

# Instructions for the Use of a General L<sup>A</sup>T<sub>E</sub>X Template for LSU Theses and Dissertations

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## 1 Introduction

This document is intended to provide basic directions for using the included L<sup>A</sup>T<sub>E</sub>X template to create your thesis or dissertation. As of this writing, this template conforms to the LSU Graduate School's format and style requirements, as stated in the *Guidelines for the Preparation of Master's Theses and Doctoral Dissertations*, dated March 2006. Note that these requirements are subject to change in future revisions of these guidelines, and the current template may not be acceptable for the preparation of future electronic theses and dissertations (ETDs). Furthermore, if your adviser, committee, or department has other formatting/style requirements in addition to those found in the Graduate School guidelines, this template may not necessarily meet your needs.

The provided template will generate a 12-point, full-justification, double-spaced document with approximately 1-inch margins, consistent with the Traditional style described in the Graduate School guidelines. By default, the resulting document contains the following, properly formatted elements: Title Page, Acknowledgments, Table of Contents, List of Tables, List of Figures, Abstract, Body of ETD, References, Appendices, and Vita. Optional ETD elements, such as the Copyright Page, Dedication, Preface, and a List of Nomenclature, are also available to you. To use the template, only a basic understanding of L<sup>A</sup>T<sub>E</sub>X is required. (Since you are considering writing your ETD in L<sup>A</sup>T<sub>E</sub>X, this is a reasonable assumption.)

The provided `.tex` and `.cls` files represent a rudimentary approach for producing a basic ETD consistent with the LSU Graduate School requirements. Thus, if you have programming experience with L<sup>A</sup>T<sub>E</sub>X macros and/or the underlying base T<sub>E</sub>X commands, feel free to modify this template as you see fit.

## 2 How To Use the Template

The following files should be included with the provided `.zip` file:

1. the current document (`instructions.pdf`),
2. a  $\LaTeX$  class file (`lsuetd.cls`),
3. a template for an ETD containing two or more appendices (`mainfile.tex`),
4. a template for an ETD with only a single appendix (`mainfileA.tex`),
5. a template for an ETD with no included appendices (`mainfileB.tex`).

For Windows users, simply copy `lsuetd.cls` and each `.tex` file to the working directory used by your  $\LaTeX$  editor (typically the My Documents folder). If you are using Linux, copy these files to your home directory (e.g., `/home/username`). Except for the number of appendices formatted, `mainfile.tex`, `mainfileA.tex`, and `mainfileB.tex` contain the same commands and include identical features. Simply choose the template file based on how many appendices (if any) you wish to include in your ETD.

### 2.1 How to Set Up Your ETD Files

When preparing a large document such as a thesis or dissertation, the most convenient way to edit and assemble the manuscript is to divide the content into multiple `.tex` files. Each chapter of the ETD is assigned its own `.tex` file (e.g., `chapter1.tex`, `chapter2.tex`, ..., `chapterX.tex`), as well as each appendix (e.g., `appendixA.tex`, `appendixB.tex`, ..., `appendixY.tex`). The References section also has its own file, named `bibliography.tex`. All of these files must be in the same directory as the template file.

The template file (`mainfile.tex`, `mainfileA.tex`, or `mainfileB.tex`) serves as a root file that accesses each individual chapter, appendix, or bibliography `.tex` file separately and adds its contents to your ETD. This allows you to make changes to different parts of your document more easily than sifting through the entire manuscript from start to finish to make particular changes. This also saves a significant amount of space when compiling the template, and avoids a lot of frustration when troubleshooting any  $\LaTeX$  errors that may arise. **This is the method used by the template to construct your thesis/dissertation, and the one you must use for everything to work properly. The names of the individual chapter/appendix/bibliography `.tex` files must also follow the same scheme as described above.**

The `\input` commands found in the template file act as a placeholder; for example, the command `\input{chapter1}` takes all the contents of `chapter1.tex` and inserts them into the template file word-for-word at the location of the `\input` command, just like a cut-and-paste operation. Therefore, in the `.tex` files created for your chapters, appendices, and references, insert only the necessary text, equations, figures, formatting and sectioning commands, environments, etc. Do NOT include preamble commands, and do not include the `\begin{document}` or `\end{document}` commands (since these are found

in the template file). Insert the title of your chapter or appendix in the template file itself, but do not include the `\chapter` command within the individual chapter or appendix files. You may use up to three (3) levels of subheadings within these `.tex` files, as necessary, using the `\section`, `\subsection`, and `\subsubsection` commands, respectively. In your `bibliography.tex` file, include only the necessary `\bibitem` commands and the references themselves.

