

The ut-thesis class ^{*}

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Abstract

The `ut-thesis` document class and template implements the requirements of the University of Toronto School of Graduate Studies (SGS), as of Winter 2020.

Contents

1	Implementation	2
1.1	Initial Code	2
1.2	Option Declaration	2
1.3	Option Execution	3
1.4	Package Loading	4
1.5	Main Code	4
1.5.1	Parameters	4
1.5.2	Environments and Commands	4
1.5.3	Page Styles	6

^{*}v3.o.a [2020/09/01] CTAN repository: <https://ctan.org/pkg/ut-thesis>

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1 Implementation

1.1 Initial Code

Switch for testing draft mode (toggled by ‘draft’ option).

```
1 \newif\if@draft
2 \@draftfalse
```

Switch for testing current page style.

```
3 \newif\if@thesispagestyle
4 \@thesispagestyletrue
```

Save original definitions of footnote and marginal note macros and lengths, to be able to reset them below as needed (when changing between single-spaced and standard-spaced notes).

```
5 \let\@thesis@footnotetext\@footnotetext
6 \let\@thesis@mpfootnotetext\@mpfootnotetext
7 \let\@thesis@marginparreset\@marginparreset
8 \newlength{\@thesisfootnotesep}
9 \newlength{\@thesismarginparpush}
10 \AtBeginDocument
11   {\setlength\@thesisfootnotesep{\footnotesep}
12    \setlength\@thesismarginparpush{\marginparpush}}
```

Save original definition of \cleardoublepage.

```
13 \let\clearstandarddoublepage\cleardoublepage
```

The \singlespacing macro from ‘setspace’ includes some vertical space (to make it easier to change line spacing within the document). Unfortunately, this has undesirable side-effects within macros, so we define our own replacement here for use within the class.

```
14 \newcommand*\singlespacingnoskip{\setstretch{\setspace@singlepage}}
```

1.2 Option Declaration

‘draft’ option: change default document settings.

```
15 \DeclareOption{draft}{\@drafttrue
16   \newcommand*\tldRAFT{%
17     {\raisebox{3ex}[0pt][0pt]{\llap{\sffamily\scriptsize DRAFT\ \ }}}
18   \newcommand*\trDRAFT{%
19     {\raisebox{3ex}[0pt][0pt]{\rlap{\sffamily\scriptsize \ \ DRAFT}}}
20   \newcommand*\blDRAFT{%
21     {\raisebox{-3ex}[0pt][0pt]{\llap{\sffamily\scriptsize DRAFT\ \ }}}
22   \newcommand*\brDRAFT{%
23     {\raisebox{-3ex}[0pt][0pt]{\rlap{\sffamily\scriptsize \ \ DRAFT}}}
24   \ExecuteOptions{doublespaced}
25   \PassOptionsToClass{draft,twoside,openany}{report}}
```

Margin options.

```
26 \DeclareOption{narrowmargins}{\AtEndOfClass % 1 1/4" left, 3/4" others
27   {\geometry{margin=.75in,left=1.25in,headsep=.375in-\headheight,
28     footskip=.375in,marginparwidth=.5in,marginparsep=.125in}}}
```

```

29 \DeclareOption{normalmargins}{\AtEndOfClass % 1 1/4" left, 1" others
30   {\geometry{margin=1in,left=1.25in,headsep=.5in-\headheight,
31     footskip=.5in,marginparwidth=.75in,marginparsep=.125in}}}
32 \DeclareOption{widemargins}{\AtEndOfClass % 1 1/4" all around
33   {\geometry{margin=1.25in,headsep=.625in-\headheight,
34     footskip=.625in,marginparwidth=.75in,marginparsep=.25in}}}
35 \DeclareOption{extrawidemargins}{\AtEndOfClass % 1 1/2" all around
36   {\geometry{margin=1.5in,headsep=.75in-\headheight,
37     footskip=.75in,marginparwidth=1in,marginparsep=.25in}}}

```

Line Spacing options.

```

38 \DeclareOption{singlespaced}{\AtEndOfClass{\singlespacingnoskip}}
39 \DeclareOption{onehalfspaced}{\AtEndOfClass{\onehalfspacing}}
40 \DeclareOption{doublespaced}{\AtEndOfClass{\doublespacing}}

