



The College of Graduate Studies presents

# A THESIS/DISSERTATION WORKSHOP

# STAFF

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✕ **Beth Smith— basmith@tnitech.edu**

Academic Support Associate

**[www.tnitech.edu/graduatestudies](http://www.tnitech.edu/graduatestudies)**

# FOUNDATION OF A THESIS/DISSERTATION

- ✘ It is a reflection of you and your research.
- ✘ The quality of your paper is important both to you personally and as a representative of Tennessee Tech University.
- ✘ The integrity of the content is essential to the continued development of new knowledge and application to benefit society.

# WRITING THE THESIS/DISSERTATION

## ✗ What format do I use?

You are encouraged to use publications within your field (journals and textbooks) to assist you in establishing bibliographic form, use of numbers, and other conventions that are discipline oriented. Although knowledge and use of publication formatting is essential, the regulations established by the College of Graduate Studies guide always take precedence.

# WRITING THE THESIS/DISSERTATION

## ✗ What is the proper writing style?

You should use style handbooks such as the most recent editions of the *MLA Handbook for Writers of Research Papers* (English), *Publication Manual of the American Psychological Association* (Education), *CBE Style Manual* (Biology), *Form and Style* (Arts & Sciences, Engineering, Education), *The Chicago Manual of Style*, and *Harbrace College Handbook* as resources for basic style and grammar.

# WRITING THE THESIS/DISSERTATION

## ✖ Where can I get help if I have questions?

### + For help with writing and writing styles

- ✖ Writing Excellence Studio at Teach (WEST)  
Foundation Hall 117

<https://www.tnitech.edu/cas/english/west/>

- ✖ Go to <https://www.tnitech.edu/graduatestudies/etd>

- \* Thesis/Dissertation Guide Manual

- \* Thesis/Dissertation Checklist

- + If you cannot find the answers to your questions there, you may contact Beth Smith in the College of Graduate Studies as an additional resource.

# BIG TIPS TO SAVE YOU TIME & TROUBLE



- ✗ In your word processing program, set your paragraph styles to “0” space before and after paragraphs. Also, set your line spacing to “double.” This eliminates most spacing errors.
- ✗ Learn how to use “right tabs” and “leaders” so that you can properly format your Table of Contents, List of Tables, and List of Figures.
- ✗ Don’t rely on LaTeX alone for all your formatting. The content has format requirements as well.

# EXAMPLES OF PRELIMINARY PAGES

# ABSTRACT PAGE

## Key Elements:

- ✗ The page title starts on the first line of the page.
- ✗ The title of the thesis or dissertation is single-spaced.
- ✗ The body of the abstract is single-spaced within paragraph and a blank line is left between paragraphs.
- ✗ There is NO page number.

### AN ABSTRACT OF A THESIS OR DISSERTATION

#### GUIDE TO THE PREPARATION OF THESES AND DISSERTATIONS FOR STUDENTS AND FACULTY OF TENNESSEE TECHNOLOGICAL UNIVERSITY

Graduate S. Jones

Master of Arts and Sciences in English

This guide is designed as a resource tool for students and faculty venturing into the thesis or dissertation process. Material presented is in the approved, required format allowing the reader to see a visual example as well as learn from the written instruction.

It has been found that students have less difficulty with the development of the research paper and fewer corrections when provided with a clear and concise set of instructions that are easily followed. Today's students tend not to read instructions but to imitate what they see. Detailed instructions for a properly formatted paper unfortunately cannot be condensed like a Reader's Digest story; thus leaving this lengthy but informative paper to read.

Students who followed the guidelines showed a greater overall happiness during the review process as there were much fewer corrections noted by the Office of Research and Graduate Studies. The average student tends to have approximately five rounds of corrections/revisions/resubmissions on average. The student that follows the formatting guidelines and utilizes spell check in the word processing program tends to have an average of two rounds of corrections/revisions/resubmissions.

