

uothesis — A L^AT_EX package for the generation of theses and dissertations that meet the requirements established by the University of Oregon Graduate School*

Michael D. Anderson[†]

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1 Introduction

The `uothesis` class file provides support for generating properly formatted documents that comply with the University of Oregon Graduate School style guidelines for the preparation of dissertations and theses. The use of this class does not replace the review process by the Thesis Editor or guarantee the document will pass that review perfectly. Its intention is to simplify the formatting of the document and limit the type of possible corrections to minor fine tuning. This document summarizes the features of the class and provides an example header for the generation of a basic document. This document is NOT intended as a substitute for the University of Oregon Graduate School manual and will not be repeating the specifics of document formatting, as the user is expected to have downloaded, read and understood that manual¹.

*This file describes version v2.4, last revised 2010/12/21.

[†]E-mail: mander13@uore...

¹Thesis and Dissertation Style and Policy Manual (v. Fall 2010)

2 Installation

The package is supplied in `dtx` format, running `tex uothesis.dtx` will extract the package whereas `latex uothesis.dtx` will extract it and also typeset the documentation.

Typesetting the documentation requires a number of packages in addition to those needed to use the package. This is mainly because of the number of demonstration items included in the text. To compile the documentation without error, you will need the packages:

- `array`
- `hypdoc`
- `lmodern`
- `booktabs`
- `listings`
- `microtype`

3 Requirements

The `uothesis` class itself minimally requires the following packages:

- `float`
- `setspace`
- `ragged2e`
- `subfig`
- `lineno`
- `draftwatermark`
- `xcolor`
- `layouts`
- `graphicx`
- `todonotes`

Additional features and functionality may require the following packages:

- `chemstyle` (for chemistry)
- `amsthm` (for `amstex`)
- `mhchem` (for chemistry)
- `amssymb` (for `amstex`)
- `amsmath` (for `amstex`)
- `lipsum` (for `lipsum`)

These are normally present in the current major \TeX distributions, but are also available from [The Comprehensive TeX Archive Network](#). Note that these packages themselves may have secondary dependencies not expressly listed here. When in doubt read their documentation.

4 The Class File

`uothesis` is an extended version of the `report` \LaTeX primitive class. It has been heavily extended to comply with the University of Oregon Graduate School requirements for the formatting of dissertations and theses. While every effort has been made to assure that the class generates a document that fully complies with the Graduate School's requirements, every document will be different and use different packages that may cause formatting issues. Therefore, the use of this package *does not* replace extensive proof reading or the meetings with the thesis editor.

5 Class Options

Class options for `uthesis` should be declared in the usual manner within square brackets during the class declaration in the header:

```
\documentclass[option1,option2,option3]{uthesis}
```

Note that class options should be coma separated.

5.1 General class options

<code>dissertation</code>	Formats the document for a Ph.D. dissertation.
<code>msthesis</code>	Formats the document for a Master's thesis (still experimental... Graduate School has not approved for theses.)
<code>draftimages</code>	Graphics included using <code>\includegraphics</code> are suppressed to just their bounding boxes and file names. This option is useful for quick compiles where only the layout of the pages and text are a concern. This option is suppressed by the option <code>final</code> .
<code>draftcopy</code>	Creates a draft copy of the document. Dates the document on each page, does not include the preliminary pages, TOC, TOF, or TOT. A page of notes and omissions is created after the cover page for use with the editorial macros below. This option also uses the <code>bound</code> option, which shifts the text block slightly to one side for three hole punching. Line numbering is also invoked for this draft mode and the text is shrunk down by one size to reduce paper if the draft is printed.
<code>committeedraft</code>	Like <code>draftcopy</code> except includes front matter and standard title page. Does not include the texts of the acknowledgement or dedication. For distribution to committee members.
<code>latedraft</code>	Useful for last-minute preparations, corrections, and editing before handing the document to the graduate school. For all purposes, <code>latedraft</code> is identical to <code>final</code> , with the exception that the dedication and the acknowledgements are suppressed and the inclusion of a disclaimer to clearly mark this as a draft copy.
<code>final</code>	The final draft for presentation to the graduate school.

