

AN ABSTRACT OF A THESIS OR DISSERTATION
GUIDE TO THE PREPARATION OF THESES AND DISSERTATIONS
FOR STUDENTS AND FACULTY OF TENNESSEE
TECHNOLOGICAL UNIVERSITY

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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.

This is the guide for preparing a thesis or dissertation, taking it through the approval process, and binding the final paper. Notes are written in red where further clarification is needed. This guide is formatted in the main approved style. Your paper should look like this, or like the samples in the Appendices, before submitting to the Office of Graduate Studies for final review. Examples of additional accepted styles of the front matter and final matter are presented in the Appendices.

**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

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(This page is optional)

(Page numbers begin printing on the first page
after the title page beginning with roman numeral ii.)

CERTIFICATE OF APPROVAL OF THESIS

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

by

Graduate S. Jones

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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

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.

(ACKNOWLEDGEMENTS must fit on one page.)

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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

manuscript is carefully evaluated by experts in your field. The format requirements presented in this guide are imposed to ensure an appropriate academic appearance of your manuscript.

Ethical Standards

Since conferral of a graduate degree implies professional integrity and knowledge of scholarly methods, there are three areas in which you as a graduate student should be particularly cautious: (1) proper acknowledgment of cited works, (2) the proper use of copyrighted material, and (3) the proper reporting of work where research compliance is required.

Plagiarism

Merriam-Webster's Collegiate Dictionary [9] defines plagiarism as "steal[ing] and pass[ing] off ideas or words of another as one's own" and "the use of a created production without crediting the source." "You must acknowledge all material quoted, paraphrased, or summarized from any published or unpublished work. Failing to cite a source, deliberately or accidentally, is plagiarism" [8, p. 424]. If you use the exact words of your source, they must be enclosed in quotation marks and the source cited; if you do not use the exact words but paraphrase or summarize the source, it still must be cited. When involved in collaborative research, you should exercise extreme caution to avoid questions of plagiarism. If in doubt, check with your major professor and the Graduate School about the project. Plagiarism will be investigated when suspected and prosecuted if established.

Copyright

If you use copyrighted material in a limited way, it is usually unnecessary to seek permission to quote. If, however, you use material from a copyrighted work to the extent that the rights of the copyright owner might be violated, you must obtain permission of the owner. In

determining the extent of a written work that may be quoted without permission, you should consider the proportion of the material to be quoted in relation to the substance of the entire work. According to *The Chicago Manual of Style* [7], "A few lines from a sonnet, for instance, form a greater proportion of the work than do a few lines from a novel. Use of anything in its entirety is rarely acceptable" (p. 124). In no case should you copy a standardized test of similar material and include it in a thesis/dissertation without written permission. According to Circular 21 (Reproduction of Copyrighted Works by Educators and Librarians, p. 11) [10], "...the following shall be prohibited: . . . There shall be no copying of or from works intended to be 'consumable' in the course of study or of teaching. These include workbooks, exercises, standardized tests and test booklets and answer sheets and like consumable material." The publisher usually has the authority to grant permission to quote excerpts from the copyrighted work or can refer requests to the copyright owner or designated representative. The copyright owner may charge for permission to quote. You should credit permissions with the acknowledgments, and the source should appear in the Bibliography. (Some fields alternatively use Literature Cited, References, or Works Cited.)

Federal and State Regulations

Compliance with federal and state regulations governing the use of human subjects, animal care, radiation, legend drugs, recombinant DNA, or the handling of hazardous materials/wastes in research is monitored by a number of regulatory agencies. Because of these regulations, research compliance is another area of importance to you as a graduate student and to the conduct of your research. Tennessee Technological University requires you to verify that you have complied with the appropriate approval procedure(s) prior to the initiation of the thesis or dissertation-related research, if approval is relevant to the research. If your research involves any of the areas mentioned above, you should determine what compliance is required by the school (available in the Office of Research).

Definitions

Typeface or Font

These terms apply to all the features available within a "type" family. For many printers, typeface includes bold, italic, and the various sizes of any named type (Arial, Helvetica, Times Roman, New York, Geneva, etc.).

Text

In the discussion of formatting, text is used as a generic term to designate the main body of the thesis/dissertation and to distinguish this element from preliminary pages, references, tables, figures, and appendices.