```

Line spacing for notes.

```

41 \DeclareOption{singlespacednotes}{\AtBeginDocument
42   {\setlength\footnotesep{\@thesisfootnotesep}
43     \setlength\marginparpush{\@thesismarginparpush}
44     \renewcommand{\@footnotetext}[1]%
45       {\@thesis@footnotetext{#1\singlespacingnoskip}}
46     \renewcommand{\@mpfootnotetext}[1]%
47       {\@thesis@mpfootnotetext{#1\singlespacingnoskip}}
48     \renewcommand*{\@marginparreset}%
49       {\@thesis@marginparreset\singlespacingnoskip}}}
50 \DeclareOption{standardspacednotes}{\AtBeginDocument
51   {\setlength\footnotesep{\baselineskip-\@thesisfootnotesep}
52     \setlength\marginparpush{\baselineskip-\@thesismarginparpush}
53     \let\@footnotetext\@thesis@footnotetext
54     \let\@mpfootnotetext\@thesis@mpfootnotetext
55     \let\@marginparreset\@thesis@marginparreset}}}

```

Page styles for cleared pages.

```

56 \DeclareOption{cleardoublepagestyleempty}
57   {\AtEndOfClass{\let\cleardoublepage\clearemptydoublepage}}
58 \DeclareOption{cleardoublepagestyleplain}
59   {\AtEndOfClass{\let\cleardoublepage\clearplainedoublepage}}
60 \DeclareOption{cleardoublepagestylestandard}
61   {\AtEndOfClass{\let\cleardoublepage\clearstandarddoublepage}}

```

All other options are passed to the base class directly.

```

62 \DeclareOption*{\PassOptionsToClass{\CurrentOption}{report}}

```

1.3 Option Execution

Default settings: standard options followed by ut-thesis options.

```

63 \ExecuteOptions{letterpaper,oneside,openright}
64 \ExecuteOptions{normalmargins,onehalfspaced,singlespacednotes}

```

Process options.

```

65 \ProcessOptions

```

1.4 Package Loading

Load base class using current setting for basic options.

```
66 \LoadClass{report}
```

To set/change page layout.

```
67 \RequirePackage{calc}
```

```
68 \RequirePackage{geometry}
```

To set/change line spacing.

```
69 \RequirePackage{setspace}
```

1.5 Main Code

1.5.1 Parameters

The following five commands set the respective field values so we can generate the title page and abstract page automatically.

```
70 \newcommand*{\degree}[1]%  
71   {\ifx\empty#1\empty\else\gdef\@degree{#1}\fi}  
72 \newcommand*{\department}[1]%  
73   {\ifx\empty#1\empty\else\gdef\@department{#1}\fi}  
74 \newcommand*{\gradyear}[1]%  
75   {\ifx\empty#1\empty\else\gdef\@gradyear{#1}\fi}  
76 \renewcommand*{\author}[1]%  
77   {\ifx\empty#1\empty\else\gdef\@author{#1}\fi}  
78 \renewcommand*{\title}[1]%  
79   {\ifx\empty#1\empty\else\gdef\@title{#1}\fi}
```

Default values for the required fields.

```
80 \degree{\emph{(degree)}}  
81 \department{\emph{(department)}}  
82 \gradyear{\emph{(year of graduation)}}  
83 \author{\emph{(author)}}  
84 \title{\emph{(title)}}
```

1.5.2 Environments and Commands

`\begin{preliminary}` sets the pagestyle and page numbering for the preliminary sections; `\end{preliminary}` resets the page numbering. The default page style is used outside of the preliminary block.

```
85 \newenvironment*{preliminary}%  
86   {\pagestyle{plain}\pagenumbering{roman}}%  
87   {\cleardoublepage\pagenumbering{arabic}}
```

Change `\maketitle` to follow SGS guidelines.

```
88 \renewcommand*{\maketitle}%  
89   {\begin{titlepage}  
90     \large\singlespacingnoskip  
91     \begin{center}  
92       \mbox{}
```

```

93      \vfill
94      \textsc{\@title}\\
95      \vfill
96      by \\
97      \vfill
98      {\@author}\\
99      \vfill
100     \vfill
101     A thesis submitted in conformity with the requirements\\
102     for the degree of {\@degree}\\
103     Graduate Department of {\@department}\\
104     University of Toronto\\
105     \vfill
106     {\copyright} Copyright {\@gradyear} by {\@author}\\
107     \vspace{.01\textheight}
108     \mbox{}
109   \end{center}
110   \setcounter{page}{1}
111   \end{titlepage}
112   \setcounter{page}{2}}

