

The mines-thesis class *

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Abstract

This package provides a class for graduate students at Colorado School of Mines to prepare their theses and dissertations.

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*This document corresponds to mines-thesis v1.0, dated 2020/01/10.

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1 User's Guide

1.1 Installation

1.2 Invocation and Options

`\documentclass` The mines-thesis class is invoked in the standard fashion.

```
\documentclass[\langle options \rangle]{mines-thesis}
```

There are several options corresponding to the type of the document and its general appearance. They are described below. Generally speaking, the options have `key=value` forms, for example,

```
\documentclass[10pt]{mines-thesis}
```

The default options are `letterpaper,12pt. TODO review? onside? onecol-umn,draft,openany`

1.3 Preprogrammed Formats

```
\title
\author
\year
\degree
\advisor
\coadvisor
\department
\departmenthead
abstract
```

The environment `abstract` must *precede* the `\makefrontmatter` command. Again, this is different from the standard L^AT_EX. Putting `abstract` after `\makefrontmatter` will trigger an error.

```
\begin{abstract}
Here goes the abstract...
\end{abstract}
```

`\makefrontmatter` The front matter of a thesis includes:

1. Title page (Required)
2. Copyright page
3. Submittal page (Required)
4. Abstract (Required)
5. Table of Contents (Required)
6. Lists (Required if included in thesis)
 - (a) List of Figures

- (b) List of Tables
- (c) List of Equations (optional)
- (d) List of Plates
- (e) List of Symbols

7. Acknowledgments

8. Dedication

Invoking

`\makefrontmatter`

will generate all components listed above. It can be commented out until you need the front matter generated.

`\chapter`

`\section`

`\subsection`

`\subsubsection`

`\paragraph`

`landscape`

Try the `lscape` package: `lscape.sty` Produce landscape pages in a (mainly) portrait document. This modifies the margins and rotates the page contents but not the page number. Useful, for example, with large multipage tables, and is compatible with the packages `longtable` and `supertabular`. If you are using `pdfLaTeX`, you should use `pdfscape` instead. The `pdfscape` package adds PDF support to the `landscape` environment of package `lscape`, by setting the PDF/Rotate page attribute. Pages with this attribute will be displayed in landscape orientation by conforming PDF viewers:

```
begin{landscape}
  Here goes the figure or table...
end{landscape}
```

`\OnehalfSpacing`

`\DoubleSpacing`

`SingleSpace`

`\OnehalfSpacing \OnehalfSpacing* \DoubleSpacing \DoubleSpacing*` Text will be double spaced or 1.5 spaced. Sometimes it is also required to make page notes and floats (including captions) in ‘double’ spacing. The starred version of the two macros above takes care of this.

2 Frequently Asked Questions

Blank pages. If you use `landscape` and got extra blank pages, it is mostly because your figure is too large. You need to resize the height or width of the figure. For example, instead of `\includegraphics[width=\linewidth]{FigureName}`, you should use `\includegraphics[width=.6\linewidth]{FigureName}`

When using line breaks in thesis title, chapter title, or section titles, use `\protect\\` instead of `\\`. This is because these titles use both `center` environment and `\MakeTextUppercase`. `\MakeLowercase` are robust but they have moving arguments (see `\protect`).

3 Implementation

3.1 Initial Code

These packages are useful when writing this `.dtx` file. The `\ifthenelse` macro controls many conditional logic command, So we load `ifthen` package. The `\collect@body` macro in `amsmath` is defined using `\def`. We load `environ` to access the `\long` version of this command.

```
1 \RequirePackage{ifthen}
2 \RequirePackage{environ}
3 \RequirePackage{calc}
```

3.1.1 Declaration of Options

The `review` boolean is defined here for use with the class options.

```
4 \newboolean{review}
5 \DeclareOption{draft}{\setboolean{review}{true}}
6 \DeclareOption{final}{\setboolean{review}{false}}
7 \PassOptionsToClass{final,12pt,onecolumn,openany}{memoir}
8 \DeclareOption*{
9 \PassOptionsToClass{\CurrentOption}{memoir}
10 }
11 \ExecuteOptions{final}
```

3.1.2 Execution of Options

```
12 \ProcessOptions\relax
```

3.1.3 Package Loading

```
13 \LoadClass[oneside,letterpaper]{memoir}
```

3.2 Main Code

3.2.1 Global Setting

In this section, we define margins, spacings, indentations, hyphenations, and so on. The page is set by `\setpagecc` to be centered with respect to the stock.

```
14 \setpageecc{11in}{8.5in}{*}
```