Preliminary Pages

Sometimes called "front matter," preliminary pages serve as a guide to the contents and nature of the manuscript [7]. The approval or acceptance sheets, as part of the preliminary pages, confirm acceptance by the committee members acting for the department, and the Dean of Graduate Studies, acting for the university or college.

Table

A table consists of numbers, words, or both, and presents information that is separated into columns. Tabular information allows you, the author, to convey information to a reader in a structured format.

Figure

Any diagram, drawing, graph, chart, map, photograph, or material that does not fit into the restricted format for a table is a figure. Figures generally show relationships or illustrate information rather than present precise data.

Appendix

An appendix is generally a "catch-all" for supplementary material to the thesis/dissertation. In some cases, tables and/or figures are placed in an appendix to avoid interrupting the text.

CHAPTER 2

THESIS/DISSERTATION ELEMENTS AND STYLE

Preliminary Pages

Abstract

You must include an abstract as part of your electronic thesis/dissertation submitted to the Graduate School. Although the content of the abstract is determined by you and your graduate committee, the following information is appropriate:

- a short statement concerning the area of investigation,
- a brief discussion of the methods and procedures used in gathering the data,
- a condensed summary of the findings,
- conclusions reached in the study.

There is no word limit on the abstract appearing in the thesis or dissertation but it must be confined to one page in the typestyle consistent with the text. The abstract is not numbered but should be included as the first page in the eTD.

Title Page

You will assign the title page the Roman numeral "i," although the number does not appear on the page. The date which appears shall be the month and year of commencement. Your name must appear as you are registered at the University. The wording and format of the title page must be exactly as shown in Appendix A.

Copyright Page

You will include a copyright page only if the manuscript is being formally copyrighted (Appendix A). You will find additional information about copyrighting in Chapter 6.

Approval Sheet

An approval sheet with original signatures must be submitted to the Graduate School. The page should use the exact wording and format shown in Appendix A. This sheet must be in the same base font as the remainder of the thesis/dissertation. The name used on the approval sheets and title page must be that under which you are registered at the University. Black ink is recommended for the original signatures. The number of signature lines must equal the number of committee members. The major and degree to be awarded must be exactly those to which you were admitted officially by the Graduate School. Majors and degrees can be found in the University's graduate catalog. Number the approval sheet.

Dedication Page

If you wish to dedicate the manuscript, include the dedication statement at this point. The page should be centered vertically and horizontally.

Acknowledgements

You should use the acknowledgements to thank those who have helped in the process of obtaining the graduate degree. Also, list permissions to quote copyrighted material here, as well as acknowledgments for grants and special funding.

Table of Contents

The Table of Contents may vary in style and amount of information included. However, you must include List of Figures, List of Tables, List of Symbols, chapter or part titles, the Bibliography, the Appendix(es), if any, and the Vita. The page numbers for the Bibliography and

the Appendix(es) are the numbers assigned to the separation sheet preceding each of these items. **All** headings and subheadings **must** be listed in the Table of Contents.

List of Tables/List of Figures

If there are two or more tables, you must include a List of Tables. Similarly if there are two or more figures, you must include a List of Figures. There must be separate lists for tables and figures. Include in the appropriate list any tables or figures appearing in the appendix(es). Be sure that each title is different from the other titles, and that the wording of all titles entered in the lists is exactly as it appears on the table or figure. This includes the information up to the first terminal punctuation. You do not include additional explanatory information in the list.

List of Symbols/List of Abbreviations/Nomenclature

You should make the title of this section reflect its content. You may use this section to define specialized terms or symbols, or you may place such information in an appendix.

Text

Divisions

This manual has been written in the format described herein. You must divide the manuscript into a logical scheme that you follow consistently throughout the work. Chapters are the most common major division; parts are also permissible. Examples of chapter and part headings are shown in Appendix B. For a discussion of divisions into "parts," see Chapter 4.

Number each chapter or part consecutively and begin on a new page. A division entitled **INTRODUCTION** may be the first numbered chapter or part. Chapter or part titles are primary divisions of the entire manuscript and are not part of the subdivision scheme (Appendix C).

Subdivisions

You may use either the format and order of subdivisions that are described in this manual or the numerical decimal system of identifying heading and subheading (Appendix D). The subdivisions within a chapter or part do not begin on a new page unless the preceding page is filled. First and second level subdivisions are always preceded by an extra blank line to indicate to the reader a major shift in subject. **Never** have **only one** subdivision at any level.

