\renewcommand{\@programmeq}{elektronica-ICT}}{%
    \ifthenelse{\equal{#3}{}}%
    {}{%
    \ifthenelse{\equal{#1}{FREE}}
    {\renewcommand{\@programmeq}{#3}}{
    \errmessage{Error in 3rd arg to macro programme[3]: invalid
      programme qualifier}}}}}}}%
    %
    \ifthenelse{\equal{#2}{IW}\and\not\equal{#3}{}}
    {\renewcommand{\@programmes}{: }}{}
}
⟨/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.

```
⟨*ct⟩
\newcommand{\@coursecodei}{}
\newcommand{\@coursecodeii}{}
\newcommand{\@coursecodeiii}{}
\newcommand{\@coursecodeiv}{}
\newcommand{\@coursei}{}
\newcommand{\@courseii}{}
\newcommand{\@courseiii}{}
\newcommand{\@courseiv}{}
\newcommand{\@qrcoursei}{}
\newcommand{\@qrcourseii}{}
\newcommand{\@qrcourseiii}{}
\newcommand{\@qrcourseiv}{}
\newcommand{\course}[2]{
  \renewcommand{\@coursecodei}{#1}
  \renewcommand{\@coursei}{#2}
  \ifx\@qrcoursei\@emptymacro
  \renewcommand{\@qrcoursei}{#2}
  \fi
}
\newcommand{\qrcourse}[1]{
  \renewcommand{\@qrcoursei}{#1}
}
\newcommand{\coursei}[2]{
  \renewcommand{\@coursecodei}{#1}
  \renewcommand{\@coursei}{#2}
  \ifx\@qrcoursei\@emptymacro
  \renewcommand{\@qrcoursei}{#2}
  \fi
}
\newcommand{\qrcoursei}[1]{
  \renewcommand{\@qrcoursei}{#1}
}
\newcommand{\courseii}[2]{
  \renewcommand{\@coursecodeii}{#1}
  \renewcommand{\@courseii}{#2}
  \ifx\@qrcourseii\@emptymacro
  \renewcommand{\@qrcourseii}{#2}
  \fi
}
\newcommand{\qrcourseii}[1]{
  \renewcommand{\@qrcourseii}{#1}
}
\newcommand{\courseiii}[2]{
  \renewcommand{\@coursecodeiii}{#1}
  \renewcommand{\@courseiii}{#2}
  \ifx\@qrcourseiii\@emptymacro
  \renewcommand{\@qrcourseiii}{#2}
  \fi
}
```

```
\newcommand{\qrcourseiii}[1]{
  \renewcommand{\@qrcourseiii}{#1}
}
\newcommand{\courseiv}[2]{
  \renewcommand{\@coursecodeiv}{#1}
  \renewcommand{\@courseiv}{#2}
  \ifx\@qrcourseiv\@emptymacro
  \renewcommand{\@qrcourseiv}{#2}
  \fi
}
\newcommand{\qrcourseiv}[1]{
  \renewcommand{\@qrcourseiv}{#1}
}
⟨/ct⟩
```

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

```
⟨*mt⟩
\newcommand{\@diploma}{ERROR}
\newcommand{\diploma}[1]{
  \newcommand{\MoSIW}{Master of Science in de industri\"ele wetenschappen}
  \newcommand{\MoSTEW}{Master of Science in de toegepaste economische wetenschappen}
  \renewcommand{\@diploma}{
    \ifthenelse{\equal{#1}{MA-IW-BK}}
                          {\MoSIW: bouwkunde}{
    \ifthenelse{\equal{#1}{MA-IW-BCH}}
                          {\MoSIW: biochemie}{
    \ifthenelse{\equal{#1}{MA-IW-CH}}
                          {\MoSIW: chemie}{
    \ifthenelse{\equal{#1}{MA-IW-EI}}
                          {\MoSIW: elektronica-ICT}{
    \ifthenelse{\equal{#1}{MA-IW-EI-AE}}
                          {\MoSIW:\\elektronica-ICT, afstudeerrichting automotive engineering}{
    \ifthenelse{\equal{#1}{MA-IW-EI-ICT}}
                          {\MoSIW:\\elektronica-ICT, afstudeerrichting ICT}{
    \ifthenelse{\equal{#1}{MA-IW-EM-AE}}
                          {\MoSIW:\\elektromechanica, afstudeerrichting automotive engineering}
    \ifthenelse{\equal{#1}{MA-IW-EM-AU}}
                          {\MoSIW:\\elektromechanica, afstudeerrichting automatisering}{
    \ifthenelse{\equal{#1}{MA-IW-EM-EM}}
                          {\MoSIW:\\elektromechanica, afstudeerrichting elektromechanica}{
    \ifthenelse{\equal{#1}{MA-IW-EM-EN}}
                          {\MoSIW:\\elektromechanica, afstudeerrichting energie}{
    \ifthenelse{\equal{#1}{MA-TEW-HI}}
                          {\MoSTEW: handelsingenieur}{
    \ifthenelse{\equal{#1}{MA-TEW-HIBI}}
                          {\MoSTEW:\\handelsingenieur in de beleidsinformatica}{
    \ifthenelse{\equal{#1}{MA-TEW-EB}}
                          {\MoSTEW: economisch beleid}{
    \ifthenelse{\equal{#1}{MA-TEW-BK}}
```

```
                            {\MoSTEW: bedrijfskunde}
    {\errmessage{Error in argument to macro diploma: must be one of
        MA-IW-XXX with XXX one of BCH, CH, EI, EI-AE, EI-ICT, EM-AE,
        EM-AU, EM-EM, EM-EN, MA-TEW-YYY with YYY one of HI, HIBI, EB, BK! <<}}}}}}}}}}}}}}}}
}
}
⟨/mt⟩
```