5.2 Formatting class options

<code>justified</code>	This option turns off the ragged right setting for the large text blocks of the document and returns the text block formatting to the \LaTeX default, which is full justification. The UOGS does not generally approve of full justification, but they will accept it in this case since \LaTeX does it properly.
<code>copyright</code>	Includes the copyright page.
<code>numsections</code>	Provides the option of numbered sections.
<code>gsmodern</code>	An alternate formatting scheme to <code>numsections</code> that still provides the section numbering. This has been designed to be closer to technical manuscripts with the numbering hierarchy spanning from the Chapter to the subsection level.
<code>contnumbering</code>	This changes the figure and table numbering to be continuous throughout the document from start to finish.
<code>amstex</code>	Loads <code>amsmath</code> , <code>amsthm</code> , and <code>amssymb</code> packages in proper order.
<code>chemistry</code>	Loads the <code>amstex</code> class option, <code>mhchem</code> , and <code>chemstyle</code> packages. Defines new environments for long and short reactions (<code>chem</code> and <code>Chem</code>) and a new cross reference type for reactions (<code>rxn:</code>) for use with <code>\eqref{}</code> . The <code>rxn:</code> prefix is

paired with a new counter to keep track of the reaction environments. This counter is reset by chapter by default.

smallcaps Allows small caps in titles and TOC. This option should only be used if there is a need to differentiate between capital and lower case letters in the title, such as with atomic symbols.

bound The **bound** option is provided strictly for personal use. It reformats the margins and text block parameters to allow for printing and binding of finished documents. A disclaimer is placed at the bottom of the copyright page, and the copyright notation on this page is suppressed.

6 Manuscript macros

6.1 General macros

\cleanbreak Forces a clean linebreak in the TOC, TOT, and TOF. This macro is provided to correct issues with over-run in the TOC, etc. It is used so:

```
\chapter[This is the use of the \linebreak...]{This is the use of
the...}
```

The line would break at the point indicated. This macro does not always work depending on how badly other typesetting rules are violated and should only be used in the square bracketed "short title" area. Note that to conform to the University of Oregon Graduate School style manual the title in the square and curly brackets should be identical. A second caveat to this command is that it is especially unstable with the use of ragged right text blocks. The method that is used for the fully justified text block (L^AT_EX default) is incompatible with the **Ragged2e** package, and so a second method, **\newline**, is used. This method gives L^AT_EX the option of allowing a page break in the middle of the TOC entry.

6.2 Editing macros (**draftcopy**, **committeedraft**)

\ednote **\ednote{}** is a variation on standard margin notes. A numbered margin note will be placed in the margin with a place holder in the text body at the location in the text. A line will connect the place holder with the margin note and the text in the "{}" will appear on the notes page in the draft copy of the document. The macro is used so:

```
This is some text that needs a callout\ednote{this is a call out}.
```

\needref **\needref{}** places a diamond in the text body at the command location, and a red margin note at the same line with an arrow and a "citation." The "{}" can be left blank, but must be included at the moment. Text in the braces will also appear on the notes page in the draft copy.

\here **\here** places a square in the text body and a red "here" in the margin. It is intended to mark incomplete sections and will place an "incomplete section" note in the draft copy notes page.

6.3 Chemistry macros (**chemistry**)

These commands use a combination of **mhchem** and **amsmath** calls to create two new environments, **chem** and **Chem**. These reactions can be cross referenced using

the rxn prefix in `\eqref{}`.

```
\eqref{rxn:somerxn}
```

`\chem` `\chem` is for short equations (no more than 1 column width) and uses `mhchem` and standard AMS equation environments. It is used so:

```
\chem[rxn:firstrxn]{MT2X4}
```

`\Chem` The second environment is `\Chem`, which is for long reactions. This environment uses `amsmath multiline` environments which allow the use of `\\` to indicate where the equation should be broken. In this reaction, the line will be broken following the reaction arrow (`->` in the code).

```
\Chem[rxn:secondrxn]{[(\cmath{(2+\delta)}Se \cdot \ce{Cr}
\cdot \ce{Cu} \cdot \ce{Cr} \cdot \ce{\cmath{(2+\delta)}Se})) ->
[SI{600}{\celsius}][\text{amorphous melt}]]\ CuCr2Se4
\cmath{(\text{Fd3m, } \angle 111\angle_{SL} )} + Se ^ }
```