Centered head. If there is not room for the complete heading and at least two lines of text at the bottom of a page, begin the new subdivision on the next page. If a chapter contains only one level of subdivision, use the centered head. Type the first letter of each word in caps, place it in bold type (or underline if bold is not available), and center it four inches from the right edge of the page. Place it two blank lines (line spacing = 2 or 3) below the preceding text and two blank lines above the text which follows. **If a second level of subdivision immediately follows the centered head, use only one blank line (line spacing = 2) between the two subheadings.**

Freestanding sidehead. If a chapter makes use of two levels of subdivision, then a freestanding sidehead is the second subdivision. Position the freestanding sidehead flush with the left margin (see Margin Settings and Justification), two blank lines below the preceding text (**double space if preceded by a centered head**) and two blank lines above the text that follows. Capitalize the first letter of each major word. Place the sidehead in bold type; there is no end punctuation.

Paragraph sidehead. A third subdivision is indicated by a paragraph sidehead which is subordinate to both the centered head and the freestanding sidehead. Place the paragraph sidehead a single blank line below the preceding text. Indent it like a regular paragraph. Capitalize only the first letter of the first word. Place the heading in bold type, followed by a period, and in every instance begin the text on the same line.

Quotations

You must give full credit for every quotation or paraphrase used. A carefully worded paraphrase is usually preferable to a long quotation. Paraphrases are not enclosed in quotation marks. If you use a footnote to acknowledge a source, its' superscript normally follows the final punctuation of the material cited; however, you should place the superscript at the end of a sentence if only the sentence is referenced. Quotations are used when it is desirable to reproduce literary material in exact detail. Quotations which are not over three lines long are usually enclosed in quotation marks and are place within the text. When quotations are longer, they are usually set off from the test in a separate paragraph or paragraphs and single-spaced. Follow the guidelines of conventional practice in your discipline.

References within Text

Notes documenting the text and corresponding to a superscripted number in the text are called footnotes when they are printed at the bottom of the page [7]. This format is only used occasionally and has generally been replaced by references. References usually consist of information in parenthesis or square brackets within the text. Two common methods of referencing are (1) to use author's name and date of publication, as in (Smith, 1990), or (2) to assign numbers to the bibliographical entries and insert the corresponding number for the authors as they are cited in the text, as in Smith [95]. The purpose of references is to guide the reader to the corresponding entry in the Bibliography, where complete information is available. Footnotes or reference notes collected at the end of each chapter or part (end note) are not acceptable. In microfilm or other electronic format, large numbers or pages are reproduced on a single sheet of film, making end notes difficult for the reader to locate. You must determine the form, style, and contents of footnotes or reference notes by what is generally accepted in your field of study. Most of the popular word processing applications have a footnote feature that provides automatic

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

the text to avoid problems in shifting during last-minute revisions. In degree of importance, tables and figures are secondary to the text so that the text dictates where the tables or figures are placed. You must fill all pages with text and in no case should a page be left significantly short because of the mention of a table or figure.

You may incorporate within the text a table or figure less than one-half page in length (approximately four inches), provided it meets the following conditions:

- is in numerical order
- is separated from the text by extra space (approximately one-half inch)
- is not continued onto a following page
- follows its specific mention in the text.

If tables and figures are integrated with text, you must place them so that they appear either at the top or the bottom of a page. A mention on the upper half of a page of text would mean that the bottom half of the page would be reserved for the table or figure, and a mention in the bottom half of the page would place the table or figure at the top of the next page. Always have a balance of no less than one-half page of text and no more than one-half page of table or figure. If multiple tables or figures are mentioned together on a page, you may place them on pages together, provided there is approximately one-half inch between each. You need not designate as figures small diagrams within the text, nor designate as formal tables compilations which are no more than a few lines in length.

Placement of tables and figures in the appendix. When all tables and/or figures are in an appendix, you will so state in a footnote in the body of the text attached to the first mention of a table or figure; do not repeat this information thereafter. When only some of the tables and figures are in an appendix, clearly indicate their location when the items are mentioned in the text (e.g., Table 1, Appendix A), unless the numbering scheme makes the location obvious (e.g., Table A-1).

