

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,oneside,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 \setpagecc{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
```

```
20 \@ifundefined{DoubleSpacing}{
```

```
21 \newcommand{\linespace}{1.5}
```

```
22 }{
```

```
23 \newcommand{\linespace}{2}
```

```
24 }
```

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.

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

```
26 \let\@afterindentfalse\@afterindenttrue
```

```
27 \@afterindenttrue
```

We check and implement the layout settings.

```
28 \checkandfixthelayout[nearest]
```

Moreover, we remove all interior spaces for list enviroments,

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

and prevent L^AT_EX from hyphenating the entire document.

```
30 \tolerance=1
```

```
31 \emergencystretch=\maxdimen
```

```
32 \hyphenpenalty=10000
```

```
33 \hbadness=10000
```

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

```
34 \renewcommand{\abstractname}{ABSTRACT}
```

```
35 \renewcommand{\chaptername}{CHAPTER}
```

```
36 \renewcommand{\appendixname}{APPENDIX}
```

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

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

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

```
40 \newcommand{\acknowledgmentname}{ACKNOWLEDGMENTS}
```

```
41 \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 42 \renewcommand{\year}[1]{\gdef\@year{#1}}
\year 43 \newcommand{\degree}[2]{\gdef\@degree{#1}\gdef\@degreelevel{#2}}
\degree 44 \newcommand{\advisor}[1]{\gdef\@advisor{#1}}
\advisor 45 \newcommand{\coadvisor}[1]{\gdef\@coadvisor{#1}}
\coadvisor 46 \newcommand{\department}[1]{\gdef\@department{#1}}
\department 47 \newcommand{\departmenthead}[1]{\gdef\@departmenthead{#1}}
\departmenthead 48 \gdef\@author{Student Name}
49 \gdef\@title{This is the first line of a medium length title,
50 \protect\ this is the second line}
51 \gdef\@year{2020}
52 \gdef\@degreelevel{Doctor of Philosophy}
53 \gdef\@degreelevel{Computer Science}
54 \gdef\@advisor{Dr. Main Advisor}
55 \gdef\@department{Department of XXXXX}
56 \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).

```

57 \newboolean{auto} % for auto pyramid
58 \setboolean{auto}{false}

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

```

```

73 \rightskip=\z@ plus -1fil
74 \parfillskip=\z@ plus 2fil
75 #1\par
76 }
77 }
78 \newcommand{\autotitle}{\setboolean{auto}{true}}
79 \newcommand{\maketitlepage}{
80 \clearpage
81 \quad\[\baselineskip]
82 \begin{vplace}
83 \centering
84 \ifthenelse{\boolean{auto}}
85 {\invpyr{\MakeTextUppercase{\@title}}}
86 {\@title}
87 \end{vplace}
88 \begin{center}
89 by\
90 \@author
91 \end{center}
92 \clearpage
93 } % 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.

```

94 \newcommand{\makecopyrightpage}{
95 \clearpage
96 \begin{vplace}[0.8]
97 \centering
98 Copyright~by~\@author~\@year\
99 All~Rights~Reserved
100 \end{vplace}
101 \clearpage
102 } % 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.

```

103 \newcommand{\makesubmittalpage}{
104 \clearpage
105 A thesis submitted to the Faculty and the Board of
106 Trustees of the Colorado School of Mines in partial
107 fulfillment of the requirements for the degree of
108 {\@degreelv} ({\@degreename}).
109 \vspace{2em}
110 \begin{flushleft}

```

```

111 Golden, Colorado\\[.5em]
112 Date \underline{\hspace{2in}}
113 \end{flushleft}
114 \vspace{.5em}
115 \begin{flushright}
116 Signed: \underline{\hspace{2in}}\\
117 {\@author}\\[2em]
118 Signed: \underline{\hspace{2in}}\\
119 \begin{SingleSpace}
120 {\@advisor}\\
121 Thesis Advisor\\[2em]
122 \end{SingleSpace}
123 \@ifundefined{@coadvisor}{
124 \vspace{2.5em}
125 }{
126 Signed: \underline{\hspace{2in}}\\
127 \begin{SingleSpace}
128 {\@coadvisor}\\
129 Thesis Advisor
130 \end{SingleSpace}
131 }
132 \end{flushright}
133 \begin{flushleft}
134 Golden, Colorado\\[.5em]
135 Date \underline{\hspace{2in}}
136 \end{flushleft}
137 \vspace{.5em}
138 \begin{flushright}
139 Signed: \underline{\hspace{2in}}\\
140 \begin{SingleSpace}
141 {\@departmenthead}\\
142 Professor and Head\\
143 {\@department}
144 \end{SingleSpace}
145 \end{flushright}
146 \clearpage
147 } % 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`

```

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

```


Abstract will show in the table of contents.

```

150 \newcommand{\makeabstractpage}{
151 \clearpage
152 \chapter*{\abstractname}
153 \@abstract
154 \addcontentsline{toc}{chapter}{\abstractname}
155 \clearpage
156 } % 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.