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

```
⟨*mt⟩
\newcommand{\@defensedate}{ERROR}
\newcommand{\defensedate}[1]{\renewcommand{\@defensedate}{#1}}
⟨/mt⟩
```

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

```
⟨*mt⟩
\newcommand{\@defenselocation}{Antwerpen}
\newcommand{\defenselocation}[1]{\renewcommand{\@defenselocation}{#1}}
⟨/mt⟩
```

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

```
⟨*ct | mt⟩
\newcommand{\@academicyear}{XXX-YYYY}
\newcommand{\academicyear}[1]{\renewcommand{\@academicyear}{#1}}
⟨/ct | mt⟩
```

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

```
⟨*ct⟩
\newcommand{\@copyrightnotices}{}
\newcommand{\copyrightnotices}[1]{\renewcommand{\@copyrightnotices}{#1}}
⟨/ct⟩
```

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

```
⟨*le⟩
\newcommand{\@sender}{< Specify sender using
  \tbs{}sender\{name\}\{role\} >}
\newcommand{\@senderrole}{˜}
\newcommand{\sender}[2]{\renewcommand{\@sender}{#1}\renewcommand{\@senderrole}{#2}}
⟨/le⟩
```

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

```
⟨*le⟩
\newcommand{\@logo}{\logoname}
\newcommand{\logo}[1]{\renewcommand{\@unit}{#1}}
⟨/le⟩
```

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

```
⟨*le⟩
\newcommand{\@unit}{}
\newcommand{\unit}[1]{\renewcommand{\@unit}{#1}}
⟨/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.

```
⟨*le⟩
\newcommand{\@emailuser}{}
\newcommand{\@emaildomain}{}
\newcommand{\email}[2]{\renewcommand{\@emailuser}{#1}\renewcommand{\@emaildomain}{#2}}
⟨/le⟩
```

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

```
⟨*le⟩
\newcommand{\@phone}{}
\newcommand{\phone}[1]{\renewcommand{\@phone}{#1}}
⟨/le⟩
```

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

```
⟨*le⟩
\newcommand{\@fax}{}
\newcommand{\fax}[1]{\renewcommand{\@fax}{#1}}
⟨/le⟩
```

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

```
⟨*le⟩
\newcommand{\@mobile}{}
\newcommand{\mobile}[1]{\renewcommand{\@mobile}{#1}}
⟨/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).

```
⟨*le⟩
\newcommand{\@returnaddress}{<specify return-address using \tbs\{single-line-return-address\}>}
\renewcommand{\returnaddress}[1]{\renewcommand{\@returnaddress}{#1}}
⟨/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).

```
⟨*le⟩
\newcommand{\@to}{<Specify addressee using \tbs to\{name\}>}
\renewcommand{\to}[1]{\renewcommand{\@to}{#1}}
⟨/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).

```
⟨*le⟩
\newcommand{\@toorganization}{<Specify organization using
  \tbs toorganization\{\}>}
\newcommand{\toorganization}[1]{\renewcommand{\@toorganization}{#1}}
⟨/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).

```
⟨*le⟩
\newcommand{\@toaddress}{<Specify (multiline) destination address\\using \tbs toaddress\{\}>}
\newcommand{\toaddress}[1]{\renewcommand{\@toaddress}{#1}}
⟨/le⟩
```

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

```
⟨*le⟩
\newcommand{\@subject}{-}
\newcommand*{\subject}[1]{\renewcommand{\@subject}{#1}}
⟨/le⟩
```

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

```
⟨*le⟩
\renewcommand*{\opening}[1]{#1}
⟨/le⟩
```

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

```
⟨*le⟩
\newcommand{\@closing}{<specify a closing formula using \tbs closing\{\}>}
```

```
\renewcommand*{\closing}[1]{\renewcommand{\@closing}{#1}}
⟨/le⟩
```

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

```
⟨*le⟩
\newcommand{\@signature}{\vspace*{8ex}}
\renewcommand*{\signature}[1]{\renewcommand{\@signature}{#1}}
⟨/le⟩
```

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

```
⟨*le⟩
\newcommand{\@carboncopy}{}
\newcommand{\carboncopy}[1]{\renewcommand{\@carboncopy}{#1}}
⟨/le⟩
```

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

```
⟨*le⟩
\newcommand{\@enclosed}{}
\newcommand{\enclosed}[1]{\renewcommand{\@enclosed}{#1}}
⟨/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).

```
⟨*le⟩
\newcommand{\@address}{< Put your multi-line address here\\using
  \tbs address\{\} >}
\renewcommand{\address}[1]{\renewcommand{\@address}{#1}}
⟨/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:

```
⟨*ct⟩
\if@twoside
\lhead[\thepage]{\slshape\rightmark}
\chead[]{}
\rhead[\slshape\leftmark]{\thepage}
\lfoot[\uaname{} -- \@facultyacronym]{\@courseversion}
\cfoot[]{}
\rfoot[]{\@title{}\@ifmtarg{\@subtitle}{}{ --- \@subtitle}}
\else
\lhead[]{\leftmark}
\chead[]{}
\rhead[]{\thepage}
\lfoot[]{\@courseversion}
\cfoot[]{UAntwerpen--\@facultyacronym}
\rfoot[]{\@title{}}
\fi
⟨/ct⟩
```

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

```
⟨*mt⟩
\if@twoside
  \lhead[\thepage]{\slshape\rightmark}
  \chead[]{}
  \rhead[\slshape\leftmark]{\thepage}
  \lfoot[\uaname{} -- \@facultyacronym]{}
  \cfoot[]{}
  \rfoot[]{\@title{}}
\else
  \lhead[]{\leftmark}
  \chead[]{}
  \rhead[]{\thepage}
  \lfoot[]{}
  \cfoot[]{UAntwerpen--\@facultyacronym}
  \rfoot[]{\@title{}}
\fi
⟨/mt⟩
```

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

