

# The mines-thesis class \*

Ming Li<sup>†</sup> Jian Lin

December 22, 2019

## Abstract

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

## Contents

|          |  |          |
|----------|--|----------|
| <b>1</b> | <b>User's guide</b>  | <b>2</b> |
| 1.1      | Installation . . . . .                                     | 2        |
| 1.2      | Invocation and options . . . . .                           | 2        |
| 1.3      | Preprogrammed Formats . . . . .                            | 2        |
| <b>2</b> | <b>Implementation</b>                                      | <b>4</b> |
| 2.1      | Declaration of Options . . . . .                           | 4        |
| 2.2      | Execution of Options . . . . .                             | 4        |
| 2.3      | Package Loading . . . . .                                  | 4        |
| 2.4      | Main Code . . . . .  | 4        |
| 2.4.1    | Commands to define parameters for the front matter . . . . | 4        |
| 2.4.2    | Front Matter . . . . .                                     | 4        |

---

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

<sup>†</sup>mili@mymail.mines.edu

# 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[screen=true, review=false]{mines-thesis}
```

The default options are `letterpaper,10pt. TODO review? oneseide? 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<sup>A</sup>T<sub>E</sub>X. 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`

## 2 Implementation

### 2.1 Declaration of Options

```
1 \PassOptionsToClass{letterpaper,10pt}{memoir}
2 \DeclareOption*{\PassOptionsToClass{CurrentOption}{memoir}}
```

### 2.2 Execution of Options

```
3 \ProcessOptions
```

### 2.3 Package Loading

```
4 \LoadClass{memoir}
5 \renewcommand{\normalsize}{\fontsize{10pt}{12pt}\selectfont} \setlength{\textwidth}{6.5in}
6 \setlength{\textheight}{8in}
7 \pagenumbering{arabic} % needed even though this class will not show page numbers
```

### 2.4 Main Code

#### 2.4.1 Commands to define parameters for the front matter

```
8 \def\year#1{\gdef\@year{#1}}
9 \def\degree#1#2{\gdef\@degree#1{\@degree#2}}
10 \def\advisor#1{\gdef\@advisor{#1}}
11 \def\coadvisor#1{\gdef\@coadvisor{#1}}
12 \def\department#1{\gdef\@department{#1}}
13 \def\departmenthead#1{\gdef\@departmenthead{#1}}
```

#### 2.4.2 Front Matter

## 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.

```
advisor=      \subitem **\advisor+, 10 \subitem **\fontsize+, 5 and=      \subitem **\renewcommand+,
coadvisor=    \subitem **\coadvisor+, 11 \subitem **\gdef+, 8--13 \subitem **\selectfont+, 5
CurrentOption= \subitem **\CurrentOption+, 2 \subitem **\setlength+, 4 \subitem **\setlength+, 5, 6
LoadClass=    \subitem **\LoadClass+, 4
DeclareOption= \subitem **\DeclareOption+, 2 \subitem **\normalsize+, 5 \subitem **\textheight+, 6
def=          \subitem **\def+, 8--13 \subitem **\textwidth+, 5
degree=       \subitem **\degree+, 9 \subitem **\pagenumbering+, 7 \subitem **\textwidth+, 5
department=   \subitem **\department+, 12 \subitem **\PassOptionsToClass+, 1, 2
departmenthead= \subitem **\departmenthead+, 13 \subitem **\year+, 8
```