The margins is set to be 1in for all left, right, upper, and lower margins.

```
15 \setlrmarginsandblock{1in}{*}{*}
```

```
16 \setulmarginsandblock{1in}{*}{*}
```

If there is a header, its height would be `\onelineskip`. If there is a footer, it would be `2\onelineskip` below the body text. The header would be `2\onelineskip` above the body text.

```
17 \setheadfoot{\onelineskip}{2\onelineskip}
```

```
18 \setheaderspaces{*}{2\onelineskip}{*}
```

By default, we use double spacing for the thesis/dissertaion.

```
19 \DoubleSpacing
```

The paragraph indentation is 2em. 1em is roughly the width of a capital “M” in the current font. We will also indent the first paragraph after a section heading.

```
20 \setlength{\parindent}{2em}
```

```
21 \let\@afterindentfalse\@afterindenttrue
```

```
22 \@afterindenttrue
```

We check and implement the layout settings.

```
23 \checkandfixthelayout
```

Moreover, we remove all interior spaces for list enviroments,

```
24 \tightlists % use \firmlists if vertical gaps is wanted
```

and prevent L^AT_EX from hyphenating the entire document.

```
25 \tolerance=1
```

```
26 \emergencystretch=\maxdimen
```

```
27 \hyphenpenalty=10000
```

```
28 \hbadness=10000
```

We also rename the headings for the toc, lof, lot, and the references. ALL UPPER CASE LETTERS are used.

```
29 \renewcommand{\abstractname}{ABSTRACT}
```

```
30 \renewcommand{\chaptername}{CHAPTER}
```

```
31 \renewcommand{\appendixname}{APPENDIX}
```

```
32 \renewcommand{\contentsname}{TABLE OF CONTENTS}
```

```
33 \renewcommand{\listfigurename}{LIST OF FIGURES}
```

```
34 \renewcommand{\listtablename}{LIST OF TABLES}
```

```
35 \newcommand{\acknowledgmentname}{ACKNOWLEDGMENTS}
```

```
36 \renewcommand{\bibname}{REFERENCES}
```

3.2.2 Front Matter

`\makefrontmatter` The `\makefrontmatter` will generate all front matter pages: `\maketitlepage` for Title Page, `\makecopyrightpage` for Copyright Page, `\makesubmittalpage` for Submittal Page, `\makeabstractpage` for Abstract, `\makecft` for Tables of Contents (toc) and Lists (List of Figures (lof) & List of Tables (lot)), `\makeacknowledgementpage` for Acknowledgments, and `\makededicationpage` for Dedication.

First We define the macros for the informations and set their default values.

```

\title
\author 37 \renewcommand{\year}[1]{\gdef\@year{#1}}
\year 38 \newcommand{\degree}[2]{\gdef\@degreeelv{#1}\gdef\@degreename{#2}}
\degree 39 \newcommand{\advisor}[1]{\gdef\@advisor{#1}}
\advisor 40 \newcommand{\coadvisor}[1]{\gdef\@coadvisor{#1}}
\coadvisor 41 \newcommand{\department}[1]{\gdef\@department{#1}}
\department 42 \newcommand{\departmenthead}[1]{\gdef\@departmenthead{#1}}
\departmenthead 43 \gdef\@author{Student Name}
44 \gdef\@title{This is the first line of a medium length title,
45 \protect\\ this is the second line}
46 \gdef\@year{2020}
47 \gdef\@degreeelv{Doctor of Philosophy}
48 \gdef\@degreename{Computer Science}
49 \gdef\@advisor{Dr. Main Advisor}
50 \gdef\@department{Department of XXXXX}
51 \gdef\@departmenthead{Dr. Department Head}

```

Then we design the title page.