# TITLE PAGE

GUIDE TO THE PREPARATION OF THESES AND DISSERTATIONS  
FOR STUDENTS AND FACULTY OF TENNESSEE  
TECHNOLOGICAL UNIVERSITY

---

A Thesis (or Dissertation)  
Presented to  
the Faculty of the Graduate School  
Tennessee Technological University  
by  
Graduate S. Jones

---

In Partial Fulfillment  
of the Requirements of the Degree  
MASTER OF SCIENCE  
Nuclear Medicine

---

August 2010

## Key Elements:

- ✗ The title is double-spaced and in inverted pyramid form.
- ✗ The page is centered vertically and horizontally.
- ✗ Spacing between text and dividing lines is equal in all places.
- ✗ There is no printed page number.

# COPYRIGHT PAGE

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## Key Elements

- ✖ This page is optional.
- ✖ This page is centered both horizontally and vertically.
- ✖ This is the first page number with a printed number.

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# CERTIFICATE OF APPROVAL (SIGNATURE PAGE)

**CERTIFICATE OF APPROVAL OF THESIS**

**GUIDE TO THE PREPARATION OF THESES AND DISSERTATIONS**  
**FOR STUDENTS AND FACULTY OF TENNESSEE**  
**TECHNOLOGICAL UNIVERSITY**

by  
Jane S. Doe

Graduate Advisory Committee:

|   |  |   |
|---|--|---|
| <div style="border: 1px solid red; padding: 5px; width: fit-content;"><p>If you have one chairperson, simply put name of your chair and the word Chairperson under the first blank.</p></div> | <div style="margin-left: 20px;">→ Paul Kuzowski, Cochairperson</div> <div style="margin-left: 20px;">Michael Jackson, Cochairperson</div> <div style="margin-left: 20px;">Jackie Clingenpeel</div> <div style="margin-left: 20px;">Clint Liu</div> | <div style="margin-left: 20px;">Date</div> <div style="margin-left: 20px;">Date</div> <div style="margin-left: 20px;">Date</div> <div style="margin-left: 20px;">Date</div> |
|---|--|---|

Approved for the Faculty:

Mark Stephens  
Dean  
College of Graduate Studies

Date

iii

## Key Elements:

- ✗ The page title begins on the first line of the page.
- ✗ The thesis/dissertation title is double-spaced and inverted pyramid form.
- ✗ “Dr.” does not appear before any names.
- ✗ There is a printed page number.

# DEDICATION PAGE

## Key Elements:

- ✖ This page is optional.
- ✖ This page is centered both horizontally and vertically.
- ✖ The page number is printed.

### DEDICATION

This thesis is dedicated to my parents who have  
supported me throughout my education.  
Thanks for making me see this adventure through to the end.

# ACKNOWLEDGEMENTS

## ACKNOWLEDGEMENTS

I would like to thank Dr. Kuzowski who worked so diligently with me throughout my time at Tennessee Technological University. When my research reached a dead end, your guidance and assistance helped me see new possibilities and new avenues I had not yet explored. To Dr. Jackson and Dr. Liu, your constant advice helped me when decisions were difficult to make.

Thank you to all the department secretaries who helped me get all my copies made, get registered for classes, and bought supplies for my experiments. You were always cheerful and helpful. You have become an extended family to me.

Last, but not least, I would like to express my gratitude to the Cookeville Regional Medical Center for allowing me to present and test my theories in their facility.

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- ✘ This page is optional.
- ✘ The title begins on the first line of the page.
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- ✘ The page number is printed.

# TABLE OF CONTENTS

## TABLE OF CONTENTS

|  | Page |
|--|------|
| LIST OF TABLES.....                    | x    |
| LIST OF FIGURES.....                   | xi   |
| CHAPTER ONE - THE ESSENTIALS .....     | 1    |
| Purpose of the Guide .....             | 1    |
| Ethical Standards .....                | 2    |
| Plagiarism.....                        | 2    |
| Copyright .....                        | 3    |
| Federal and State Regulations.....     | 4    |
| Definitions .....                      | 4    |
| Typeface of Font.....                  | 4    |
| Text.....                              | 4    |
| Preliminary Pages .....                | 5    |
| Table.....                             | 5    |
| Figure.....                            | 5    |
| Appendix.....                          | 5    |
| CHAPTER TWO - ELEMENTS AND STYLE ..... | 6    |
| Preliminary Pages .....                | 6    |
| Abstract.....                          | 6    |
| Title Page.....                        | 6    |
| Copyright Page.....                    | 7    |
| Approval Sheet.....                    | 7    |
| Dedication Page .....                  | 7    |
| Acknowledgements .....                 | 8    |
| Table of Contents .....                | 8    |
| List of Tables/List of Figures.....    | 8    |