Horizontal tables and figures. To accommodate large tables or figures you must sometimes place them in horizontal (landscape) orientation on the page. The margin at the binding edge must still be 1.5 inches, and all other margins at least one inch. The margin at the

top of the page and the placement of the page number must be consistent with the rest of the thesis. Place the table or figure and its caption so that they can be read when the thesis is turned 90 degrees clockwise.

Tables

Typeface. For the table captions you must use the base typeface and size used for the manuscript. The size of the type within the table may differ, depending on the "fit" of the information within the margins.

Required components. Since tables consist of tabulated material or columns, the use of ruling or horizontal lines in tables helps the reader distinguish the various parts of the table. Vertical lines are accepted but not required. One of the characteristics that identifies tabulated material as a table is the presence of at least the following three horizontal lines:

- The table opening line, which appears after the table caption and before the columnar headings.
- The columnar heading closing line, which closes off the headings from the main body of the table.
- The table closing line, signaling that the data are complete. Anything appearing below the closing line is footnote material.

Tables must have at least two columns which carry headings at the top as brief indications of the material in the columns [7, p.329]. The headings appearing between the table opening line and the column heading closing line must apply to the entire column down to the table closing line. It is never appropriate to change columnar headings on continued pages. One method of avoiding a problem is to use subcolumnar heads, which are headings that appear below the column heading closing line, cut across the columns of the table and apply to all the tabular matter lying below it [7, p. 330].

Continued tables. You may continue tables on as many pages as necessary, provided the columnar headings within the columnar block remain the same. Repeat the columnar block for

each page. Do not repeat the table caption, but indicate continuation pages with the designation: Table ____ (Continued). You may reduce tables too large to fit within margins. See Chapter 6 for hints on technical production.

Table footnotes. Footnotes to tables consist of four different categories [11]:

- **Source notes.** If you take the table or data within the table from another source, use the word **Source(s)**:, followed by the full reference citation, regardless of the format of referencing used in the main body of the text. This ensures that if that specific page is copied in the future by an interested reader, all bibliographic information is contained within the page. Include all references in the Bibliography.
- **General Notes.** Introduce general notes, which may include remarks that refer to the table as a whole, as **Note(s)**:.
- **Superscript notes.** For notes to specific parts of the table use superscripts (letters for tables consisting of numbers; numerals for tables consisting of words; symbols if letters or numbers might be mistaken for exponents) that are attached to the part of the table to which they apply.
- **Level of probability notes.** For a table containing values for which levels of probability are given, use asterisks. Use a single asterisk for the lowest level of probability, two for the next higher, etc. [7].

Figures

Font. Since figures are considered illustrations, regardless of the nature of their content, any print that is part of the figure can be in any neat and legible font. You must use the same base font and size for the figure caption and page number as in the rest of the manuscript because this material is considered to be part of the typeset body of the manuscript (see Chapter 6).

Legends. You may place explanatory material for figures within the figure, either above or below the caption, or continue it after the period following the caption. If a figure has a long

caption and/or legend which must be placed on a separate sheet because of the size of the figure, place this page immediately before the figure. The page number assigned to the caption page is considered to be the first page of the figure.

Continued figures. You may continue onto other pages a figure containing several related parts too large to be included on a single page. The first page contains the figure number and complete caption, and subsequent pages contain the remainder of the figure and the designation: Figure ____ (Continued).

Figure footnotes. Footnotes to figures consist of two different categories [11]:

- **Source notes**—If the figure or information within the figure is taken from another source, use the word **Source(s)**:, followed by the full reference citation, regardless of the format for referencing used in the main body of the text. This ensures that if that specific page is copied in the future by an interested reader, all bibliographic information is contained within the page. If you have made changes in a figure from another source, so indicate by using the phrase “Adapted from”
- **General notes**—Introduce general notes, which may include remarks that refer to the figure as a whole, as **Note(s)**: .

You must include all references in the Bibliography.

Equations

The most recent edition of *The Chicago Manual of Style* [7] is a good resource. Generally, it is expected that all equations will be typewritten or printed in the final copy. With some word processing programs (e.g., WordPerfect) you can create equations that contain any number of special characters and symbols. When questions arise concerning the placement of equations, proper spacing, and indentations, feel free to consult with the thesis/dissertation consultant in the Graduate School. The following general rules apply in the use of equations.