`\maketitlepage` The thesis title must be in all upper case letters, be centered on the page both horizontally and vertically, be in an inverted pyramid shape and the font size needs to be the same size as all other font in the main text (i.e. do not make the font size larger).

```

52 \newboolean{auto} % for auto pyramid
53 \setboolean{auto}{false}

54 \DeclareRobustCommand{\invpyr}[1]{
55 \vbox{
56 \vspace{10pt}
57 \hsize=\textwidth
58 \parindent=\z@
59 \emergencystretch=1in
60 \parshape 6
61 0.01\textwidth .98\textwidth
62 0.1\textwidth .8\textwidth
63 0.15\textwidth .7\textwidth
64 0.2\textwidth .6\textwidth
65 0.25\textwidth .5\textwidth
66 0.3\textwidth .4\textwidth
67 \leftskip=\z@ plus 1fil
68 \rightskip=\z@ plus -1fil
69 \parfillskip=\z@ plus 2fil
70 #1\par
71 }
72 }

73 \newcommand{\autotitle}{\setboolean{auto}{true}}
74 \newcommand{\maketitlepage}{
75 \clearpage
76 \begin{vplace}
77 \centering

```

```

78 \ifthenelse{\boolean{auto}}
79 {\invpyr{\MakeTextUppercase{\@title}}}
80 {\@title}
81 \end{vplace}
82 \begin{center}
83 by\\
84 \@author
85 \end{center}
86 \clearpage
87 } % end of \maketitlepage

```

Next, the copyright page.

`\makecopyrightpage` Copyright Page. This is an optional page that follows the title page. No displayed page number, centered upper and lower case text.

```

88 \newcommand{\makecopyrightpage}{
89 \clearpage
90 \begin{vplace}[0.8]
91 \centering
92 Copyright~by~\@author~\@year\\
93 All~Rights~Reserved
94 \end{vplace}
95 \clearpage
96 } % end of \makecopyrightpage

```

Next, the submittal page.

`\makesubmittalpage` This is a required page that displays the Roman numeral ii page number. Beginning with this page, front matter Roman numeral page numbers are centered 1/2 inch from the bottom edge of page. All signatures are required before the final thesis format review.

```

97 \newcommand{\makesubmittalpage}{
98 \clearpage
99 A thesis submitted to the Faculty and the Board of
100 Trustees of the Colorado School of Mines in partial
101 fulfillment of the requirements for the degree of
102 {\@degreeelv} ({\@degreename}).
103 \vspace{2em}
104 \begin{flushleft}
105 Golden, Colorado\\[.5em]
106 Date \underline{\hspace{2in}}
107 \end{flushleft}
108 \vspace{.5em}
109 \begin{flushright}
110 Signed: \underline{\hspace{2in}}\\
111 {\@author}\\[2em]
112 Signed: \underline{\hspace{2in}}\\
113 \begin{SingleSpace}
114 {\@advisor}\\
115 Thesis Advisor\\[2em]

```

```

116 \end{SingleSpace}
117 \@ifundefined{@coadvisor}{
118 \vspace{2.5em}
119 }{
120 Signed: \underline{\hspace{2in}}\\
121 \begin{SingleSpace}
122 {\@coadvisor}\\
123 Thesis Advisor
124 \end{SingleSpace}
125 }
126 \end{flushright}
127 \begin{flushleft}
128 Golden, Colorado\\[.5em]
129 Date \underline{\hspace{2in}}
130 \end{flushleft}
131 \vspace{.5em}
132 \begin{flushright}
133 Signed: \underline{\hspace{2in}}\\
134 \begin{SingleSpace}
135 {\@departmenthead}\\
136 Professor and Head\\
137 {\@department}
138 \end{SingleSpace}
139 \end{flushright}
140 \clearpage
141 } % end of \makesubmittalpage

```

Next, the abstract page.

`\makeabstractpage` ABSTRACT (title) is centered horizontally, 1 keyboard return below 1 inch top margin and in ALL UPPER CASE LETTERS. Each paragraph should be indented.

`abstract` We redefine the `abstract` environment to save the text.

`\@saveabstract`

```

142 \newcommand{\@saveabstract}[1]{\long\gdef\@abstract{#1}}
143 \renewenvironment{abstract}{\Collect@Body\@saveabstract}{}

Abstract will show in the table of contents.
144 \newcommand{\makeabstractpage}{
145 \clearpage
146 \chapter*{\abstractname}
147 \@abstract
148 \addcontentsline{toc}{chapter}{\abstractname}
149 \clearpage
150 } % end of \makeabstractpage

```

Next, the table of contents and lists.

`\makecft` `\makecft` generates Table of Contents, List of Figures, and List of Tables.