```
⟨*le⟩
\lhead[]{}
\chead[]{}
\rhead[]{}
```

```
\lfoot[\small\textcolor{gray}{\@date}]{\textcolor{gray}{\@date}}
\cfoot[]{}
\rfoot[\small\textcolor{gray}{\pagename~\thepage~\orname~\pageref{lastpage}}]{\small\textcolor{
⟨/le⟩
```

Some common code remains:

```
⟨*ct | mt⟩
\setlength{\headheight}{13.7pt}
\renewcommand{\headrulewidth}{1pt}
\renewcommand{\footrulewidth}{1pt}
\pagenumbering{arabic}
⟨/ct | mt⟩
⟨*le⟩
\renewcommand{\headrulewidth}{0pt}
\renewcommand{\footrulewidth}{0pt}
⟨/le⟩
```

Remains to take care of filling

```
⟨*ct | mt | le⟩
\if@filled\else
  \raggedright
\fi
\raggedbottom
\onecolumn
⟨/ct | mt | le⟩
```

5.8 Copyright notice

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

```
⟨*ct⟩
\newcommand{\@crnotice}{
  This document has been typeset using \LaTeX{} and the
  \texttt{uantwerpencoursetext} class.\\
  \@copyrightnotices

  \@courseversion

  CONFIDENTIAL AND PROPRIETARY.

  \copyright{} \@versionyear{} University of Antwerp, All rights reserved.
}
⟨/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 an 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:

```
⟨*ct | mt⟩
\pgfmathsetmacro{\ua@Wh}{\paperwidth}
\pgfmathsetmacro{\ua@Xh}{0.2\paperheight}
\pgfmathsetmacro{\ua@Yh}{0.125\paperheight}
\pgfmathsetmacro{\ua@XMYh}{\ua@Xh-\ua@Yh}
\pgfmathsetmacro{\ua@Rh}{0.5*\ua@Wh/\ua@XMYh*\ua@Wh+0.5*\ua@XMYh}
\pgfmathsetmacro{\ua@Qh}{\ua@Rh-\ua@Xh+\paperheight}
⟨/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:

```
⟨*ct | mt⟩
\pgfmathsetmacro{\ua@Wba}{0.4*\paperwidth}
\pgfmathsetmacro{\ua@Sba}{0.125*\paperheight}
\pgfmathsetmacro{\ua@XMYba}{0.02\paperheight}
\pgfmathsetmacro{\ua@Rba}{0.5*\ua@Wba/\ua@XMYba*\ua@Wba+0.5*\ua@XMYba}
\pgfmathsetmacro{\ua@Qba}{\ua@Rba+\ua@Sba}
⟨/ct | mt⟩
```

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

```
⟨*ct | mt⟩
\pgfmathsetmacro{\ua@Wbb}{0.65*\paperwidth}
\pgfmathsetmacro{\ua@Sbb}{0.14*\paperheight}
\pgfmathsetmacro{\ua@XMYbb}{0.06\paperheight}
\pgfmathsetmacro{\ua@Rbb}{0.5*\ua@Wbb/\ua@XMYbb*\ua@Wbb+0.5*\ua@XMYbb}
\pgfmathsetmacro{\ua@Qbb}{\ua@Rbb+\ua@Sbb}
⟨/ct | mt⟩
```

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

```
⟨*ct | mt⟩
\pgfmathsetmacro{\ua@ll}{0.15*\paperwidth}
\pgfmathsetmacro{\ua@l}{0.4*\paperwidth}
\pgfmathsetmacro{\ua@d}{0.1in}
\pgfmathsetmacro{\ua@rr}{0.85*\paperwidth}
⟨/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.

```
⟨*ct⟩
\newcommand\sprtr{ / }
\newcommand\myqrdata{
I: Universiteit Antwerpen\string\n
F: \@faculty\string\n
P: \@programmet\ \@programmecqr\ \@programmeq\string\n
C: \@coursecodei\ \@qrcoursei
\sprtr
\@coursecodeii\ \@qrcourseii
\sprtr
\@coursecodeiii\ \@qrcourseiii
\sprtr
\@coursecodeiv\ \@qrcourseiv
\string\n
Y: \@academicyear\string\n
T: \@qrtitle\string\n
S: \@qrsubtitle\string\n
A: \@qrauthor\string\n
L: \@qrlectureri
\sprtr
\@qrlecturerii
\sprtr
\@qrlectureriii
\sprtr
\@qrlectureriv}
\newsavebox{\myqrcode}
⟨/ct⟩
```