- Align on operational signs equations that have more than one line.

- Center equations between the left-and right-hand margins.
- Do not break at the end of a line a short equation in the text; rather you should “space out” the line so that the equation will begin on the next line; or you may center the equation on a line by itself.
- Set connecting words of explanation such as hence, therefore, and similarly at the left-hand margin either on the same line with the equation or on a separate line (if used with a numbered equation). Do not use commas following these words.
- Number displayed equations (those set on separate lines) consecutively throughout each chapter, flush with the right margin.
- Follow equations that end a sentence with a period, normally on the line of type which concludes the equation. For equations that have several horizontal lines, align the period with the equal sign. The use of the period should be regarded as an aid to clarity.

Bibliography

You must include a list of materials used in the preparation of the manuscript of the thesis/dissertation. This may consist only of references cited in the text or it may include works consulted as well. The list is preceded by a numbered page with the title centered vertically and horizontally. The purpose of listing the citations is threefold: (1) to serve as an acknowledgment of sources; (2) to give readers sufficient information to locate the volume; and (3) in the case of personal interviews or correspondence, to save readers the trouble of attempting to locate material that is not available. If your appendix contains references, the appendix **must** precede the bibliography. Follow the format for the citations used in your field of study.

Appendix

An appendix (appendixes or appendices), if included, is preceded by a numbered page with the designation centered vertically and horizontally between the margins. Place original data

and supplementary materials in the appendix. In some cases, all tables and figures are included in the appendix(es).

Vita

Write the vita, which contains appropriate personal, academic, and professional information about you, in narrative form. Since copies of the manuscript will be available to the public, do not include private information. The vita is the last item in the manuscript and appears with no preceding separation page.

Table 1: Page Order for Theses/Dissertations

Page Title	Number of Pages Allowed	Page Number
Abstract	1	0 - but no print
Title Page	1	i - but no print
Copyright	1 (is optional)	ii
Certificate of Approval	1	iii unless no copyright
Dedication	1 (is optional)	iv unless no copyright
Acknowledgements	1 (is optional)	v unless any optional pages not included
Table of Contents	unlimited	vi unless any optional pages not included
List of Tables	unlimited	next roman numeral
List of Figures	unlimited	next roman numeral
List of Abbreviations	unlimited	next roman numeral
Body	unlimited	1
References	unlimited	next Arabic numeral
Appendix	unlimited	next Arabic numeral
Vita	1	next Arabic numeral

CHAPTER 3

FORMATTING

Typeface and Quality

Typeface or Font

The typeface or font you use affects the physical appearance of your manuscript more than any other single element. With word processing software packages, you are provided the opportunity to use different typefaces, type sizes, and font attributes, such as bold or italics.

Laser printers provide the opportunity to use different type sizes and special effects such as bold and italics. Although most laser printers also have some typewriter styles available as options, the sizes of the type on a laser printer are often measured in points rather than in characters per inch. Text is normally most readable in 10, 11, or 12-point, so this size is highly recommended. You may use other sizes for emphasis.

You must consistently follow your styles or conventions used for special effects throughout the manuscript. If you decide to set single-spaced quotes in italics or in a smaller type than that used for the regular text, you must follow that convention for **all** single-spaced quotes. Other illustrations of special effects may be found in journals or textbooks.

The typeface or font selected for text will be the base style or the "starting point" for all type selection [12] and will establish the framework for the entire manuscript. All the following items must be in the family of type selected as the "base" style:

- Preliminary pages
- Text
- Table captions
- Figure captions
- Page numbers

Type Quality

Acceptable type quality for the final **master** copy is determined by the following factors:

- The visual smoothness of the letters
- A high-contrast, solid image

Spacing

Spacing has both aesthetic and utilitarian effects on the appearance of a page. Vertical spacing determines the number of typed lines that will fit on a page and can make a manuscript appear either cluttered or uncluttered, depending on space left between lines. Horizontal spacing "tightens up the spaces between certain pairs of letters, such as WA" [13, p. 604], and makes the spacing of proportional fonts pleasing to the eye.

Most technical decisions about both vertical and horizontal spacing are determined by the software package. When you select a typeface and size, the default values for spacing are automatically set. Most word processing packages then allow you to set the line spacing, using the predetermined line height as a basis. Single spacing leaves a small space between two lines of type and double spacing leaves the equivalent of the height of a line between the two lines of type.