## Key Elements:

- ✗ TABLE OF CONTENTS begins on the first line of the page and is in all uppercase letters.
- ✗ “Page” is the column header for the page numbers.
- ✗ The page numbers are right tabbed with periods as leaders.
- ✗ LIST OF TABLES, LIST OF FIGURES, and all CHAPTERS AND CHAPTER TITLES are in uppercase letters.
- ✗ Chapters sections are in Title Case.
- ✗ Notice the indentions to indicate the level of header.

# TABLE OF CONTENTS (TECHNICAL STYLES)

## TABLE OF CONTENTS

|   | Page |
|---|------|
| LIST OF TABLES.....   | viii |
| LIST OF FIGURES.....  | ix   |
| Chapter   |      |
| 1. INTRODUCTION.....  | 1    |
| Introduction.....   | 1    |
| Background Review.....  | 3    |
| Basic Concepts.....   | 4    |
| Motivation and Methodology.....   | 7    |
| 1. LITERATURE REVIEW.....   | 3    |
| ECT System Configuration.....   | 3    |
| Sensor Description.....   | 5    |
| The ECT Model.....  | 7    |
| Reconstructive Techniques.....  | 10   |
| Capacitance Measuring Circuit.....  | 10   |
| Differential Sampling Circuit.....  | 10   |
| 2. A NEW WIDE FREQUENCY BAND CAPACITANCE TRANSDUCER<br>WITH APPLICATION TO MEASURING METAL FILL TIME..... | 12   |
| Quality.....  | 12   |
| Availability.....   | 13   |
| Other Considerations.....   | 13   |
| 3. CONCLUSION.....  | 15   |
| Results.....  | 16   |
| Future Work.....  | 19   |
| REFERENCES (or BIBLIOGRAPHY whichever you prefer).....  | 20   |
| APPENDIX.....   | 21   |
| VITA.....   | 30   |

## TABLE OF CONTENTS

|   | Page |
|---|------|
| LIST OF TABLES.....   | viii |
| LIST OF FIGURES.....  | ix   |
| Chapter   |      |
| 1. INTRODUCTION.....  | 1    |
| 1.1 Introduction.....   | 1    |
| 1.1.1 Background Review.....  | 3    |
| 1.1.2 Basic Concepts.....   | 4    |
| 1.2 Motivation and Methodology.....   | 7    |
| 2. LITERATURE REVIEW.....   | 3    |
| 2.1 ECT System Configuration.....   | 3    |
| 2.1.1 Sensor Description.....   | 5    |
| 2.2 The ECT Model.....  | 7    |
| 2.3 Reconstructive Techniques.....  | 10   |
| 2.4 Capacitance Measuring Circuit.....  | 10   |
| 2.5 Differential Sampling Circuit.....  | 10   |
| 3. A NEW WIDE FREQUENCY BAND CAPACITANCE TRANSDUCER<br>WITH APPLICATION TO MEASURING METAL FILL TIME..... | 12   |
| 3.1 Quality.....  | 12   |
| 3.2 Availability.....   | 13   |
| 3.3 Other Considerations.....   | 13   |
| 4. CONCLUSION.....  | 15   |
| 4.1 Results.....  | 16   |
| 4.2 Future Work.....  | 19   |
| REFERENCES (or BIBLIOGRAPHY whichever you prefer).....  | 20   |
| APPENDIX.....   | 21   |
| VITA.....   | 30   |

# LIST OF FIGURES

LIST OF FIGURES

| Figure  | Page |
|---|------|
| 1. Logos of the eTD service used by TTU. .... | 32   |
| 2. Happy Graduates ..... 35                   |      |