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

```
⟨*ct⟩
\renewcommand\maketitle{%
  \pagestyle{empty}
  \if@qr
  \savebox{\myqrcode}[2.7in][t]{
    \begin{pspicture}(2.7in,2.7in)
      \psbarcode{\myqrdata}{width=1.0 height=1.0 encoding=byte eclevel=M}{qrcode}
    \end{pspicture}
  }
  \fi
  \begin{titlepage}
    \if@titlepagetableonly
    Dit is een cursustekst van Universiteit Antwerpen.\\
    Het titelblad dient opgemaakt te worden met de volgende gegevens:
    \begin{center}
      \begin{tabular}{|l|l|}
        \hline
        \bfseries I & Universiteit Antwerpen \\\hline
        \bfseries F & \@faculty \\\hline
        \bfseries P & \parbox[t]{14cm}{\@programmet
```

```
        \@programmec\@programmes \@programmeq}  \\\hline
      \bfseries C & \parbox[t]{14cm}{
        \texttt{\@coursecodei} \@coursei\\
        \texttt{\@coursecodeii} \@courseii\\
        \texttt{\@coursecodeiii} \@courseiii\\
        \texttt{\@coursecodeiv} \@courseiv} \\\hline
      \bfseries Y & \@academicyear \\\hline
      \bfseries T & \parbox[t]{14cm}{\@title}\\\hline
      \bfseries S & \parbox[t]{14cm}{\@subtitle}\\\hline
      \bfseries A & \parbox[t]{14cm}{\@author}\\\hline
      \bfseries L & \parbox[t]{14cm}{\@lectureri\\
                                    \@lecturerii\\
                                    \@lectureriii\\
                                    \@lectureriv} \\\hline
    \end{tabular}
  \end{center}
  ~\\
  Waarbij: I = instelleng, F = faculteit, P = programma, C =
  cursusmodule, T = titel, S = subtitel, A = auteur(s), L =
  lesgever(s)\\~\\
  \if@qr
  Deze informatie is ook gecodeerd in de onderstaande QR-code.\\
  \vspace*{1cm}
  \usebox{\myqrcode}
  \fi
  \else
  \begin{tikzpicture}[remember picture,overlay]
    \node at (current page.center) {
      \begin{tikzpicture}[inner sep=0pt]
        \clip (0,0) rectangle(\paperwidth,\paperheight);
        \if@titlepagenoartwork\else
        \filldraw [uacorpbord] (0.55\paperwidth,\ua@Qba pt) circle (\ua@Rba pt);
        \filldraw [white] (0.35\paperwidth,\ua@Qbb pt) circle (\ua@Rbb pt);
        \filldraw [uacorpblue] (0,\ua@Qh pt) circle (\ua@Rh pt);
        \path
        (0.95\paperwidth,0.1\paperheight)
        node [anchor=north east] {
          \includegraphics[width=0.25\paperwidth]{\logoname}};
        \fi
        \path
        (\ua@l pt -\ua@d pt,0.77\paperheight)
        node [anchor=north east, text width=0.35\paperwidth] {
          \begin{flushright}
            \uppercase\expandafter{\uaname}\\~\\
            \academicyearname{} \@academicyear
          \end{flushright}}
        (\ua@l pt +\ua@d pt,0.65\paperheight)
        node [anchor = north west, text width = 0.55\paperwidth] {
          {\large \@faculty{}}\\[0.05\paperheight]
          {\huge \bf \@title{}}\\[2ex]
```

```
            {\Large \bf \@subtitle{}}\\[3ex]
            {\Large \bf \@author{}}}
          (\ua@l pt +\ua@d pt,0.45\paperheight)
          node [anchor = north west, text width = 0.55\paperwidth] {
            \@lectureri~\\
            \@lecturerii~\\
            \@lectureriii~\\
            \@lectureriv}
          (\ua@l pt +\ua@d pt,0.35\paperheight)
          node [anchor = north west, text width = 0.55\paperwidth] {
            {\bf \@programmet \\ \@programmec\@programmes  \@programmeq}}
          (\ua@l pt +\ua@d pt,0.30\paperheight)
          node [anchor = north west, text width = 0.55\paperwidth] {
            \texttt{\@publishercode}~\\~\\
            \texttt{\@coursecodei{}} \@coursei~\\
            \texttt{\@coursecodeii{}} \@courseii~\\
            \texttt{\@coursecodeiii{}} \@courseiii~\\
            \texttt{\@coursecodeiv{}} \@courseiv}
          (\ua@l pt - 2\ua@d pt, 0.368\paperheight)
          node [anchor = north east, text width = 0.35\paperwidth] {
            {\normalsize\begin{flushright}
                \@publisher{}
              \end{flushright}}};
        \end{tikzpicture}
      };
    \end{tikzpicture}
    \fi
  \end{titlepage}%
  \clearpage
  \vspace*{\stretch{1}}
  \@crnotice
  \clearpage
  \setcounter{footnote}{0}%
  \global\let\thanks\relax
  \global\let\maketitle\relax
  \global\let\@thanks\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
  \pagestyle{fancy}
  \thispagestyle{empty}
}
⟨/ct⟩
```

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

```
⟨*ct⟩
\newcommand\makefinalpage{
```

```
  \if@titlepagetableonly
  \else
  \cleardoublepage
  \thispagestyle{empty}
  ~% intentionally blank page
  \clearpage
  \thispagestyle{empty}
  \begin{tikzpicture}[remember picture,overlay]
    \node at (current page.center) {
      \begin{tikzpicture}[inner sep=0pt]
        \clip (0,0) rectangle(\paperwidth,\paperheight);
        \if@titlepagenoartwork\else
        \filldraw [uacorpblue] (\paperwidth,\ua@Qh pt) circle (\ua@Rh pt);
        \fi
        \path
        (0.1\paperwidth,0.1\paperheight)
        node [anchor = south west, text width = 0.6\paperwidth] {
          CONFIDENTIAL AND PROPRIETARY\\~\\

          \copyright{} \@versionyear{} \uaname,
          All rights reserved.}
        (0.9\paperwidth,0.1\paperwidth)
        node [anchor = south east] {
          \usebox{\myqrcode}
        };
      \end{tikzpicture}
    };
  \end{tikzpicture}
  \fi
}
⟨/ct⟩
```

