

**The Title of a Yale University Doctoral
Dissertation**

A Dissertation
Presented to the Faculty of the Graduate School
of
Yale University
in Candidacy for the Degree of
Doctor of Philosophy

by
The Author

Dissertation Director: Dr. A. Smith

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Abstract

**The Title of a Yale University Doctoral
Dissertation**

The Author

2006

Replace this text with the thesis abstract.

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Preface

This is the preface. It is an unnumbered chapter. The `markboth` TeX field at the beginning of this paragraph sets the correct page heading for the Preface portion of the document. The preface does not appear in the table of contents.

Introduction

The introduction is entered using the usual chapter tag. Since the introduction chapter appears before the `mainmatter` TeX field, it is an unnumbered chapter. The primary difference between the preface and the introduction in this shell document is that the introduction will appear in the table of contents and the page headings for the introduction are automatically handled without the need for the `markboth` TeX field. You may use either or both methods to create chapters at the beginning of your document. You may also delete these preliminary chapters.

Part I

The First Part

Chapter 1

About this Shell

This is the body (mainmatter) of the Yale University?? Doctoral Dissertation shell document.

The front matter has a number of sample entries that you should replace with your own. Replace this text with the body of your thesis. Do not delete the `mainmatter` TeX field found above in a paragraph by itself or the numbering of different objects will be wrong.

Changes to the typeset format of this shell and its associated L^AT_EX formatting file (`yalephd.cls` and `book.cls`) are not supported by MacKichan Software, Inc. If you wish to make such changes, please consult the L^AT_EX manuals or a local L^AT_EX expert. At the time this shell was created, the typesetting specification file was downloaded from the Yale Department of Economics?? Graduate Program Home Page?? using the link <http://www.econ.yale.edu/graduate/phd/yalephd.cls>?? .

If you modify this document and export it as “Yale University Doctoral Dissertation.shl” in the `Shells\Theses\SW` directory, it will become your new Yale University Doctoral Dissertation shell.

The typesetting specification selected by this shell document uses the default class

options, except that 12pt has been selected for the body text font size. There are a number of class options supported by this typesetting specification. The available options include setting the font used in the body of the document. Select **Typeset, Options and Packages**, the **Class Options** tab and then click the **Modify** button to see the class options that are available for this typesetting specification.

The text in chapter 3 was copied from the typesetting specification file `yalephd.cls`.

Chapter 2

Features of this Shell

2.1 Section

Use the Section tag for major sections, and the Subsection tag for subsections.

2.1.1 Subsection

This is just some harmless text under a subsection.

Subsubsection

This is just some harmless text under a subsubsection.

Subsubsubsection This is just some harmless text under a subsubsubsection.

Subsubsubsubsection This is just some harmless text under a subsubsubsub-section.

2.2 Tags

You can apply the logical markup tag *Emphasized*.

You can apply the visual markup tags **Bold**, *Italics*, Roman, Sans Serif, *Slanted*, SMALL CAPS, and Typewriter.

You can apply the special mathematics-only tags BLACKBOARD BOLD, *CALLIGRAPHIC*, and *fraktur*. Note that blackboard bold and calligraphic are correct only when applied to uppercase letters A through Z.

You can apply the size tags tiny, scriptsize, footnotesize, small, normalsize, large, Large, LARGE, huge and Huge.

This is a Body Math paragraph. Each time you press the Enter key, Scientific WorkPlace switches to mathematics mode. This is convenient for carrying out “scratchpad” computations.

Following is a group of paragraphs marked as Short Quote. This environment is appropriate for a short quotation or a sequence of short quotations.

The only thing we have to fear is fear itself. *Franklin D. Roosevelt*, Mar. 4, 1933

Ask not what your country can do for you; ask what you can do for your country. *John F. Kennedy*, Jan. 20. 1961

There is nothing wrong with America that cannot be cured by what is right with America. *William J. “Bill” Clinton*, Jan. 21, 1993

The Long Quotation tag is used for quotations of more than one paragraph. Following is the beginning of *Alice’s Adventures in Wonderland* by Lewis Carroll:

Alice was beginning to get very tired of sitting by her sister on the bank, and of having nothing to do: once or twice she had peeped into

the book her sister was reading, but it had no pictures or conversations in it, ‘and what is the use of a book,’ thought Alice ‘without pictures or conversation?’

So she was considering in her own mind (as well as she could, for the hot day made her feel very sleepy and stupid), whether the pleasure of making a daisy-chain would be worth the trouble of getting up and picking the daisies, when suddenly a White Rabbit with pink eyes ran close by her.

There was nothing so very remarkable in that; nor did Alice think it so very much out of the way to hear the Rabbit say to itself, ‘Oh dear! Oh dear! I shall be late!’ (when she thought it over afterwards, it occurred to her that she ought to have wondered at this, but at the time it all seemed quite natural); but when the Rabbit actually took a watch out of its waistcoat-pocket, and looked at it, and then hurried on, Alice started to her feet, for it flashed across her mind that she had never before seen a rabbit with either a waistcoat-pocket, or a watch to take out of it, and burning with curiosity, she ran across the field after it, and fortunately was just in time to see it pop down a large rabbit-hole under the hedge.