You must double space the general text. You may use single spacing to set off quoted material and for references and tables. In the event that an extra blank line is needed (e.g., between chapter number and title), you should add an additional "enter," doubling the white space. See Subdivisions, for specific spacing instructions for headings.

Indentations

Make paragraph indentations uniform throughout the thesis/dissertation. Indent the paragraph from five to 10 spaces.

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 Indentions	All paragraphs indented 5 to 10 spaces. Most tabs are automatically set at 5 spaces (1/2 inch).
Widowed/Orphaned Lines	None allowed. Most word processing software allows for personalized settings which can autocorrect widow/orphan lines.

Pagination

The Abstract is not assigned a page number. Use small Roman numerals to number all other pages preceding the text. Although the preliminary paging begins with the title page, no number appears on that page; therefore, the following page is page ii. Beginning with the first page of text, number all pages consecutively throughout the manuscript, including the Bibliography, Appendix(es), and Vita, with Arabic numerals. Pagination using letter suffixes (i.e., 10a and 10b) is not allowed. Number the initials page of any major subdivision (e.g., the first page of a chapter, division pages) at the bottom, leaving a margin below the page number of 1 inch from the bottom edge and centered on 4 inches from the right edge of the page. **Update: if you are having difficulty with the placement of the page numbers being in two different locations, you may choose to place the page number at the bottom center on all pages.** Place the numbers of other pages in the upper right -hand corner, leaving a margin of one inch from the top edge and one inch from the right edge of the page, with the text beginning a double space below. Make sure that numbers appear on separation sheets.

Paper and Duplication

Print or type the master copy on plain white paper. Reproduce any additional copies of the thesis/dissertation submitted to the Graduate School on paper. Use the same brand of paper throughout all copies for binding and for the approval pages.

CHAPTER 4

SPECIAL PROBLEMS AND CONSIDERATIONS

The guidelines given in the previous chapters are sufficient for most theses/dissertations; however, there are several circumstances that require additional guidance. This chapter addresses a few of the more specific questions that may exist in the preparation of your thesis/dissertation, such as the use of papers that have been or will be submitted to journals, and the division of unusually long manuscripts.

Theses/Dissertations in the Form of Journal Articles

A thesis or dissertation may include articles submitted or about to be submitted to professional journals. However, some guidelines apply. You must integrate the individual papers into a unified presentation. This might be done through an introductory chapter containing, among other things, a detailed literature review of the type not presented in journal articles. Additionally, you might use one or more connecting chapters to expand upon the methodology or the theoretical implications of the findings presented in the individual articles. You must adopt a uniform style of headings, reference citations, and bibliographical format--in compliance with this guide--for the thesis/dissertation, even though you may have prepared the individual papers for submission to different journals. You may list each paper as an individual chapter within the thesis/dissertation, or you may treat each paper as a part and follow the multipart format discussed in the next section. If you use chapter divisions, you will include only one Bibliography (including all references from the various articles) at the end of the text. Finally, you may add appendixes to present information not included in the chapters. Number pages consecutively throughout the manuscript.

Multipart Theses and Dissertations

With approval of the committee members, you may divide the thesis/dissertation into parts, rather than sections or chapters. The use of parts is an effective method of organization when you have performed research in two or more areas not practical to be combined into a single presentation or when you wish to maintain consistent format for journal articles. You may treat each part as a separate unit, with its own chapters, figures, tables, Bibliography, and Appendix(es) (if needed). You may combine the Bibliography and Appendix(ex) at the end, as in the case of theses/dissertations in the form of journal articles (see previous section). In all cases, you must include an abstract or foreword which provides an overview and summary of the project, and a single Table of Contents, List of Tables, and List of Figures. Use consecutive pagination throughout the manuscript, including numbering of the required separation sheets listing the part number and title placed before each part.

Two-Volume Theses/Dissertations

If a manuscript is more than 2.5 inches in thickness (approximately 500 sheets of 20 pound 25 percent cotton paper), you must divide it as equally as possible into two volumes not exceeding 2.5 inches each. You must make the divisions between chapters or major divisions, such as Bibliography or Appendixes. List the contents for the entire manuscript in the Table of Contents at the beginning of Volume 1. Pagination is continuous throughout both volumes. Just prior to Chapter 1, insert a sheet with **VOLUME 1** centered both horizontally and vertically between margins. Volume 2 opens with a title page followed by a sheet showing **VOLUME 2**. Do not assign a page number to either volume separation sheet. Multi-volume theses/dissertations must be assembled into a single PDF file for submission into the eTD interface.