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

```
⟨*mt⟩
\renewcommand\maketitle{%
  \pagestyle{empty}
  \begin{titlepage}
    \begin{tikzpicture}[remember picture,overlay]
      \node at (current page.center) {
        \begin{tikzpicture}[inner sep=0pt]
          \clip (0,0) rectangle(\paperwidth,\paperheight);
          \if@titlepagenoartwork\else
          \filldraw [lightgray] (0.55\paperwidth,\ua@Qba pt) circle (\ua@Rba pt);
          \filldraw [white] (0.35\paperwidth,\ua@Qbb pt) circle (\ua@Rbb pt);
          \filldraw [lightgray] (0,\ua@Qh pt) circle (\ua@Rh pt);
          \path
          (0.95\paperwidth,0.1\paperheight)
          node [anchor=north east] {
            \includegraphics[width=0.25\paperwidth]{\logoname}};
```

```
          \fi
          \path
          (\ua@ll pt,0.77\paperheight)
          node [anchor=north west, text width=0.7\paperwidth] {
            \uppercase\expandafter{\uaname}\\~\\
            \academicyearname{} \@academicyear\\~\\
            {\large \@faculty{}}\\~\\
            \masterthesisname{}\\[0.05\paperheight]
            {\Large \bf \@title{}}}
          (\ua@ll pt,0.55\paperheight)
          node [anchor = north west, text width = 0.7\paperwidth] {
            {\large \bf \@author{}}\\~\\~\\
            \begin{tabular}{@{}p{2.7cm}p{10.8cm}}
              \textbf{\promotorsname{}:}
              & \@supervisori \\
              & \@supervisorii \\
              & \@supervisoriii \\
              & \@supervisoriv
            \end{tabular}
          }
          (\ua@ll pt,0.3\paperheight) node [anchor=north west, text width = 0.7\paperwidth]{%
            \thesisname\\
            \@diploma\\
            \@defenselocation, \@defensedate
          };
        \end{tikzpicture}
      };
    \end{tikzpicture}
  \end{titlepage}%
  \clearpage
  \setcounter{footnote}{0}%
  \global\let\thanks\relax
  \global\let\maketitle\relax
  \global\let\@thanks\@empty
  \global\let\title\relax
  \global\let\author\relax
  \global\let\date\relax
  \global\let\and\relax
  \pagestyle{fancy}
  \thispagestyle{empty}
}
⟨/mt⟩
```

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

```
⟨*mt⟩
\newcommand\makefinalpage{
  \cleardoublepage
  \thispagestyle{empty}
```

```
  \begin{tikzpicture}[remember picture,overlay]
    \node at (current page.center) {
      \begin{tikzpicture}[inner sep=0pt]
        \clip (0,0) rectangle(\paperwidth,\paperheight);
        \if@titlepagenoartwork\else
        \filldraw [lightgray] (\paperwidth,\ua@Qh pt) circle (\ua@Rh pt);
        \fi
      \end{tikzpicture}
    };
  \end{tikzpicture}
}
⟨/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.

```
⟨*le⟩
\newcommand\maketitle{%
  \pagestyle{fancy}
  \thispagestyle{empty}
  \begin{tikzpicture}[overlay,remember picture]
    \path (current page.north west) +(1.8cm,-1.2cm)
    node[anchor=north west] {
      \includegraphics[height=1.1cm]{\@logo}
    };
    \draw (current page.north west)
    +(1cm,-98mm) -- +(1.5cm,-98mm);
    % 90 x 45
    % pos: 20mm van kant, 15mm van onderkant
    \path (current page.north east) +(-100mm,-65mm)
    node[anchor=west,text width=80mm,align=left] {
      \scriptsize\textcolor{gray}{\uline{\@returnaddress}}\\*
      \normalsize\@to\\*
      \@toorganization\\*
      \@toaddress
    };
  \end{tikzpicture}
  \begin{tikzpicture}[overlay,remember picture]
    \path (current page.south west) +(0,-0.7cm)
```

```
    node[anchor=south west,inner sep=0pt, outer sep=0pt]
    {\includegraphics{\footername}};
  \end{tikzpicture}
  ~\\[3ex]
  \textcolor{uacorpblue}{\bf \@sender}
  \ifx\@senderrole\@emptymacro\\[1.75ex]\else \\*\@senderrole\\[1.75ex]\fi
  \@faculty
  \ifx\@unit\@emptymacro\else\\* \@unit\fi~\\[1.75ex]
  \@address\\[1.75ex]
  \ifx\@email\@emptymacro\else E \@emailuser\tat{}\@emaildomain\\\fi
  \ifx\@phone\@emptymacro\else T \@phone\\\fi
  \ifx\@fax\@emptymacro\else F \@fax\\\fi
  \ifx\@mobile\@emptymacro\else M \@mobile\\\fi
  ~\\[4ex]
  \begin{tikzpicture}[anchor=north west,align=left,outer sep=0,inner sep=0]
    \path
    (0,0) node { \scriptsize \strut
      \textcolor{gray}{\uppercase\expandafter{\datename} } }
    (4cm,0) node { \scriptsize \strut
      \textcolor{gray}{\uppercase\expandafter{\subjectname} } }
    (0,-2.5ex) node { \strut \@date }
    (4cm,-2.5ex) node[align=left] { \strut \@subject };
  \end{tikzpicture}~\\[4ex]
}
⟨/le⟩
```

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

```
⟨*le⟩
\AtEndDocument{
  \@closing\\*[3ex]\@signature~\\[3ex]
  \@sender
  \ifx\@senderrole\@emptymacro\\[8ex]\else\\*\@senderrole\\[8ex]\fi
  \setlength{\parskip}{0em}
  \ifx\@carboncopy\@emptymacro\else CC: \@carboncopy\\[4ex]\fi
  \ifx\@enclosed\@emptymacro\else ENCL: \@enclosed\fi
  \label{lastpage}
}
⟨/le⟩
```

5.11 References

```
⟨*ct | mt⟩
\IfFileExists{varioref.sty}{\RequirePackage{varioref}}{}
⟨/ct | mt⟩
%
⟨*ct⟩
\IfFileExists{hyperref.sty}{
    \RequirePackage{hyperref}
```