7 Manuscript organization

It is suggested that you use some scheme for breaking up your document both for ease of editing and for debugging purposes. The method that has been suggested in the past is to break up the manuscript into a header or root file and a series of dependent tex files that contain one chapter each contained in a directory folder. These dependent tex files can then be included or excluded by using `\include{}` commands. `uothesis` is set up to support this method of working. The inclusion of the `"\% !TEX root = <path to root file>"` command will aid in this. The manuscript header example provided demonstrates one possible scheme for splitting of documents. The different components of the header and will be provided in the next section.

7.1 Manuscript header example

```
\documentclass[dissertation,justified,copyright,draftimages,final,
gsmodern]{uothesis}

\usepackage[english,UKenglish]{babel}
\input{custom_cmds.tex}

THEESIS FRONT MATTER

TITLES.
\covertitle{Document Title As it will appear on\\ the cover page}
\abstracttitle{Document Title: As it will appear on the abstract page}

AUTHOR
\author{Your Name Here}

DEPARTMENT
\narrowdepartment{Short Dept. Name}
\department{Full name of department}
```

```

DEGREE INFORMATION
\degreetype{Doctor of Philosophy}
\degreemonth{Month}
\degreeyear{XXXX}

```

```

COMMITTEE INFORMATION
\advisor{Advisor's name}
\chair{Chair's name}
\committee{Member 1 & Inside\\
    Member 2 & Inside\\
    Member 3 & Outside\\
    Member 4 & Honorary\\}
\graddean{Richard Linton}

```

```

CURRICULUM VITAE
\include{thesis_cv}

```

```

ACKNOWLEDGEMENTS
\include{thesis_acknowledgements}

```

```

DEDICATION (optional)
\include{thesis_dedication}

```

```

ABSTRACT
\include{thesis_abstract}

```

```

Main Document
\begin{document}
\maketitle

```

```

CHAPTERS
\include{introduction}
\include{chapter_2}

```

```

APPENDICES
\appendix
\include{tappendix_1}

```

```

REFERENCES
\bibliographystyle{unsrtnat}
\bibliography{bib}
\end{document}

```

Note that the various components of the document are kept separate with `\include` commands. The exception is the `\input` command used for the `custom_cmds.tex`. The difference comes from the fact that `\input` is treated as part of the header file itself and is processed in line with the rest of the code. The `\import` command takes the output of the target file and adds that, resulting in pages breaks after each `\include`. This is handy, as the style manual requires that each chapter starts on a new page.

8 Manuscript meta-data

8.1 Main information

<code>\covertitle</code>	<code>\covertitle{}</code> is the title that will appear on the title page of the document. It requires hard coding of the line breaks, using <code>"\"</code> , to comply with the inverted pyramid style of the graduate school ² .
<code>\abstracttitle</code>	<code>\abstracttitle{}</code> is the title form for anywhere the title appears as in line text. Do NOT use line breaks in the abstract title.
<code>\author</code>	The full name of the author as it appears on the UO records.
<code>\narrowdepartment</code>	Some departments have an officially designated "short" name. If you are in one of these departments, this should go here and will be used in the appropriate locations in the document.
<code>\department</code>	This is the official name of the students department.
<code>\degreetype</code>	Take the abbreviation of the degree that the document is for and expand it to its full name, e.g. Doctor of Philosophy, Master of Arts, Science, etc.
<code>\degreemonth</code>	Month of graduation, either December, March, June, or August.
<code>\degreeyear</code>	The year that the dissertation or thesis will be defended.
<code>\advisor</code>	Full name of the research advisor
<code>\chair</code>	Full name of the committee chair
<code>\cochair</code>	Full name of the committee cochair, if applicable.
<code>\committee</code>	A list of the examining committee following the form: " <i>\full name\&\member type\</i> " (see example below). This list can be of arbitrary length and is formatted using a table.
	<pre> \committee{Dr. Person 1 & Member\\ Dr. Person 2 & Member\\ Dr. Person 3 & Outside Member\\ Dr. Person 4 & Honorary Member\\} </pre>
<code>\graddean</code>	The full name of the current dean of the University of Oregon Graduate School.