LIST OF FIGURES

| Figure   | Page |
|--|------|
| 1.1 Steps involved in Lost Foam Casting process .....  | 2    |
| 2.1 Electrical Capacitance Tomography System .....   | 16   |
| 2.2 Cross-section of ECT sensor with internal electrodes .....   | 17   |
| 2.3 Finite element model of the ECT Sensor .....   | 23   |
| 2.4 Capacitance sensitivity distributions of six typical electrode pairs calculated<br>for 12 electrodes .....         | 26   |
| 2.5 The image obtained using Linear Back Projection technique .....  | 32   |
| 2.6 Charge/discharge capacitance measuring circuit [14] .....  | 42   |
| 2.7 AC-based capacitance measuring circuit [14] .....  | 44   |
| 2.8 Differential sampling capacitance measuring circuit 05 .....   | 45   |
| 3.1 Schematic diagram of capacitance measuring stage .....   | 47   |
| 3.2 Schematic diagram of capacitance measurement transducer .....  | 50   |
| 3.3 Output of the demodulation stage for a signal with frequency $\omega_c$ by 10%<br>from transmitter frequency ..... | 54   |
| 3.4 Final output voltage with changing the stray capacitance .....   | 55   |

LIST OF FIGURES

| Figure  | Page |
|---|------|
| Figure 1.1 Steps involved in Lost Foam Casting process .....  | 2    |
| Figure 2.1 Electrical Capacitance Tomography System .....   | 16   |
| Figure 2.2 Cross-section of ECT sensor with internal electrodes .....   | 17   |
| Figure 2.3 Finite element model of the ECT Sensor .....   | 23   |
| Figure 2.4 Capacitance sensitivity distributions of six typical electrode pairs calculated<br>for 12 electrodes .....         | 26   |
| Figure 2.5 The image obtained using Linear Back Projection technique .....  | 32   |
| Figure 2.6 Charge/discharge capacitance measuring circuit [14] .....  | 42   |
| Figure 2.7 AC-based capacitance measuring circuit [14] .....  | 44   |
| Figure 2.8 Differential sampling capacitance measuring circuit 05 .....   | 45   |
| Figure 3.1 Schematic diagram of capacitance measuring stage .....   | 47   |
| Figure 3.2 Schematic diagram of capacitance measurement transducer .....  | 50   |
| Figure 3.3 Output of the demodulation stage for a signal with frequency $\omega_c$ by 10%<br>from transmitter frequency ..... | 54   |
| Figure 3.4 Final output voltage with changing the stray capacitance .....   | 55   |

# LIST OF TABLES

## LIST OF TABLES

| Table   | Page |
|---|------|
| 1. Page Order for Theses/Dissertations.....                           | 19   |
| 2. Quick Reference Guide for Mechanics of Thesis or Dissertation..... | 23   |

## LIST OF TABLES

| Table   | Page |
|---|------|
| 1.1 Steps involved in Lost Foam Casting process .....   | 2    |
| 2.1 Electrical Capacitance Tomography System .....  | 16   |
| 2.2 Cross-section of ECT sensor with internal electrodes .....  | 17   |
| 2.3 Finite element model of the ECT Sensor .....  | 23   |
| 2.4 Capacitance sensitivity distributions of six typical electrode pairs calculated for 12 electrodes .....         | 26   |
| 2.5 The image obtained using Linear Back Projection technique .....   | 32   |
| 2.6 Charge/discharge capacitance measuring circuit [14] .....   | 42   |
| 2.7 AC-based capacitance measuring circuit [14] .....   | 44   |
| 2.8 Differential sampling capacitance measuring circuit 05 .....  | 45   |
| 3.1 Schematic diagram of capacitance measuring stage .....  | 47   |
| 3.2 Schematic diagram of capacitance measurement transducer .....   | 50   |
| 3.3 Output of the demodulation stage for a signal with frequency $\omega_c$ by 10% from transmitter frequency ..... | 54   |
| 3.4 Final output voltage with changing the stray capacitance .....  | 55   |