CHAPTER 5

TECHNICAL POINTERS

Computer use has enabled you to assume responsibility for all aspects of thesis/dissertation preparation, allowing you to function as author, editor, and publisher of your manuscript. With this freedom has come the full responsibility of ensuring that the content is accurate, grammar and mechanics are acceptable, and all elements of formatting are handled correctly. The purpose of this chapter is to provide some pointers on technical production and to address some common production problems.

Appearance

The element that contributes most to the attractiveness of a manuscript is consistency. Consistency in formatting means that you establish and adhere to a series of conventions or protocols regarding spacing, heading sequencing, and other aspects of appearance to guide readers through the manuscript visually, thus enabling them to concentrate on the content. Consistency in thesis/dissertation production is especially critical, since it determines in part the committee reaction to content and, ultimately, acceptance of the manuscript by the Graduate School.

CHAPTER 6

BRINGING IT TO FRUITION

At this point in the development of your thesis/dissertation you have prepared a draft which must now be brought to fruition. This chapter describes the possible steps for completion and acceptance of the final manuscript.

Draft Copy to Committee

Before you submit a draft copy of your thesis/dissertation to your committee, it should be checked out by at least your major professor for content. His/her recommendations should be incorporated in the draft copy that you submit to your graduate advisory committee. **Please note that this review by your major professor is a crucial step, and it may need to be repeated several times.**

When your major professor is satisfied with your draft copy, you must submit a copy to all members of your advisory committee for their review. At the same time you should set a date, time, and place that is convenient for all your committee members for the presentation and final examination/defense of your thesis/dissertation.

Final Examination/Defense of Thesis/Dissertation

The format of your presentation and final examination and/or defense of your thesis/dissertation (which in some departments requires more than one session) is set by the policy of your department or college. Although its length may vary with whether it is for a thesis or dissertation, there is typically a formal oral presentation of your research to your advisory committee and any guests whom you or your committee members might have invited. A period for questions normally follows. The intention of this process is to verify your understanding of your contribution to the body of knowledge in your research area and your general field of study.

Committee Revisions

Recommendations for changes and/or additions are a natural byproduct of this review of your thesis/dissertation by your entire committee and your defense of it. These should be critically reviewed with both your major professor and the individual committee members who made the recommendation, and incorporated as appropriate.

Graduate School Review

As this point your manuscript is ready for review by the Graduate School prior to its final approval by your advisory committee and submission to the printer for reproduction. This check will pick up any format problems that must be corrected before the thesis/dissertation is printed. The Graduate School must receive, by the date in the Online Calendar, one preliminary electronic copy of the thesis/dissertation for review. The preliminary copy must be submitted to the Graduate School through the eTD Administrative Interface. Failure to submit the preliminary copy by the deadline will result in your removal from the commencement list. Before the Graduate School personnel may review your thesis/dissertation, your advisor must grant us approval to review your thesis.

Graduate School Revisions

You must now make the revisions recommended by the Graduate School. If there is any doubt about a revision, check with the Graduate School again. This is also the appropriate time to take a copy of your manuscript to each of your advisory committee members to obtain their final approval of your thesis/dissertation, as reflected by their signature on your Certificate of Approval of Thesis/Dissertation.



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.

Submission to Graduate School

Official Copies

The Graduate School must receive, by the date published in the Online Calendar, a finalized PDF of the thesis/dissertation. The Certificate of Approval must be submitted on 20 pound paper to the Graduate School and must contain original signatures. The eTD will be submitted to ProQuest for publishing after commencement. This constitutes publication and makes the dissertation available to the public. Your department may require additional copies of your thesis/dissertation.

Additional Copies and Binding

You are also responsible for the reproduction of all other copies of the thesis/dissertation. Hard binding of these copies may be arranged through the Graduate School. Your major professor can help determine who expects to receive copies and how they should be bound.