```
    \hypersetup{
      backref=true,
      breaklinks=true,
      colorlinks=true,
      citecolor=black,
      filecolor=black,
      hyperindex=true,
      linkcolor=black,
      pageanchor=true,
      pagebackref=true,
      pagecolor=black,
      pdfpagemode=UseOutlines,
      urlcolor=black
    }
    \AtBeginDocument{
      \hypersetup{
        pdftitle={\@title},
        pdfsubject={\@subtitle},
        pdfauthor={\@author}
      }
    }
}{}
⟨/ct⟩
%
%
⟨*mt⟩
\IfFileExists{hyperref.sty}{
    \RequirePackage{hyperref}
    \hypersetup{
      backref=true,
      breaklinks=true,
      colorlinks=true,
      citecolor=black,
      filecolor=black,
      hyperindex=true,
      linkcolor=black,
      pageanchor=true,
      pagebackref=true,
      pagecolor=black,
      pdfpagemode=UseOutlines,
      urlcolor=black
    }
    \AtBeginDocument{
      \hypersetup{
        pdftitle={\@title},
        pdfsubject={Master's Thesis},
        pdfauthor={\@author}
      }
    }
}{}
```

1019 ⟨/mt⟩

Change History

v1.0
- General: Consolidated uacoursetext class and uamasterthesis class 1
- Added option qr 20
- Added option titlepagenoartwork 20
- Added option titlepagetableonly 20

v1.1
- `\diploma`: Fixed typo on programme's name (e-umlaut) 31
- General: Small bugfixes and 'filled' option 1
- Added option user documentation 5
- Made raggedright conditional on option 'filled', because it can't be undone 37

v1.2
- General: Added lmodern package and increased headheight to 13.7pt to please Fancyhdr 1
- Added lmodern package to please MikTeX 21
- Increased headheight to please Fancyhdr 37

v1.3
- `\makefinalpage`: Changed eso-pic for tikz 42, 44
- `\maketitle`: Changed eso-pic for tikz 43
- General: Minor bugfixes, abondonment of a few packages, font freedom 1
- Abandoned use of cmbright - no more font dictatorship for theses and courses 21
- Added inclusion of background package 22
- Changed eso-pic for tikz and background 39

v1.4
- General: Implemented uantwerpenletter class 1
- Implemented letter class 20

v1.5
- `\maketitle`: Implemented new footer 45
- General: Replaced bottom arcs in footer of letter by official PDF versions 1
- Removed documentation 45

v1.6
- `\diploma`: Added diploma codes . 31
- General: Added diploma codes for Faculty of Applied Economics . 1
- Added diploma code documentation 8

v1.7
- `\maketitle`: Embedded babel translations of keywords into title page 40, 43
- General: Added babel translations of elements of master's thesis title page 1
- Added babel tags of elements of master's thesis title page 23

v1.8
- `\makefinalpage`: Inserted blank one but last page 42
- `\maketitle`: Allowed for empty senderrole 45
- `\signature`: Added signature . . . 35
- General: Corrected minor typographic mistakes, added signature and solved problems with shell escape 1
- Added missing packages ifmtarg and shellesc 21
- Allowed for empty senderrole . 46

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

\" 108, 331, 426
\’ 122, 129, 132, 142, 143, 145
\@academicyear 472, 473, 669, 708, 746, 850
\@address . 551, 553, 934
\@author . . 212, 711, 753, 856, 987, 1015
\@carboncopy 543, 544, 957
\@closing . 535, 536, 953
\@copyrightnotices 476, 477, 618
\@copyrighttrue 3
\@coursecodei 360, 373, 383, 661, 704, 766
\@coursecodeii 361, 393, 663, 705, 767
\@coursecodeiii 362, 403, 665, 706, 768
\@coursecodeiv 363, 413, 667, 707, 769
\@coursei 364, 374, 384, 704, 766
\@courseii 365, 394, 705, 767
\@courseiii 366, 404, 706, 768
\@courseiv 367, 414, 707, 769
\@courseversion 222, 223, 560, 567, 620
\@crnotice . . . 614, 782
\@date 593, 946
\@defensedate 464, 465, 868
\@defenselocation 468, 469, 868
\@diploma . 424, 428, 867
\@email 935
\@emaildomain 495, 496, 935
\@emailuser 494, 496, 935
\@empty 787, 878
\@emptymacro 49, 188, 201, 213, 255, 264, 273, 282, 291, 375, 385, 395, 405, 415, 931, 933, 935–938, 955, 957, 958
\@enclosed 547, 548, 958
\@faculty . 154, 157, 159, 161, 163, 165, 167, 169, 171, 173, 175, 177, 179, 659, 700, 750, 851, 932
\@facultyacronym 153, 156, 560, 568, 577, 585
\@fax 503, 504, 937
\@filledtrue 15
\@ifmtarg 562
\@ifpackageloaded . 92
\@lectureri . . . 245, 254, 263, 712, 756
\@lecturerii 246, 272, 713, 757
\@lectureriii 247, 281, 714, 758