## LIST OF TABLES

|   | Page |
|---|------|
| Table 1.1 Steps involved in Lost Foam Casting process .....   | 2    |
| Table 2.1 Electrical Capacitance Tomography System .....  | 16   |
| Table 2.2 Cross-section of ECT sensor with internal electrodes .....  | 17   |
| Table 2.3 Finite element model of the ECT Sensor .....  | 23   |
| Table 2.4 Capacitance sensitivity distributions of six typical electrode pairs calculated for 12 electrodes .....         | 26   |
| Table 2.5 The image obtained using Linear Back Projection technique .....   | 32   |
| Table 2.6 Charge/discharge capacitance measuring circuit [14] .....   | 42   |
| Table 2.7 AC-based capacitance measuring circuit [14] .....   | 44   |
| Table 2.8 Differential sampling capacitance measuring circuit 05 .....  | 45   |
| Table 3.1 Schematic diagram of capacitance measuring stage .....  | 47   |
| Table 3.2 Schematic diagram of capacitance measurement transducer .....   | 50   |
| Table 3.3 Output of the demodulation stage for a signal with frequency $\omega_c$ by 10% from transmitter frequency ..... | 54   |
| Table 3.4 Final output voltage with changing the stray capacitance .....  | 55   |

# CHAPTER PAGE

## CHAPTER 1 THE ESSENTIALS

### Purpose of the Guide

This guide is designed to be a basic source of information for thesis/dissertation preparation. It establishes the technical parameters within which you should work, such as the electronic thesis and dissertation, submission interface, quality of paper for those who desire bound copies of their work, margins, and the sequence of pages within the manuscript. Since most of you will publish during and after your graduate education, this guide encourages the use of leading professional publications to help establish specific formatting convention.

You are encouraged to use publications within your field—journals and textbooks—to assist you in establishing bibliographic form, use of number, and other conventions that are discipline oriented. However, the application of this theory is not simple. You must understand the various elements of a manuscript and general publication formatting requirements in academic publishing. Although knowledge and use of publication formatting is essential, **the regulations established by this guide always take precedence.**

You should use style handbooks such as the most recent editions of the *MLA Handbook for Writers of Research Papers* (English) [3], *Publication Manual of the American Psychological Association* (Education) [4], *CBE Style Manual* (Biology) [5], *Form and Style* (Arts & Sciences, Engineering, Education) [6], *The Chicago Manual of Style*, and *Harbrace College Handbook* [8] as resources for basic style and grammar. In contrast, **you should never use previously accepted theses and dissertations as the final guide to style.** Examples taken from other theses may be out of context or may be incorrect. The existence of a particular style or usage in a previously accepted thesis does not establish a precedent for its continuation.

By accepting your thesis or dissertation and awarding the degree, Tennessee Technological University places its academic reputation on the line. The content of your

## Key Elements:

- ✗ CHAPTER # always begins on the first line of the page and is in uppercase letters.
- ✗ The title is always in uppercase letters.
- ✗ Notice the spacing between the titles, headers, and body of text.
- ✗ Paragraphs are indented.
- ✗ No additional space between paragraphs.

# CHAPTER BODY

formatting and placement of footnotes at the bottom of the page. For disciplines using that convention, the formatting provided by the software application would be acceptable.

## Tables and Figures

### General Information

**Titles.** Since tables and figures are separate entities, you must number them independently. Each table or figure must have a unique title descriptive of its contents. This title appears at the top of the table and at the bottom of the figure. Give figures containing parts a general title, after which you may break the figure down into "A" and "B" parts. For multiple-part figures, you may integrate the title, with titles for each part as part of the general figure title, or composite, with no reference to the individual parts. No two figures may have exactly the same title. The formatting of the titles must be consistent for all tables and figures.

**Numbering.** You may number tables and figures in one of several ways. Three of the most common numbering schemes are:

- to number consecutively throughout the manuscript, including the appendix(es), using either Roman or Arabic numerals
- to number consecutively within chapters, parts, or appendixes, with a prefix designating the chapter/part/appendix (e.g., 3-1, 3-2 . . . 4-1, 4-2, A -1, B -1)
- to establish a consecutive numbering system for the body of the manuscript and a different one for the appendix(es) (e.g., 1, 2, 3 for text and A-1, A -2, A-3 for appendix)

The style of numbering must be consistent.

**Placement within the body of the manuscript.** You must make each table or figure immediately follow the page on which it is first mentioned (except as noted in the next paragraph), and you must refer to all tables and figures by number, not by expressions such as "the following table/figure." When more than one table or figure is introduced on a page of text, each follows in the order mentioned. You may find it convenient to assign tables and figures pages separate from

## Key Elements:

- ✘ Heading styles must be followed. Do not skip a heading level.
- ✘ Notice spacing of headings.
- ✘ Right margin may be ragged or justified.