`\tableofcontents` TABLE OF CONTENTS (Title) is centered horizontally, 1 keyboard return below 1 inch top margin and in ALL UPPER CASE LETTERS. Do not list the Table of Contents in the Table of Contents page, so `\tableofcontents*` is used.

```

151 \renewcommand{\cftchapterdotsep}{\cftdotsep}
152 \renewcommand{\cftchapterfont}{\normalfont\MakeTextUppercase}
153 \renewcommand{\cftchapterpagefont}{\normalfont}
154 \renewcommand{\cftchapterleader}{\cftdotfill{\cftchapterdotsep}}
155 \renewcommand{\cftchaptername}{\chaptername\space}
156 \renewcommand{\cftappendixname}{\appendixname\space}
157 \renewcommand{\cftdotsep}{1}
158 % ^^A no extra space before the entry, or in the lof/lot
159 \setlength{\cftbeforechapterskip}{\z@ plus \z@}
160 \renewcommand{\insertchapterspace}{}
161 % ^^A \renewcommand{\insertchapterspace}{
162 % ^^A \addtocontents{lof}{\protect\addvspace{5pt}} % previous default 10pt
163 % ^^A \addtocontents{lot}{\protect\addvspace{5pt}}
164 % ^^A }

```

`\l@chapapp` Redefine the generic chapter/appendix toc entry typesetting.

```

165 \renewcommand{\l@chapapp}[3]{%
166 \ifnum \c@tocdepth >\m@ne
167 \begin{SingleSpace}
168 \cftchapterbreak
169 \vskip \cftbeforechapterskip
170 {
171 \leftskip \cftchapterindent\relax
172 %%% \memRTLleftskip \cftchapterindent\relax
173 \rightskip \@tocrmarg
174 %%% \memRTLrightskip \@tocrmarg
175 \parfillskip -\rightskip
176 %%% \parfillskip -\memRTLrightskip
177 \parindent \cftchapterindent\relax
178 \@afterindenttrue
179 \interlinepenalty\@M
180 \leavevmode
181 \let\@cftbsnum \cftchapterpresnum
182 \let\@cftasnum \cftchapteraftersnum
183 \let\@cftasnumb \cftchapteraftersnumb
184 \def\@chapapp@head{#3}%
185 \settowidth{\@tempdima}{\cftchapterfont\@chapapp@head}%
186 \addtolength{\@tempdima}{\cftchapternumwidth}%
187 \advance\leftskip \@tempdima \null\nobreak\hskip -\leftskip
188 %%% \advance\memRTLleftskip \@tempdima \null\nobreak\hskip -\memRTLleftskip
189 {\cftchapterfont {#1}}\nobreak
190 \cftchapterfillnum{#2}}
191 \end{SingleSpace}
192 \fi}

```

`\@dottedtocline@sec` Redefine `\@dottedtocline` from the original `ltsect.dtx` `\@dottedtocline{<level>}{<indent>}{<numwidth>}`

```

193 \newcommand{\@dottedtocline@sec}[5]{%
194 \ifnum #1>\c@tocdepth \else
195 \begin{SingleSpace}
196 \vskip \z@ \@plus.2\p@
197 {\leftskip #2\relax \rightskip \@tocrmarg \parfillskip -\rightskip
198 \parindent #2\relax\@afterindenttrue
199 \interlinepenalty\@M
200 \leavevmode
201 \@tempdima #3\relax
202 \advance\leftskip \@tempdima \null\nobreak\hskip -\leftskip
203 {#4}\nobreak
204 \leaders\hbox{$\m@th
205 \mkern \@dotsep mu\hbox{.}\mkern \@dotsep
206 mu$}\hfill
207 \nobreak
208 \hb@xt@\@pnumwidth{\hfil\normalfont \normalcolor #5}%
209 \par}
210 \end{SingleSpace}%
211 \fi}

212 \renewcommand{\cftfigurename}{\figurename\space}
213 \renewcommand{\cfttablename}{\tablename\space}

\l@figure \l@figure{\langle title\rangle}{\langle page\rangle} typesets the lof entry for a \figure caption heading.
Multiple line figure captions are single spaced.

214 \let\oldl@figure=\l@figure
215 \renewcommand{\l@figure}{\SingleSpacing\oldl@figure}

\l@table \l@table{\langle title\rangle}{\langle page\rangle} typesets the lof entry for a \table caption heading.
Multiple line table captions are single spaced.

216 \let\oldl@table=\l@table
217 \renewcommand{\l@table}{\SingleSpacing\oldl@table}

218 \AtBeginDocument{
219 \@ifpackageloaded{hyperref}{
220 \settocpreprocessor{chapter}{%
221 \let\tempf@rtoc\f@rtoc%
222 \def\f@rtoc{%When hyperref is used,
223 \texorpdfstring{MakeTextUppercase{\tempf@rtoc}}{\tempf@rtoc}}%
224 }
225 \renewcommand{\cftchapterfont}{\normalfont}
226 }{}
227 }
228 \newcommand{\makecft}{
229 \tableofcontents*
230 \clearpage
231 \listoffigures
232 \clearpage
233 \listoftables
234 \clearpage