157 \renewcommand{\cftchapterdotsep}{\cftdotsep}
158 \renewcommand{\cftchapterfont}{\normalfont\MakeTextUppercase}
159 \renewcommand{\cftchapterpagefont}{\normalfont}
160 \renewcommand{\cftchapterleader}{\cftdotfill{\cftchapterdotsep}}
161 \renewcommand{\cftchaptername}{\chaptername\space}
162 \renewcommand{\cftappendixname}{\appendixname\space}
163 \renewcommand{\cftdotsep}{1}
164 % ^^A no extra space before the entry, or in the lof/lot
165 \setlength{\cftbeforechapterskip}{\z@ plus \z@}
166 \renewcommand{\insertchapterspace}{\z@}
167 % ^^A \renewcommand{\insertchapterspace}{\z@}
168 % ^^A \addtocontents{lof}{\protect\addvspace{5pt}} % previous default 10pt
169 % ^^A \addtocontents{lot}{\protect\addvspace{5pt}}
170 % ^^A }

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

171 \renewcommand{\l@chapapp}[3]{%
172 \ifnum \c@tocdepth > \m@ne
173 \begin{SingleSpace}
174 \cftchapterbreak
175 \vskip \cftbeforechapterskip
176 {
177 \leftskip \cftchapterindent\relax
178 %%% \memRTLleftskip \cftchapterindent\relax
179 \rightskip \@tocrmarg
180 %%% \memRTLrightskip \@tocrmarg
181 \parfillskip -\rightskip
182 %%% \parfillskip -\memRTLrightskip
183 \parindent \cftchapterindent\relax
184 \@afterindenttrue
185 \interlinepenalty\@M
186 \leavevmode
187 \let\@cftbsnum \cftchapterpresnum
188 \let\@cftasnum \cftchapteraftersnum

```

```

189 \let\@cftasnumb \cftchapteraftersnumb
190 \def\@chapapp@head{#3}%
191 \settowidth{\@tempdima}{\cftchapterfont\@chapapp@head}%
192 \addtolength{\@tempdima}{\cftchapternumwidth}%
193 \advance\leftskip \@tempdima \null\nobreak\hskip -\leftskip
194 %%\advance\memRTLleftskip \@tempdima \null\nobreak\hskip -\memRTLleftskip
195 {\cftchapterfont {#1}}\nobreak
196 \cftchapterfillnum{#2}}
197 \end{SingleSpace}
198 \fi}

\@dottedtocline@sec Redefine \@dottedtocline from the original ltsect.dtx \@dottedtocline{<level>}{<indent>}{<numwidth>}{<secname>}
199 \newcommand{\@dottedtocline@sec}[5]{%
200 \ifnum #1>\c@tocdepth \else
201 \begin{SingleSpace}
202 \vskip \z@ \@plus.2\p@
203 {\leftskip #2\relax \rightskip \@tocrmarg \parfillskip -\rightskip
204 \parindent #2\relax\@afterindenttrue
205 \interlinepenalty\@M
206 \leavevmode
207 \@tempdima #3\relax
208 \advance\leftskip \@tempdima \null\nobreak\hskip -\leftskip
209 {#4}\nobreak
210 \leaders\hbox{$\m@th
211 \mkern \dotsep mu\hbox{.}\mkern \dotsep
212 mu$}\hfill
213 \nobreak
214 \hb@xt@\@pnumwidth{\hfil\normalfont \normalcolor #5}%
215 \par}
216 \end{SingleSpace}%
217 \fi}

218 \renewcommand{\cftfigurename}{\figurename\space}
219 \renewcommand{\cfttablename}{\tablename\space}

\l@figure \l@figure{<title>}{<page>} typesets the lof entry for a \figure caption heading.
Multiple line figure captions are single spaced.
220 \let\oldl@figure=\l@figure
221 \renewcommand{\l@figure}{\SingleSpacing\oldl@figure}

\l@table \l@table{<title>}{<page>} typesets the lof entry for a \table caption heading.
Multiple line table captions are single spaced.
222 \let\oldl@table=\l@table
223 \renewcommand{\l@table}{\SingleSpacing\oldl@table}

224 \AtBeginDocument{
225 \@ifpackageloaded{hyperref}{
226 \settocpreprocessor{chapter}{%
227 \let\tempf@rtoc\f@rtoc%
228 \def\f@rtoc{%When hyperref is used,

```

```

229 \texorpdfstring{\MakeTextUppercase{\tempf@rtoc}}{\tempf@rtoc}}%
230 }
231 \renewcommand{\cftchapterfont}{\normalfont}
232 }{}
233 }
234 \newcommand{\makecft}{
235 \tableofcontents*
236 \clearpage
237 \listoffigures
238 \clearpage
239 \listoftables
240 \clearpage
241 } % end of \makecft

\l@section \l@section{<title>}{<page>} typesets the toc entry for a \section heading.
242 \renewcommand{\@dotsep}{1}
243 \renewcommand{\l@section}{
244 \@dottedtocline@sec{1}{1.5em}{2.3em}
245 }