```

Change `\begin{abstract}...\end{abstract}` to follow SGS guidelines.

```

113 \renewenvironment*{abstract}%
114   {\begin{center}
115     \section*{Abstract}
116   \end{center}
117   \begin{center}
118     {\@title}\\[2ex]
119     {\@author}\\
120     {\@degree}\\
121     Graduate Department of {\@department}\\
122     University of Toronto\\
123     {\@gradyear}\\
124   \end{center}
125   \begin{group}
126     %% Adjust line spacing: if it was less than 2, increase it to 2;
127     %% otherwise, leave it as is.
128     \ifdim \baselinestretch pt < 1.6pt \doublespacing\fi}%
129   {\par\endgroup\newpage}

```

`\begin{dedication}...\end{dedication}` formats a dedication section (*not* on a separate page – just a paragraph formatted flush right).

```

130 \newenvironment*{dedication}%
131   {\begin{flushright}}%
132   {\end{flushright}}

```

`\begin{acknowledgements}...\end{acknowledgements}` formats an acknowledgements section (*not* on a separate page).

```

133 \newenvironment*{acknowledgements}%
134   {\begin{center}
135     \section*{Acknowledgements}
136   \end{center}

```

```

137 \begingroup\noindent}%
138 {\par\endgroup}

```

Redefine ‘thebibliography’ environment so that it generates headers in the same style as the rest of the document.

```

139 \let\@thesisthebibliography\thebibliography
140 \renewcommand*{\thebibliography}[1]{\@thesisthebibliography{#1}
141 \if@thesispagestyle\@mkboth{\textsc{\bibname}}{\textsc{\bibname}}\fi}

```

Variations of `\cleardoublepage` that explicitly set the pagestyle of any inserted blank page.

```

142 \newcommand*{\clearemptydoublepage}%
143 {{\pagestyle{empty}\clearstandarddoublepage}}
144 \newcommand*{\clearplainedoublepage}%
145 {{\pagestyle{plain}\clearstandarddoublepage}}
146 \newcommand*{\clearthesisdoublespage}%
147 {{\pagestyle{thesis}\clearstandarddoublepage}}

```

Single-spaced quotes and quotations.

```

148 \newenvironment*{\longquote}%
149 {\begin{quote}\singlespacingnoskip}{\end{quote}}
150 \newenvironment*{\longquotation}%
151 {\begin{quotation}\singlespacingnoskip}{\end{quotation}}

```

1.5.3 Page Styles

Redefine all four standard page styles (empty, plain, headings, myheadings), based on the definitions in ‘report’, so that they conform to the SGS guidelines (and include draft information if applicable). Then, define a new pagestyle ‘thesis’.

TODO: Get rid of copy-pasted definitions for pagestyles?

Pagestyle ‘empty’.

```

152 \renewcommand*{\ps@empty}%
153 {\@thesispagestylefalse
154 \let\@mkboth\@gobbletwo
155 \def\@oddfoot{\if@draft\blDRAFT\hfil
156 {\slshape\small\today}\hfil\brDRAFT\fi}%
157 \let\@evenfoot\@oddfoot
158 \def\@oddhead{\if@draft\tlDRAFT\hfil
159 {\slshape\small\today}\hfil\trDRAFT\fi}%
160 \let\@evenhead\@oddhead}

```

Pagestyle ‘plain’.

```

161 \renewcommand*{\ps@plain}%
162 {\@thesispagestylefalse
163 \let\@mkboth\@gobbletwo
164 \def\@oddfoot{\if@draft\blDRAFT\fi\hfil
165 \thepage\hfil\if@draft\brDRAFT\fi}%
166 \let\@evenfoot\@oddfoot
167 \def\@oddhead{\if@draft\tlDRAFT\hfil
168 {\slshape\small\today}\hfil\trDRAFT\fi}%
169 \let\@evenhead\@oddhead}