# CHAPTER PAGE AND BODY( TECHNICAL STYLE)

## CHAPTER 3

### THE OVERVIEW OF DATA MINING AND KNOWLEDGE DISCOVERY

Data mining and knowledge discovery (DMKD) theory framework to interpret the nature of the objects hidden behind this chapter, some basic definitions about DMKD are first brief the approaches of signature extraction and pattern recognition.

#### 3.1 Basic Definitions About DMKD

To clearly identify the goal and process of the research, the information, knowledge, and DMKD are briefly introduced in this

##### 3.1.1 Data

Data is a numerical form of the observed matter in terms of correlations. It implies two features: (a) data can be made appropriate processing, and (b) data can be transformed into transmission and processing.

##### 3.1.2 Information

Information is the specific meaning delivered by data in a circumstance. This means data is the carrier of information. It

$$v_{\theta} = L \frac{d}{dt} i_{\theta} - \omega L i_{\theta} + v_{\theta} \quad (2.23)$$

where  $L = L_t + L_m$  is the total inductance between the terminal bus and load bus;  $v_{\theta} = V_{\theta} \sin \delta^*$  and  $v_{\theta} = V_{\theta} \cos \delta^*$  are the d-axis and q-axis components of load bus voltage in  $dq$  reference frame, where  $V_{\theta}$  stands for voltage magnitude at load bus and  $\delta^*$  stands for phase angle at load bus.

Substituting Equations (2.14), (2.15), (2.16), and (2.17) into Equations (2.22)

and (2.23) to solve for  $\frac{d}{dt} i_{\theta}$  and  $\frac{d}{dt} i_{\theta}$ , we have

$$\frac{d}{dt} i_{\theta} = \frac{1}{2L} \left[ \left( 1 - \frac{L}{x_d} \right) V_{\theta} \sin \delta - V_{\theta} \sin \delta^* \right] \quad (2.24)$$

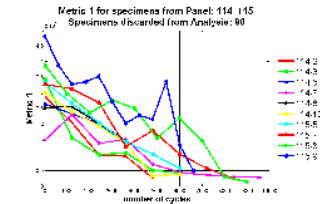
$$\frac{d}{dt} i_{\theta} = \frac{1}{2L} \left[ \left( 1 - \frac{L}{x_d} \right) V_{\theta} \cos \delta - V_{\theta} \cos \delta^* + \frac{\omega L}{x_d} E_{\theta} \right] \quad (2.25)$$

Substituting Equation (2.24) and Equation (2.25) into Equation (2.20) and Equation (2.21) to eliminate  $\frac{d}{dt} i_{\theta}$  and  $\frac{d}{dt} i_{\theta}$ , we have

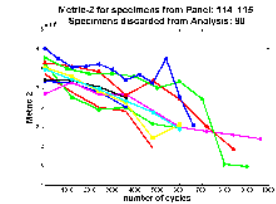
$$P_{\theta} = \frac{E_{\theta} V_{\theta}}{2x_d} \sin \delta + \frac{V_{\theta}^2}{2\omega L} \sin(\delta - \delta^*) \quad (2.26)$$

$$Q_{\theta} = \frac{E_{\theta} V_{\theta}}{2x_d} \cos \delta - \frac{V_{\theta}^2}{2\omega L} \left( 1 - \frac{L}{x_d} \right) + \frac{V_{\theta} V_{\theta} \cos(\delta - \delta^*)}{2\omega L} \quad (2.27)$$

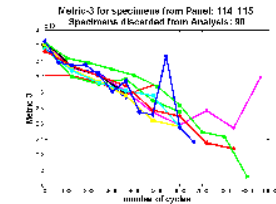
In Equation (2.26) and Equation (2.27), the instantaneous generator output power  $P_{\theta}$  and  $Q_{\theta}$  are functions of instantaneous  $V_{\theta}$ ,  $V_{\theta}$ ,  $\delta$ , and  $\delta^*$ . Usually, the disturbances will cause abrupt change of  $V_{\theta}$ ,  $V_{\theta}$ ,  $\delta$ , and  $\delta^*$ , and therefore, lead to a abrupt change of generator output power. The sensitivity of  $P_{\theta}$  and  $Q_{\theta}$  to  $V_{\theta}$ ,