In another moment down went Alice after it, never once considering how in the world she was to get out again.

Use the Verbatim tag when you want \LaTeX to preserve spacing, perhaps when including a fragment from a program such as:

```
#include <iostream>          // < > is used for standard libraries.
void main(void)              // "main" method always called first.
{
```

```
cout << "Hello World."; // Send to output stream.  
}
```

2.3 Mathematics and Text

Let H be a Hilbert space, C be a closed bounded convex subset of H , T a non-expansive self map of C . Suppose that as $n \rightarrow \infty$, $a_{n,k} \rightarrow 0$ for each k , and $\gamma_n = \sum_{k=0}^{\infty} (a_{n,k+1} - a_{n,k})^+ \rightarrow 0$. Then for each x in C , $A_n x = \sum_{k=0}^{\infty} a_{n,k} T^k x$ converges weakly to a fixed point of T .

The numbered equation

$$u_{tt} - \Delta u + u^5 + u|u|^{p-2} = 0 \text{ in } \mathbf{R}^3 \times [0, \infty[\quad (2.1)$$

is automatically numbered as equation 2.1.

2.4 Lists Environments

You can create numbered, bulleted, and description lists using the Item Tag popup list on the Tag toolbar.

1. List item 1
2. List item 2
 - (a) A list item under a list item.

The typeset style for this level is different than the screen style. The screen shows a lower case alphabetic character followed by a period while the typeset style uses a lower case alphabetic character surrounded by parentheses.

- (b) Just another list item under a list item.
 - i. Third level list item under a list item.
 - A. Fourth and final level of list items allowed.

- Bullet item 1
- Bullet item 2

– Second level bullet item.

* Third level bullet item.

· Fourth (and final) level bullet item.

Description List Each description list item has a term followed by the description of that term. Double click the term box to enter the term, or to change it.

Bunyip Mythical beast of Australian Aboriginal legends.

2.5 Theorem-Like Environments

The following theorem-like environments (in alphabetical order) are available in this style.

Acknowledgement 1 *This is an acknowledgement*

Algorithm 2 *This is an algorithm*

Axiom 3 *This is an axiom*

Case 4 *This is a case*

Claim 5 *This is a claim*

Conclusion 6 *This is a conclusion*

Condition 7 *This is a condition*

Conjecture 8 *This is a conjecture*

Corollary 9 *This is a corollary*

Criterion 10 *This is a criterion*

Definition 11 *This is a definition*

Example 12 *This is an example*

Exercise 13 *This is an exercise*

Lemma 14 *This is a lemma*

Proof. This is the proof of the lemma. ■

Notation 15 *This is notation*

Problem 16 *This is a problem*

Proposition 17 *This is a proposition*

Remark 18 *This is a remark*

Summary 19 *This is a summary*

Theorem 20 *This is a theorem*

Proof of the Main Theorem. This is the proof. ■

Chapter 3

User Documentation

First, get a copy of the booklet "Preparation and submission of the Doctoral Dissertation" from the Graduate School. Then, ask your department and advisor if there any other requirements.

This class conforms to the Graduate School's current requirements (as of March 2000), in the sense that it was accepted without any quibbles. However, requirements change, so check the fine print. Also, some departments may have additional requirements which are not included in this class.

Since ultimate responsibility rests with you, the candidate, you should verify that the resulting dissertation meets requirements of your department and the Graduate School.

12pt type is easiest to read. Please be kind to your readers.

Here's an outline of how to use this class in the file `example.tex`:

The preamble should use the `\author` command to set the author's name, the `\date` command to set the month and year the degree will be awarded, and the `\advisor` command to set the name of the dissertation advisor.

The front matter should have (in this order):

abstract

title page

copyright notice page

table of contents list of figures, if any (order of lists is optional)

list of tables, if any

acknowledgments (optional)

glossary (optional)

A dedication may also be included in the front matter, presumably after the copyright notice page and before the table of contents.

The abstract environment and the `\maketitle` command of the standard LaTeX book class are redefined to meet Graduate School requirements. A `\makecopyright` command is provide to create the copright notice.

The body is standard LaTeX stuff.

The appendices (if any) and bibliography are the end matter. The style of the bibliography is left to you.

There is a new class option 'draft' which you may find useful. It places on the title page and in the page headings the current date and a message indicating that the copy is a draft. This is helpful when you're editing and have several drafts scattered about.

3.1 Summary

Just like the report document class but

class options: draft adds 'draft of `\today`' to page heading and title page twopage, twocolumn, landscape and papersize options are ignored

abstract environment redefined to have Yale heading.

`\maketitle` produces Yale title page

`\mainmatter` resets paging for the body.

`\advisor` command to set the name of the dissertation advisor

`\makecopyright` command to produce the copyright page.

The standard `\date` command should be used to set the month and year the degree is to be awarded.

Appendix A

The First Appendix

The appendix fragment is used only once. Subsequent appendices can be created using the Chapter Section/Body Tag.

Afterword

The back matter often includes one or more of an index, an afterword, acknowledgements, a bibliography, a colophon, or any other similar item. In the back matter, chapters do not produce a chapter number, but they are entered in the table of contents. If you are not using anything in the back matter, you can delete the back matter TeX field and everything that follows it.