

# 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[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

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

```
1 \RequirePackage{ifthen}
2 \newboolean{review}
```

### 2.1 Declaration of Options

```
3 \DeclareOption{draft}{\setboolean{review}{true}}
4 \DeclareOption{final}{\setboolean{review}{false}}
5 \PassOptionsToClass{letterpaper,12pt,oneside,onecolumn,final,openany}{report}}
6 \DeclareOption*{
7 \PassOptionsToClass{\CurrentOption}{memoir}
8 }
9 \ExecuteOptions{draft,letterpaper,12pt}
```

### 2.2 Execution of Options

```
10 \ProcessOptions\relax
```

### 2.3 Package Loading

```
11 \LoadClassWithOptions{memoir}
```

### 2.4 Main Code

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

```
12 \def\year#1{\gdef\@year{#1}}
13 \def\degree#1#2{\gdef\@degree{#1}\@degree{#2}}
14 \def\advisor#1{\gdef\@advisor{#1}}
15 \def\coadvisor#1{\gdef\@coadvisor{#1}}
16 \def\department#1{\gdef\@department{#1}}
17 \def\departmenthead#1{\gdef\@departmenthead{#1}}
```

The following are the initial values for some macros that provide info.

```
18 \gdef\@author{Your Name}
19 \gdef\@title{Title of the Thesis}
20 \gdef\@year{2020}
21 \gdef\@degree{Doctor of Philosophy}
22 \gdef\@degree{Geophysical Engineering}
23 \gdef\@advisor{Dr. Main Advisor}
24 \gdef\@coadvisor{Dr. Co Advisor}
25 \gdef\@department{Department of Some Name}
26 \gdef\@departmenthead{Dr. Department Head}
```

Set margins

```
27 % ^^A automatically set by the class option letterpaper
28 % ^^A \setstocksize{11in}{8.5in}
29 % ^^A set paper size equal to stock size
30 % ^^A \settrimmedsize{\stockheight}{\stockwidth}{*}
31 % ^^A set equal trim at the top and bottom
32 % ^^A \setlength{\trimtop}{\stockheight} % \trimtop = \stockheight
```

```

33 % ^^A \addtolength{\trimtop}{-\paperheight} % - \paperheight
34 % ^^A \setlength{\trimesh}{\stockwidth} % \trimesh = \stockwidth
35 % ^^A \addtolength{\trimesh}{-\paperwidth} % - \paperwidth
36 % ^^A \settrims{0.5\trimtop}{\trimesh}
37 \setpagecc{11in}{8.5in}{*}
38 % ^^A \settypeblocksize{\paperheight}{\paperwidth}{*}
39 \setlrmarginsandblock{1in}{*}{*}
40 \setulmarginsandblock{1in}{*}{*}
41 \setheadfoot{\onelineskip}{2\onelineskip}
42 \setheaderspaces{*}{2\onelineskip}{*}
43 \DoubleSpacing
44 \checkandfixthelayout
45

```

## 2.4.2 Front Matter

`\makefrontmatter`

```

46 \newcommand{\makefrontmatter}{
47   \pagenumbering{roman}
48   \pagestyle{empty}
49   \maketitlepage
50   \pagestyle{empty}
51   \makecopyrightpage
52   \pagestyle{plain}
53   \newpage
54   \pagenumbering{arabic}
55   \setcounter{page}{1}
56 }

```

`\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 \newcommand{\maketitlepage}{
58 \clearpage
59 \vspace*{\fill}
60 \begin{center}
61 \begin{minipage}{.8\textwidth}
62 \centering
63 \MakeUppercase{\@title}
64 \end{minipage}
65 \end{center}
66 \vspace{\fill}
67 \begin{center}
68 by\\
69   \@author
70 \end{center}
71 \clearpage
72 }

```

`\makecopyrightpage` 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).

```
73 \newcommand{\makecopyrightpage}{  
74   \clearpage  
75   \vspace*{\fill}  
76   \begin{center}  
77   \begin{minipage}{.8\textwidth}  
78     \centering  
79       Copyright~by~\@author~\@year\  
80       All~Rights~Reserved  
81   \end{minipage}  
82   \end{center}  
83   \vspace{\fill}  
84   \clearpage  
85 }
```