(a) Metric 1 vs. number of cycles for mystery specimens



(b) Metric 2 vs. number of cycles for mystery specimens



(c) Metric 3 vs. number of cycles for mystery specimens

6.7: Damage metric 1, damage metric 2, and damage metric 3 vs. number of cycles for specimens @ 70% loading

# FIGURE AND TABLE PLACEMENT

## Widowed/Orphaned Lines

Avoid single lines of a paragraph at the top and bottom of a page (widow and orphan lines). If you must divide a paragraph at the bottom of a page, make at least two lines appear at the bottom and carry at least two lines to the top of the next page. If there is not room for a complete heading and at least two lines of text at the bottom of a page, begin the new subdivision on the next page.

## Other Formatting Considerations

### Margin Settings and Justification

The left margin **must** be no less than 1.5 inches; the right, top, and bottom margins no less than 1 inch. All images, including the page number, must fit within these margins. These margins define the minimum white space to be maintained on all sides.

A fully justified line of type, regardless of the number of words in it, is exactly the same length as all other lines [7]. This feature is an option in most word processing packages. Either fully justified or left-justified margins are acceptable. The use of justified margins must be consistent throughout the manuscript.

Table 2. Quick Reference Guide for Mechanics of Thesis or Dissertation

|                        |  |
|------------------------|--|
| Font Size              | 10 point – 12 point  |
| Font Type              | Arial or New Times Roman type  |
| Spacing                | Varies. Set the line spacing to double so spacing is easy. This is a great help when spacing headers.                  |
| Margins                | 1½ inch on the left. All others are 1 inch.  |
| Paragraph Indentations | All paragraphs indented 5 to 10 spaces. Most tabs are automatically set at 5 spaces (1½ inch).                         |
| Widowed/Orphaned Lines | None allowed. Most word processing software allows for personalized settings which can autocorrect widow/orphan lines. |



Figure 1. Logos of the eTD service used by TTU.

## Printing the Manuscript Master

**Under no circumstances should you generate final copies for binding from a printer.** You must photocopy them from the manuscript master onto 25 percent cotton content, 20 pound paper. The surface of cotton paper is such that ink from nonimpact printers does not always adhere permanently. The general premise of most photocopying is a combination of heat and pressure which produces a stronger permanent bond of the ink or toner with the paper. Although some printers function in much the same way, neither the heat nor pressure is sufficient to assure a permanent bond to 25 percent cotton paper. This is a potential problem of all nonimpact printers. The problem has been noted on various brands of cotton paper and with a variety of printers. In some cases there has been flaking on random pages or smearing of copy from pages rubbing against each other.

## Copying

You will find area copy shops that are familiar with the University's requirements concerning paper and copy quality. The cost of having copies made by local shops is reasonable, and you will save little money by buying your paper and doing your own copying. Professional shops are responsible for equipment malfunctions and should maintain a supply of 25 percent cotton paper. All brands of 20 pound, 25 percent cotton paper are acceptable, but all pages, including the approval sheets and any outside pages (11 x 17 inches), must be on the same brand. If you are an out-of-town student, you may wish to investigate copy shops in your location for comparison with those in this area.