```

Pagestyle ‘headings’.

```

170 \if@twoside % two-sided printing
171 \renewcommand*{\ps@headings}%
172 {\@thesispagestylefalse
173  \let\@mkboth\markboth
174  \def\@oddfoot{\if@draft\blDRAFT\hfil
175    {\slshape\small\today}\hfil\brDRAFT\fi}%
176  \let\@evenfoot\@oddfoot
177  \def\@oddhead{\if@draft\tlDRAFT\fi{\slshape\rightmark}\hfil
178    \thepage\if@draft\trDRAFT\fi}%
179  \def\@evenhead{\if@draft\tlDRAFT\fi\thepage\hfil
180    {\slshape\leftmark}\if@draft\trDRAFT\fi}%
181  \def\chaptermark##1{\markboth
182    {\MakeUppercase{\ifnum \c@secnumdepth >\m@ne
183      \@chapapp\ thechapter. \ \fi ##1}}}%
184  \def\sectionmark##1{\markright
185    {\MakeUppercase{\ifnum \c@secnumdepth >\z@
186      \thesection. \ \fi ##1}}}%
187 \else % one-sided printing
188 \renewcommand*{\ps@headings}%
189 {\@thesispagestylefalse
190  \let\@mkboth\markboth
191  \def\@oddfoot{\if@draft\blDRAFT\hfil
192    {\slshape\small\today}\hfil\brDRAFT\fi}%
193  \def\@oddhead{\if@draft\tlDRAFT\fi{\slshape\rightmark}\hfil
194    \thepage\if@draft\trDRAFT\fi}%
195  \def\chaptermark##1{\markright
196    {\MakeUppercase{\ifnum \c@secnumdepth >\m@ne
197      \@chapapp\ thechapter. \ \fi ##1}}}%
198 \fi}%@twoside

```

Pagestyle ‘myheadings’.

```

199 \renewcommand*{\ps@myheadings}%
200 {\@thesispagestylefalse
201  \let\@mkboth\@gobbletwo
202  \def\@oddfoot{\if@draft\blDRAFT\hfil
203    {\slshape\small\today}\hfil\brDRAFT\fi}%
204  \let\@evenfoot\@oddfoot
205  \def\@oddhead{\if@draft\tlDRAFT\fi{\slshape\rightmark}\hfil
206    \thepage\if@draft\trDRAFT\fi}%
207  \def\@evenhead{\if@draft\tlDRAFT\fi\thepage\hfil
208    {\slshape\leftmark}\if@draft\trDRAFT\fi}%
209  \let\chaptermark\@gobble\let\sectionmark\@gobble}

```

Pagestyle ‘thesis’ (based on ‘headings’).

```

210 \if@twoside % two-sided printing
211 \newcommand*{\ps@thesis}%
212 {\@thesispagestyletrue
213  \let\@mkboth\markboth
214  \def\@oddfoot{\if@draft\blDRAFT\hfil
215    {\slshape\small\today}\hfil\brDRAFT\fi}%
216  \let\@evenfoot\@oddfoot

```

```

217 \def\@oddhead{\if@draft\tlDRAFT\fi{\slshape\rightmark}\hfil
218 \thepage\if@draft\trDRAFT\fi}%
219 \def\@evenhead{\if@draft\tlDRAFT\fi\thepage\hfil
220 {\slshape\leftmark}\if@draft\trDRAFT\fi}%
221 \def\chaptermark##1{\markboth
222 {\textsc{\ifnum \c@secnumdepth >\m@ne
223 \@chapapp\ \thechapter. \ \fi ##1}}{}}%
224 \def\sectionmark##1{\markright
225 {\textsc{\ifnum \c@secnumdepth >\z@
226 \thesection. \ \fi ##1}}{}}
227 \else % one-sided printing
228 \newcommand*\ps@thesis{%
229 {\@thesispagestyletrue
230 \let\@mkboth\markboth
231 \def\@oddfoot{\if@draft\blDRAFT\hfil
232 {\slshape\small\today}\hfil\brDRAFT\fi}%
233 \def\@oddhead{\if@draft\tlDRAFT\fi{\slshape\rightmark}\hfil
234 \thepage\if@draft\trDRAFT\fi}%
235 \def\chaptermark##1{\markright
236 {\textsc{\ifnum \c@secnumdepth >\m@ne
237 \@chapapp\ \thechapter. \ \fi ##1}}{}}
238 \fi}%twoside

```

Default page style.

```

239 \pagestyle{thesis}

```

End of file 'ut-thesis.cls'.