8.2 Chapter-like meta-data

Chapter-like meta-data are large blocks of text. These can be placed in the header file or they can be replaced with `\include{}` arguments and kept elsewhere to keep the header compact. The example header uses the latter option.

<code>\abstract</code>	Fully formatted abstract, as you turned in to the University of Oregon Graduate School. There are size restrictions placed on this document, 350 words and 150 words for the dissertation and the thesis respectively ³
<code>\acknowledge</code>	Optional, the style guide ⁴ indicates that this should be no more that 2 pages.
<code>\dedication</code>	Optional, small text block.

8.3 The Curriculum Vitae

<code>\birthplace</code>	The birth place of the author
<code>\birthday</code>	author's birthday
<code>\schools</code>	List of the schools attended by the author, with their city and state of location. Each school is on its own line with a blank line in between:

²Thesis and Dissertation Style and Policy Manual (v. Fall 2010), Pg. 22

³Thesis and Dissertation Style and Policy Manual (v. Fall 2010), Pg. 24

⁴Thesis and Dissertation Style and Policy Manual (v. Fall 2010), Pg. 25

	<code>\schools{University of Somewhere, City, State</code>
	<code>University of Somewhere Else, City, State</code>
	<code>A State School, City, State}</code>
<code>\degrees</code>	List of the education of the author. The list takes the form of an entry followed by a blank line followed by the next entry. Each entry should be formatted so: <code>\full degree name</code> in <code>\field</code> , <code>\year</code> , <code>\school name</code> . An example is below: <pre> \degrees{Doctor of Philosophy in submersible basketry, 2010, University of Somewhere Master of Something in something important, 2005, University of Somewhere Else Bachelor of Something in something completely different, 2002, A State School.} </pre>
<code>\interests</code>	A comma delimited list of interests.
<code>\experience</code>	Work history related to the authors research, as with <code>\schools{}</code> and <code>\degrees{}</code> , one entry per line with a blank line in between.
<code>\awards</code>	A list of awards and honors.
<code>\publications</code>	This section should be formatted the same way as <code>\schools{}</code> , etc. The actual entries must be formatted <i>exactly</i> the same as the References Cited section of the document. The easiest way to do this is to take a bibtex file with the authors publications, and create a .bib file for that using the same bibtex style and then copy and pasting it into this section between the braces. Bibdesk will do this by using one of the optional copy formats under file as should JabRef.

9 Change History

v1.0	General: Everything previous to 2009/07/24 1	the error codes during the compile. 1
v2.0a	General: Initial work started. Considering all previous versions "1.0." Cleaning up comments updating out dated package used and added packages to provide new functionality. Removed support for "tech report." Removed normalspace command, will use setspace options from now on. Updated the chair and advisor listings to be more general. Corrected a formatting issue on the signature page 1	v2.0c General: Updated draftcopy option. Added new features and tuned others. Added the ednote command (mooched from the 1.0 example documents) with some modifications. Added the HERE command (mooched from the 1.0 example documents) with some modifications. Added the needref command. Added support for draft option in graphics package (figures show bounding boxes rather than figures in draftcopy mode). varioref support corrected. 1
v2.0b	General: Removed outdated caption.cls support. Cleaning up	v2.0d General: Refined editing tools to