\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
246 \newcommand{\@saveacknowledgments}[1]{
247 \long\gdef\@acknowledgments{#1}}

248 \newenvironment{acknowledgment}{\Collect@Body\@saveacknowledgments}{
Acknowledgment page is not required.
249 \newcommand{\makeacknowledgementpage}{
250 \@ifundefined{@acknowledgments}{}{
251 \clearpage
252 \chapter*{\acknowledgmentname}
253 \@acknowledgments
254 \addcontentsline{toc}{chapter}{\acknowledgmentname}
255 \clearpage}
256 } % 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

```
257 \newcommand{\@savededication}[1]{
258 \long\gdef\@dedication{#1}}

259 \newenvironment{dedication}{\Collect@Body\@savededication}{}

260 \newcommand{\makededicationpage}{
261 \@ifundefined{@dedication}{}{
262 \clearpage
263 \@dedication
264 \clearpage}
265 } % end of \makededicationpage
```

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

```
266 \newcommand{\makefrontmatter}{
267 \pagenumbering{roman}
268 \pagestyle{empty}
269 \maketitlepage
270 \makecopyrightpage
271 \pagestyle{plain}
272 \setcounter{page}{2}
273 \makesubmittalpage
274 \makeabstractpage
275 \makecft
276 \makeacknowledgementpage
277 \makededicationpage
278 \pagenumbering{arabic}
279 \setcounter{page}{1}
280
281 %\raggedright
282 %\raggedyright[0pt] % typeset flushright
283 \raggedyright[.5fil] % same as \raggedright
284 %\raggedyright[1fil] % same as \raggedright
285 %\raggedyright[0.5em] % less ragged than \raggedright
286 } % end of \makefrontmatter
```

3.2.3 Main Body

\chapter

```
287 \makechapterstyle{mineschapter}{%
288 \setlength{\midchapskip}{.2\baselineskip}
289 \setlength{\afterchapskip}{.2\baselineskip}
290 \renewcommand{\chapnumfont}{\normalfont}
291 \renewcommand{\chapttitlefont}{\normalfont}
292 \renewcommand{\chapterheadstart}{}
293 \renewcommand{\printchapternum}{}
294 \renewcommand{\printchapternonum}{}
295 \renewcommand{\printchaptername}{%
296 \centerline{\chapnumfont\MakeTextUppercase{\@chapapp\ \thechapter}}}
297 \renewcommand{\printchapterertitle}[1]{%
```

```

298 \centering \vbox{\chapttitlefont\invpyr{\MakeTextUppercase{##1}}}
299 }
300 }
301 \chapterstyle{mineschapter}

\reproduceinfo Information about the reproduced chapter. Including the author, year, organiza-
tion, publisher.
302 \newcommand{\reproduceinfo}[1]{
303 \begin{center}
304 #1\par
305 \end{center}
306 }

\reproduceabstract One single line of Abstract flused left.
307 \newcommand{\reproduceabstract}{
308 {\noindent Abstract\par}
309 }

\footnote Set the format for \footnote. One horizontal line to separate the text and the
footnotes.
310 \AtBeginDocument{
311 \setlength{\footmarkwidth}{\z@}
312 \setlength{\footmarksep}{-\footmarkwidth}
313 \setlength{\footparindent}{\footmarkwidth}
314 \renewcommand{\footnoterule}{%
315 \kern .5\baselineskip%
316 \hrule width \columnwidth \kern .5\baselineskip}
317 }

\symbolfootnote A new type of footnote command which use symbols instead of arabic numbers as
markers
318 \newcommand{\symbolfootnote}[2]{
319 \renewcommand{\thefootnote}{\fnsymbol{footnote}}
320 \footnote[#1]{#2}
321 \renewcommand{\thefootnote}{\arabic{footnote}}
322 }

\section Redefine \section, \subsection and \subsubsection.
323 \renewcommand{\section}{\@startsection{section}
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{\subsection}{\@startsection{subsection}
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}}
335 \renewcommand{\subsubsection}{\@startsection{subsubsection}
336 {1} % level
337 {\z@} % indent from left margin
338 {.1ex} % skip above heading
339 {.1ex} % heading between title and text
340 {\normalfont\normalsize\bfseries}}

```

longtable

```

341 \AtBeginDocument{
342 \@ifpackageloaded{longtable}{
343 \setlength{\LTcapwidth}{\linewidth}
344
345 }{}
346 }

```

3.2.4 Back Matter

Change the indent of References.

\thebibliography

```

347 \setlength{\bibitemsep}{\baselineskip}
348 \newlength{\bibparskip}\setlength{\bibparskip}{.5\baselineskip}
349 \let\oldthebibliography\thebibliography
350 \renewcommand\thebibliography[1]{%
351 \SingleSpacing
352 \oldthebibliography{#1}%
353 \setlength{\parskip}{\bibitemsep}%
354 \setlength{\itemsep}{\bibparskip}%
355 }

```

\bibliography

```

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 }

```