\@lectureriv 248, 290, 715, 759
\@logo 486, 910
\@mobile . . 507, 508, 938
\@phone . . . 499, 500, 936
\@programmec 312, 331, 702, 762
\@programmecqr 313, 332, 660
\@programmeq 315, 339, 341, 343, 345, 347, 351, 660, 702, 762
\@programmes 314, 356, 702, 762
\@programmet . . 311, 318, 320, 322, 324, 660, 701, 762
\@publisher 230, 238, 773
\@publishercode 241, 242, 765
\@qrauthor . . . 210, 213, 214, 218, 672
\@qrcoursei . . . 368, 375, 376, 380, 385, 386, 390, 661
\@qrcourseii . . 369, 395, 396, 400, 663
\@qrcourseiii . 370, 405, 406, 410, 665
\@qrcourseiv . . 371, 415, 416, 420, 667
\@qrlectureri . 249, 255, 256, 260, 264, 265, 269, 673
\@qrlecturerii 250, 273, 274, 278, 675
\@qrlecturereiii 251, 282, 283, 287, 677
\@qrlectureriv 252, 291, 292, 296, 679
\@qrsubtitle . . 198, 201, 202, 206, 671
\@qrtitle 185, 188, 189, 193, 670
\@qrtrue 5
\@returnaddress 511, 512, 918
\@sender 480, 483, 930, 954
\@senderrole 482, 483, 931, 955
\@signature 539, 540, 953
\@subject . 528, 529, 947

\@subtitle 197, 200, 562, 710, 752, 986
\@supervisori 300, 304, 305, 859
\@supervisorii 301, 306, 860
\@supervisoriii 302, 307, 861
\@supervisoriv 303, 308, 862
\@thanks 787, 878
\@title 187, 562, 569, 579, 586, 709, 751, 853, 985, 1013
\@titlepagenoartworktrue 9
\@titlepagetableonlytrue 11
\@to 515, 516, 919
\@toaddress 524, 525, 921
\@toorganization 519, 521, 920
\@unit 487, 490, 491, 933
\@versionyear 226, 227, 624, 817
\\ 230–236, 438, 440, 442, 444, 446, 448, 452, 524, 551, 617, 694, 699, 700, 702, 704–715, 718, 721, 723, 745, 750–752, 756–758, 762, 765–768, 815, 849–852, 856, 859–861, 866, 867, 918–920, 929, 931, 933–939, 948, 953, 955, 957
\{ 154, 481, 511, 515, 520, 524, 535, 552
\} 154, 481, 511, 515, 520, 524, 535, 552
\‘ 130, 132
\˜ 142
\␣ 660, 661, 663, 665, 667

A

\academicyear 471
\academicyearname . . 87, 101, 115, 129, 142, 746, 850
\address 550
\addto . 93, 107, 121, 134
\addtolength 31
\and 355, 791, 882
\AtBeginDocument 91, 983, 1011
\AtEndDocument 952
\author . . . 209, 789, 880

B

\baselineskip 31
\begin 687, 692, 696, 697, 728, 730, 744, 772, 805, 807, 832, 833, 835, 857, 891, 893, 907, 924, 940
\bf 751–753, 762, 853, 856, 930
\bfseries . 699–701, 703, 708–712

C

\captionsdutch 93
\captionsfrench . . . 121
\captionsgerman . . . 107
\captionsspanish . . 134
\carboncopy 542
\cfoot 561, 568, 578, 585, 594
\chead 558, 565, 575, 582, 591
\cleardoublepage 800, 889
\clearpage 780, 783, 803, 874
\clip . 731, 808, 836, 894
\closing 534
\copyright . . . 624, 817
\copyrightnotices . 475
\course 359
\coursei 382
\courseii 392
\courseiii 402
\courseiv 412
\courseversion 221

D

\date 790, 881
\datename . . 85, 100, 114, 128, 141, 943
\DeclareOption 3, 5, 9, 11, 15
\defensedate 463
\defenselocation . . 467
\definecolor 71–77
\diploma 423
\domainname 84, 98, 112, 126, 139
\draw 912

E

\else 563, 580, 608, 727, 732, 799, 809, 837, 895, 931, 933, 935–938, 955, 957, 958
\email 493
\enclosed 546
\end . . 689, 716, 717, 747, 774, 775, 777, 779, 823, 825, 863, 870, 872, 873, 898, 900, 923, 928, 948
\equal 157, 159, 161, 163, 165, 167, 169, 171, 173, 175, 177, 179, 317, 319, 321, 323, 325, 330, 333, 338, 340, 342, 344, 346, 348, 350, 355, 429, 431, 433, 435, 437, 439, 441, 443, 445, 447, 449, 451, 453, 455
\errmessage . . . 181, 327, 335, 352, 457
\ExecuteOptions . 18, 25
\expandafter 745, 849, 943, 945

F

\facultyacronym . . . 152
\fax 502
\fi 59, 65, 190, 203, 215, 257, 266, 275, 284, 293, 377, 387, 397, 407, 417, 570, 587, 610, 691, 726, 740, 778, 811, 826, 845, 897, 931, 933, 935–938, 955, 957, 958
\filldraw . 733–735, 810, 838–840, 896
\footername . . 82, 96, 110, 124, 137, 927
\footrulewidth 600, 605

G

\global 785–791, 876–882

H

\headheight 598
\headrulewidth 599, 604
\hline 698–700, 702, 707–711, 715
\huge 751
\hypersetup 969, 984, 997, 1012

I

\i 143
\if@copyright 2, 57
\if@filled 14, 608
\if@qr . . . 4, 62, 685, 722
\if@titlepagenoartwork 8, 732, 809, 837, 895
\if@titlepagetableonly 10, 693, 798
\if@twoside . . . 556, 573
\IfFileExists 963, 967, 995
\ifthenelse . . . 157, 159, 161, 163, 165, 167, 169, 171, 173, 175, 177, 179, 317, 319, 321, 323, 325, 330, 333, 338, 340, 342, 344, 346, 348, 350, 355, 429, 431, 433, 435, 437, 439, 441, 443, 445, 447, 449, 451, 453, 455