	only appear in editing mode and not cause errors during final typesetting.	1		
v2.0e	General: Created <code>draftimages</code> option, which sets the <code>includegraphics</code> command in <code>graphicx</code> to "draft" mode.	1	v2.0i	General: Created the option <code>contnumbering</code> : Provides option of having the figure and tables numbered continuously or by chapter.
v2.0f	General: Started cleaning up the comments and logic hierarchies. Using Tabs not spaces for nesting.	1	v2.0j	General: Fixed numbering issues with appendices. Corrected coding for <code>gsmodern</code> to be the hierarchical level numbering. Implemented overfull <code>hbox</code> marking in all draft modes.
v2.0g	General: Corrected comments from the UO graduate school. Title Page: Title double spaced. No hyphenation throughout (using hyphenation penalties). Suppressed widows and orphans. CV: Rolled Grants into Awards and Honors . TOC: Set the "Chapter" column heading to appear on extra TOC pages. Corrected References to be single spaced with 1 line between each entry. Correct References problem with TOC, spacing, and formatting. (found to be a conflict with <code>chemstyle</code>). <code>gsmodern</code> set to be bold sections rather than underlined to prevent obscuring subscripts.	1	v2.0k	General: Corrected conditional appendix formatting to account for the formatting difference between a singular appendix and multiple appendices. Implemented watermarking on the various draft environments. Employed <code>draftwatermark.cls</code> : Currently only places watermarks on the first page... may change this in the future. Implemented Layouts package in draft mode only: Places a schematic of the page layout after the draft copy cover
v2.0h	General: Corrected comments from UO graduate school: Corrected chapter number spacing in TOC/TOT/TOF. Corrected fonts to force 12pt on final draft. Various improvements and new features: Implemented <code>cleanbreak</code> command for TOC/TOT/TOF linebreaks. Implemented <code>smallcaps</code> option for which allows small caps in the titles for use with subscripts. Refined various modes (Draft, Committee draft, etc.) added red disclaimers to all drafts implemented line numbers on draft modes added ams math files to default loading. Implemented <code>final</code> option to turn all draft modes off for dead sure.	1	v2.0l	General: Added new environments <code>chem</code> and <code>Chem</code> based on a combination of <code>amsmath</code> equation environments and <code>mhchem</code> calls. <code>chem</code> is for use in short equations and uses <code>amsmath</code> equation environments. <code>Chem</code> is for use in long equations requiring linebreaks and uses <code>amsmath</code> multiline environments. Also added <code>rxn:</code> tag for cross referencing. allow for the use of typical ref commands or <code>eqref</code> from <code>amsmath</code> which produced parentheses
			v2.0m	General: Reworked the editing markup to use the <code>todonotes</code> package. Now adds a list of editing marks and the pages before the document in draft mode. . .
			v2.0n	General: Added support for lorem ipsum dummy text through the "lipsum" option in the docu-

	ment header. Cleaned up psuedocode.	1		istry" options. amstex loads the ams packages amsthm, amsmath, and amssymb packages in the appropriate order as indicated by the ams-tex manual. chemistry loads mhchem and creates new environments for long chemical equations as well as the "reaction" environment.	1
v2.0o	General: Brought abstract and approval pages into compliance with new graduate student formatting guidelines.	1			
v2.0p	General: Fixed comments from graduate student thesis editor. Corrected Appendix bug (somebody tied the appendix marker to the back flyleaf). Got the page number placement sorted out. . .	1			
v2.1	General: Tweaked gsmodern, numsection, and default numbering schemes for sections, tables and figures.	1			
v2.2	General: Made flush left text the default for the text block. Added "justified" option for full justified (LaTeX default) text block. Adjusted the default indent to 24pt as per the GS recommendation. .	1			
v2.3	General: added "amstex" and "chemistry" options. amstex loads the ams packages amsthm, amsmath, and amssymb packages in the appropriate order as indicated by the ams-tex manual. chemistry loads mhchem and creates new environments for long chemical equations as well as the "reaction" environment.	1	v2.4	General: added bound option for formatting the document as for printing/binding. Currently this only handles 1 sided printing based on the previous dissertation class. Also ties the bound mode to the draft mode, allowing the printing and 3 hole punching of documents. A disclaimer is placed on the copyright page indicating that the document is for personal use and is not to be confused with the official formatting (i.e. final with bound off). First version in .dtx format	1

10 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.

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\abstract	7	\cleanbreak	4	draftcopy (option) . . .	3
\abstracttitle	7	\cochair	7	draftimages (option) . .	3
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\advisor	7	committeedraft (option)	3	E	
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\chair	7	\degreetype	7	H	
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J		O	
<code>justified (option)</code> ... 3	options:		<code>justified</code> 3
L		<code>amstex</code> 3	<code>latedraft</code> 3
<code>latedraft (option)</code> ... 3	<code>bound</code> 4	<code>msthesis</code> 3	<code>numsections</code> 3
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	<code>draftimages</code> 3		