```

```

235 } % end of \makecft

\l@section \l@section{<title>}{<page>} typesets the toc entry for a \section heading.
236 \renewcommand{\@dotsep}{1}
237 \renewcommand{\l@section}{
238 \@dottedtocline@sec{1}{1.5em}{2.3em}
239 }

\makeacknowledgementpage ACKNOWLEDGMENTS (Title) is centered horizontally, 1 keyboard return below
1 inch top margin and in ALL UPPER CASE LETTERS.

acknowledgment We define the acknowledgment environment. First, we need to save the text.

\@saveacknowledgments
240 \newcommand{\@saveacknowledgments}[1]{
241 \long\gdef\@acknowledgments{#1}}

242 \newenvironment{acknowledgment}{\Collect@Body\@saveacknowledgments}{
Acknowledgment page is not required.
243 \newcommand{\makeacknowledgementpage}{
244 \@ifundefined{\@acknowledgments}{}{
245 \clearpage
246 \chapter*{\acknowledgmentname}
247 \@acknowledgments
248 \addcontentsline{toc}{chapter}{\acknowledgmentname}
249 \clearpage}
250 } % end of \makeacknowledgementpage

\makededicationpage Dedication Page: A dedication page is optional and not frequently included in a
thesis. However, occasionally the thesis writer wants to dedicate the document
to a professional colleague, friend, or relative. A dedication typically expresses
gratitude for someone's support. If a dedication page is included, it is placed at
the end of the front matter section, following the acknowledgments. Typically,
a dedication page has no title, it simply states, e.g., "For my father." Roman
numeral page numbering continues on the dedication page.

dedication We define the dedication environment. First, we need to save the text.

\@savededication
251 \newcommand{\@savededication}[1]{
252 \long\gdef\@dedication{#1}}

253 \newenvironment{dedication}{\Collect@Body\@savededication}{
254 \newcommand{\makededicationpage}{
255 \@ifundefined{\@dedication}{}{
256 \clearpage
257 \@dedication
258 \clearpage}
259 } % end of \makededicationpage

```

Call single command `\makefrontmatter` to generate all front matters.

```

260 \newcommand{\makefrontmatter}{
261 \pagenumbering{roman}
262 \pagestyle{empty}
263 \maketitlepage
264 \makecopyrightpage
265 \pagestyle{plain}
266 \setcounter{page}{2}
267 \makesubmittalpage
268 \makeabstractpage
269 \makecft
270 \makeacknowledgementpage
271 \makededicationpage
272 \pagenumbering{arabic}
273 \setcounter{page}{1}
274
275 %\raggedright
276 %\raggedyright[Opt] % typeset flushright
277 \raggedyright[.5fil] % same as \raggedright
278 %\raggedyright[1fil] % same as \raggedright
279 %\raggedyright[0.5em] % less ragged than \raggedright
280 } % end of \makefrontmatter

```

3.2.3 Main Body

`\chapter`

```

281 \makechapterstyle{mineschapter}{%
282 \setlength{\midchapskip}{.2\baselineskip}
283 \setlength{\afterchapskip}{.2\baselineskip}
284 \renewcommand{\chapnumfont}{\normalfont}
285 \renewcommand{\chapttitlefont}{\normalfont}
286 \renewcommand{\chapterheadstart}{}
287 \renewcommand{\printchapternum}{}
288 \renewcommand{\printchapternonum}{}
289 \renewcommand{\printchaptername}{%
290 \centerline{\chapnumfont\MakeTextUppercase{\@chapapp\ thechapter}}}
291 \renewcommand{\printchaptertitle}[1]{%
292 \centering \vbox{\chapttitlefont\invpyr{\MakeTextUppercase{##1}}}
293 }
294 }
295 \chapterstyle{mineschapter}