\ifx 188, 201, 213, 255, 264, 273, 282, 291, 375, 385, 395, 405, 415, 931, 933, 935–938, 955, 957, 958
\includegraphics . . . 739, 844, 910, 927

L

\label 959
\Large 752, 753, 853
\large 750, 851, 856
\LaTeX 616
\lecturer 244
\lectureri 262
\lecturerii 271
\lectureriii 280
\lectureriv 289
\leftmark 559, 564, 576, 581
\let . . 785–791, 876–882
\lfoot 560, 567, 577, 584, 593
\lhead 557, 564, 574, 581, 590
\LoadClassWithOptions 20, 27
\logo 485
\logoname 81, 95, 109, 123, 136, 486, 739, 844

M

\makeatletter 21
\makeatother 21
\makefinalpage 796, 887
\maketitle 682, 829, 903
\masterthesisname 88, 102, 116, 130, 143, 852
\mobile 506
\MoSIW 426, 430, 432, 434, 436, 438, 440, 442, 444, 446, 448
\MoSTEW 427, 450, 452, 454, 456
\myqrcode 680, 686, 725, 821
\myqrdata 657, 688

N

\n . . . 658–660, 668–672
\newif . . . 2, 4, 8, 10, 14
\newsavebox 680
\node . 729, 806, 834, 892
\normalsize . . . 772, 919
\not 355

O

\onecolumn 612
\opening 531
\orname 83, 97, 111, 125, 138, 595

P

\pagename 595
\pagenumbering 601
\pageref 595
\pagestyle . . . 684, 792, 831, 883, 905
\paperheight 629, 630, 633, 637, 638, 644, 645, 731, 737, 742, 748, 750, 754, 760, 763, 770, 808, 813, 836, 842, 847, 852, 854, 865, 894
\paperwidth . . . 628, 636, 643, 650, 651, 653, 731, 733, 734, 737, 739, 743, 749, 755, 761, 764, 771, 808, 810,

813, 814, 819, 836, 838, 839, 842, 844, 848, 855, 865, 894, 896
\parbox 701, 703, 709–712
\parindent 30
\parskip 31, 956
\path 736, 741, 812, 841, 846, 908, 916, 925, 941
\pgfmathsetmacro 628–633, 636–640, 643–647, 650–653
\phone 498
\ProcessOptions . 19, 26
\programme 310
\promotorsname 89, 103, 117, 131, 144, 858
\psbarcode 688
\publisher 229
\publishercode 240

Q

\qrauthor 217
\qrcourse 379
\qrcoursei 389
\qrcourseii 399
\qrcourseiii 409
\qrcourseiv 419
\qrlecturer 259
\qrlectureri 268
\qrlecturerii 277
\qrlectureriii 286
\qrlectureriv 295
\qrsubtitle 205
\qrtitle 192

R

\raggedbottom 611
\raggedright 609
\relax 785, 786, 788–791, 876, 877, 879–882
\renewcommand 94–104, 108–118, 122–132, 135–145, 156, 157, 159, 161, 163, 165, 167, 169, 171, 173, 175, 177, 179, 186, 187, 189, 193, 200, 202, 206, 211, 212, 214, 218, 223, 227, 238, 242, 254, 256, 260, 263, 265, 269, 272, 274, 278, 281, 283, 287, 290, 292, 296, 304–308, 318, 320, 322, 324, 331, 332, 339, 341, 343, 345, 347, 351, 356, 373, 374, 376, 380, 383, 384, 386, 390, 393, 394, 396, 400, 403, 404, 406, 410, 413, 414, 416, 420, 428, 465, 469, 473, 477, 483, 487, 491, 496, 500, 504, 508, 512, 516, 521, 525, 529, 532, 536, 540, 544, 548, 553, 599, 600, 604, 605, 683, 830
\RequirePackage 35, 38–40, 46–48, 52–54, 58, 63, 64, 68, 963, 968, 996
\returnaddress 510
\rfoot 562, 569, 579, 586, 595
\rhead 559, 566, 576, 583, 592
\rightmark . . . 557, 574

S

\savebox 686
\scriptsize 918, 942, 944
\sender 479
\setcounter 32, 784, 875
\setlength 30, 598, 956
\signature 538
\slshape 557, 559, 574, 576
\small 593, 595
\sprtr 656, 662, 664, 666, 674, 676, 678
\stretch 781
\string 658–660, 668–672
\strut 942, 944, 946, 947
\subject 527
\subjectname . 86, 99, 113, 127, 140, 945
\subtitle 196
\supervisor 299
\supervisori 305
\supervisorii 306
\supervisoriii 307
\supervisoriv 308

T

\tat 21, 935
\tbs 22, 154, 481, 511, 515, 520, 524, 535, 552
\textbackslash 22
\textbf 858
\textcolor 593, 595, 918, 930, 943, 945
\texttt 617, 704–707, 765–769
\thanks 785, 876
\thepage 557, 559, 566, 574, 576, 583, 595
\thesisname . 90, 104, 118, 132, 145, 866
\thispagestyle 793, 801, 804, 884, 890, 906
\title 184, 788, 879
\to 514
\toaddress 523
\toorganization . . . 518

U

\ua@d . 652, 742, 748, 754, 760, 763, 770
\ua@l . 651, 742, 748, 754, 760, 763, 770
\ua@ll 650, 847, 854, 865

\ua@Qba . . . 640, 733, 838
\ua@Qbb . . . 647, 734, 839
\ua@Qh 633, 735, 810, 840, 896
\ua@Rba 639, 640, 733, 838
\ua@Rbb 646, 647, 734, 839
\ua@Rh 632, 633, 735, 810, 840, 896
\ua@rr 653
\ua@Sba 637, 640
\ua@Sbb 644, 647
\ua@Wba 636, 639
\ua@Wbb 643, 646
\ua@Wh 628, 632
\ua@Xh 629, 631, 633
\ua@XMYba 638, 639
\ua@XMYbb 645, 646
\ua@XMYh 631, 632
\ua@Yh 630, 631
\uaname 80, 94, 108, 122, 135, 230, 560, 577, 745, 817, 849
\uline 918
\unit 489
\uppercase 745, 849, 943, 945
\usebox 725, 821

V

\versionyear 225
\vspace . . . 539, 724, 781