## 2.2 How to Add or Eliminate Chapters, Appendices, and Other Elements

In the template files `mainfile.tex`, `mainfileA.tex`, and `mainfileB.tex`, it is assumed that your ETD contains five (5) chapters. If your ETD contains more or less chapters, only a few simple changes should be made to the template file used:

- Within the template file, immediately after the Abstract section, there is a section containing several `\input` commands, as well as a sequence of `\chapter`, `\doublespacing`, `\pagebreak`, and `\singlespacing` commands. After the last `\singlespacing` command in this section, insert the following commands to include Chapter X in your ETD, where X= 6, 7, 8, ...:

```
\chapter{Title of Chapter X}  
\doublespacing  
\input{chapterX}  
\pagebreak  
\singlespacing
```

and repeat for each additional chapter, as necessary. Each chapter to be included in your ETD has these same five lines of input. Therefore, if you have less than five chapters, simply “comment out” the five input lines corresponding to the unused chapter in question by placing a `%` character at the far left of the input line. For example, if you have only four chapters in your ETD, you must alter the commands for Chapter 5 by placing `%` at the beginning of each line, as follows:

```
%\chapter{Title of Chapter 5}  
%\doublespacing  
%\input{chapter5}  
%\pagebreak  
%\singlespacing
```

Thus, all references to Chapter 5 have been eliminated.

- If you are using `mainfile.tex` as your template and want to include more than two appendices, inserting the additional appendices is done in a nearly identical fashion

as additional chapters. Near the end of the template file, there is a section containing a sequence of `\chapter`, `\vspace`, `\input`, and `\pagebreak` commands, which is located AFTER the `\appendix` command. To include Appendix Y, where  $Y = C, D, E, \dots$ , add the following four lines after the last `\pagebreak` command in this section:

```
\chapter{Title of Appendix Y}
\vspace{0.5em}
\input{appendixY}
\pagebreak
```

and repeat for each additional appendix, as necessary.

- Within the template file, there are several blocks of “commented out” lines that generate optional thesis/dissertation elements, such as the Copyright Page, Dedication, Preface, and List of Nomenclature. To include any of these elements in your ETD, locate the block corresponding to the desired feature, and simply remove the `%` characters at the beginning of each of the six lines in the block, and insert the text for these sections directly into the template file itself.

### 3 General Comments and Suggestions

Most of the formatting technicalities, such as those for the Table of Contents, List of Tables, and List of Figures, are handled automatically by the template. The only changes to the commands in the template file that you need to make are those concerning the inclusion and/or removal of chapters, appendices, and optional ETD elements, as described previously. Everything else in the template file is fairly self-explanatory, and I have included some additional comments to remind you where you need to add commands for any necessary additional chapters or appendices. You must insert the text for the Title Page, Acknowledgments, Abstract, and Vita directly into the template file, as well as the titles of chapters and appendices; I have included sample text for each of these sections in the template as examples. If you need to use other  $\LaTeX$  packages in addition to those already provided in the template, insert them inside the `\usepackage` command, separated by commas. For those of you who are interested in creating an improved  $\LaTeX$  template, I have also added a few comments to describe the purpose of certain groups of commands.

Finally, there are several issues that I want to bring to your attention:

1. Even after using this template, check your final manuscript to ensure that it complies with *all* of the requirements set forth in the Graduate School guidelines. **Note that this template WILL NOT automatically remove widows and orphans from your text. You will have to do this manually.**
2. If you include itemized lists such as this one in the body of your ETD, do not use the standard `itemize` or `enumerate` environments, since they introduce extra white

space in the body of the text that is not acceptable to the Graduate School. Instead, use the `compactitem` and `compactenum` environments, respectively, to ensure that the double-spacing is consistent within the list.

3. Although three levels of subheadings within a chapter are supported by this template, only the top two are shown in the Table of Contents. This is because the numbering of subsubsections within a chapter (for example, 2.1.3.1) becomes too cumbersome, and this level of detail is not necessary to include in the Table of Contents.
4. When compiling the template file to generate your thesis/dissertation, be sure to compile **at least twice** before converting the `.dvi` file to `.ps` or `.pdf` form. When changes are made to the content that are reflected in the Table of Contents, List of Figures, etc.,  $\text{\LaTeX}$  will not generate the correct page numbering until after the second time the template file is compiled. Also, make sure that your manuscript is written on standard 8.5"  $\times$  11" letter paper when converting the `.dvi` file. For example, this is done in Linux using the following command for conversion to PostScript:

```
dvips mainfile.dvi -o mythesis.ps -t letter
```

5. One of the best features of  $\text{\LaTeX}$  is its automatic cross-referencing function for bibliographic references (using the `\cite` command), and for equations and tables/figures (using the `\ref` command). I strongly advise you to use this feature, particularly in documents where the order of equations and figures may change drastically before your ETD is finalized.