```

`\reproduceinfo` Information about the reproduced chapter. Including the author, year, organization, publisher.

```

296 \newcommand{\reproduceinfo}[1]{
297 \begin{center}
298 #1\par
299 \end{center}
300 }

```

`\reproduceabstract` One single line of Abstract flused left.

```

301 \newcommand{\reproduceabstract}{
302 {\noindent Abstract\par}
303 }

```

`\footnote` Set the format for `\footnote`. One horizontal line to separate the text and the footnotes.

```

304 \AtBeginDocument{
305 \setlength{\footmarkwidth}{\z@}
306 \setlength{\footmarksep}{-\footmarkwidth}
307 \setlength{\footparindent}{\footmarkwidth}
308 \renewcommand{\footnoterule}{%
309 \kern .5\baselineskip%
310 \hrule width \columnwidth \kern .5\baselineskip}
311 }

```

`\symbolfootnote` A new type of footnote command which use symbols instead of arabic numbers as markers

```

312 \newcommand{\symbolfootnote}[2]{
313 \renewcommand{\thefootnote}{\fnsymbol{footnote}}
314 \footnote[#1]{#2}
315 \renewcommand{\thefootnote}{\arabic{footnote}}
316 }

```

`\section` Redefine `\section`, `\subsection` and `\subsubsection`.

```

317 \renewcommand{\section}{\@startsection{section}
318 {1} % level
319 {\z@} % indent from left margin
320 {.1ex} % skip above heading
321 {.1ex} % heading between title and text
322 {\normalfont\normalsize\bfseries}}
323 \renewcommand{\subsection}{\@startsection{subsection}
324 {1} % level
325 {\z@} % indent from left margin
326 {.1ex} % skip above heading
327 {.1ex} % heading between title and text
328 {\normalfont\normalsize\bfseries}}
329 \renewcommand{\subsubsection}{\@startsection{subsubsection}
330 {1} % level
331 {\z@} % indent from left margin
332 {.1ex} % skip above heading
333 {.1ex} % heading between title and text
334 {\normalfont\normalsize\bfseries}}

```

`longtable`

```

335 \AtBeginDocument{
336 \@ifpackageloaded{longtable}{
337 \setlength{\LTcapwidth}{\linewidth}
338 }

```

```

339 }{}
340 }

```

3.2.4 Back Matter

Change the indent of References if `natbib` package is loaded.

```

341 \AtBeginDocument{
342 \ifpackageloaded{natbib}{
343 \setlength{\bibhang}{\parindent}
344 \newlength{\bibskiplen}
345 \setlength{\bibskiplen}{\f@size pt}
346 \newlength{\bibskipscale}
347 \setlength{\bibskipscale}{\baselinestretch\bibskiplen}
348 \setlength{\bibsep}{\bibskipscale-.5\baselineskip}
349 }{}
350 }

```

`\bibliography`

```

351 \let\oldbibliography=\bibliography
352 \renewcommand{\bibliography}[1]{
353 \begin{SingleSpace}
354 \oldbibliography{#1}
355 \end{SingleSpace}
356 }

```

3.2.5 Others

`landscape` We define the `landscape` to handle the page numbering in landscape mode.

```

357 \AtBeginDocument{
358 \ifpackageloaded{pdflscape}{
359 \newcommand{\Lpagenumber}{\ifdim\textwidth=\linewidth\else\bgroup
360 \dimendef\margin=0 %use \margin instead of \dimen0
361 \ifodd\value{page}\margin=\oddsidemargin
362 \else\margin=\evensidemargin
363 \fi
364 \raisebox{\dimexpr -\topmargin-\headheight-\headsep-0.5\linewidth}{[Opt] [Opt] {%
365 \rlap{\hspace{\dimexpr \margin+\textheight+\footskip}%
366 \llap{\rotatebox{90}{\thepage}}}}}%
367 \egroup\fi
368 }
369 \ifpackageloaded{everypage}{
370 \AddEveryPageHook{\Lpagenumber}%
371 \let\oldlandscape=\landscape
372 \let\endoldlandscape=\endlandscape
373 \renewenvironment{landscape}{
374 \oldlandscape\pagestyle{empty}\begin{vplace}}{
375 \end{vplace}\endoldlandscape
376 \pagestyle{plain}}
377 }{}

```

378 }{
379 }