# REFERENCES OR BIBLIOGRAPHY

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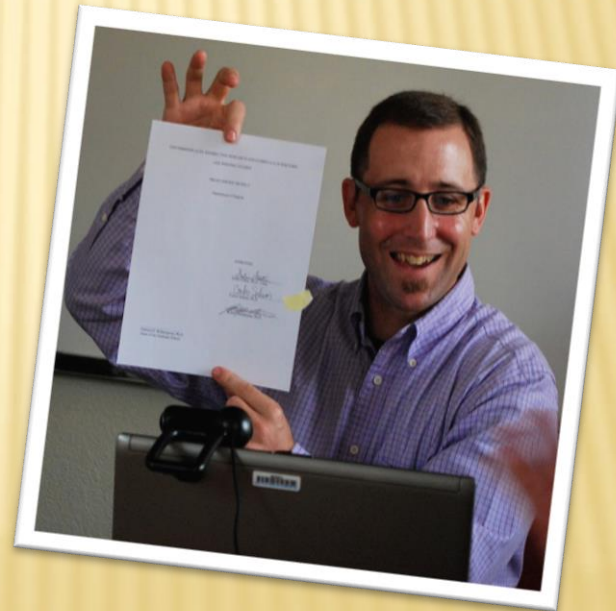
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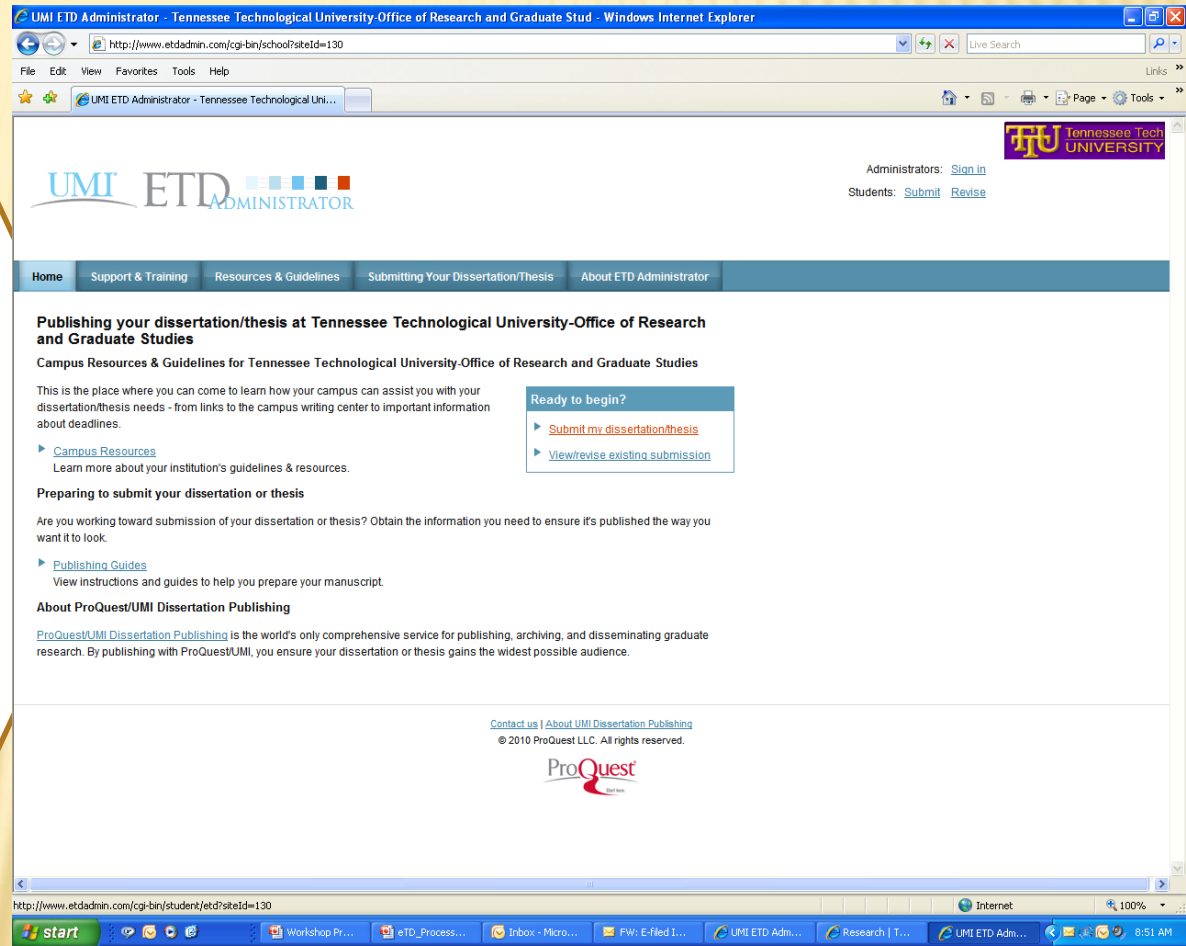
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