Copyright

If the research work for your thesis or dissertation was supported in part by a contract or grant, you should check with your major advisor relative to any restrictions that might apply to copyrighting the material. After consultation with the chairperson of your advisory committee, you should decide whether or not to copyright the thesis to discourage unauthorized copying. If you decide to copyright, you must insert an extra page after the title page of each volume. Assign this page the number ii, but do not type the number on the page. Type and center the following information on the copyright page:

Copyright (c) _____, 20 (year)

All rights reserved

Registration of your thesis/dissertation document with the U.S. Copyright Office is optional and can be handled through the eTD Administrative Interface. Once the copyright notice is placed in the document, it is fully protected by the Copyright Law; however, registration is a prerequisite to certain remedies for infringement.

In view of the University's Policy on Patents and Copyrights, with regard to thesis/dissertation support, you should consult the chairperson of your advisory committee before the copyright notice is placed in the document. A copy of the University Policy is available in the Office of Research and Graduate Studies.

Graduate School Final Check and Acceptance

After you have submitted the final PDF to the Graduate School, that office will review your thesis/dissertation again for corrections made on any previous errors. When this review has been successfully completed, your thesis/dissertation will be approved.

Commencement

Commencement is a fitting culmination of your effort to obtain a graduate degree. Whatever the degree to be conferred, it marks an appropriate beginning.



Figure 2. Happy Graduates.

REFERENCES

1. Lacava, Ann L. *TCGS Guide to the Preparation of Theses and Dissertations*. Knoxville, Tennessee, 1992.
2. *Tennessee Technological University Thesis Manual*. Cookeville, Tennessee, 1989.
3. Gibaldi, Joseph and Walter S. Achtert. *MLA Handbook for Writers of Research Papers*. Third Edition. New York: The Modern Language Association of America, 1988.
4. *Publication Manual of the American Psychological Association*. Third Edition. Washington, D.C.: American Psychological Association, 1983.
5. *CBE Style Manual*. Fifth Edition. Bethesda, Maryland: Council of Biological Editors, Inc., 1983.
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8. Hodges, John C., Mary E. Whitten, Winifred B. Horner, Suzanne S. Webb, Robert K. Miller. *Harbrace College Handbook*. Eleventh Edition. New York: Harcourt Brace Jovanovich, 1990.
9. *Merriam-Webster's Collegiate Dictionary*. Tenth Edition. Springfield, Massachusetts; Merriam-Webster, Inc., 1993.
10. "Circular 21: Reproduction of Copyrighted Works by Educators and Librarians." Washington, D.C.: Government Printing Office, May 1988.
11. Turabian, Kate L. *A Manual for Writers of Term Papers, Theses, and Dissertations*. Fifth Edition. Chicago and London: The University of Chicago Press, 1987.
12. *WordPerfect for IBM Personal Computers and PC Networks. Version 5.1*. Orem, Utah: WordPerfect Corporation, 1988.
13. Alfieri, Vincent. *The Best Book of: WordPerfect Version 5.0*. Indianapolis, Indiana: Hayden Books, 1988.

APPENDICES

APPENDIX A
PRELIMINARY PAGES SAMPLES

Sample Abstract

THESIS/DISSERTATION TITLE IN ALL CAPS IN AN INVERTED PYRAMID FORMAT

John W. Buck

Master of Science in Electrical Engineering

A Z-80-based two-dimensional position control system for stepper motors was specified, designed, fabricated, and evaluated. The control system was designed to control two stepper motors in an open-loop system.

The control system used Z-80 mode 2 interrupts for servicing peripheral modules. Single chip solutions were used throughout for each major circuit except for the motor control module. An IEEE-488 bus communications module was designed and built for interfacing with external computers.

A novel function was incorporated into the control system which allowed the user to map boundaries into the memory. The boundary map was then used for obstacle avoidance.

Although the control system performed as expected and met all specifications, it was recommended that the motor control module be replaced with a single chip solution. It was also recommended that the memory be increased and more functions be added.

Instructions:

1. Each thesis/dissertation must be accompanied by an abstract.
2. The title begins on the first line of the page.
3. The abstract must be single-spaced with a double space between paragraphs.
4. The abstract does not display a page number and is not assigned a page number.
5. There should be two to three blank lines between the heading items.
6. Top margin should be one inch.

Sample Title Page

THE EFFECTS OF ALCOHOLISM, EATING DISORDERS, DEPRESSION

AND PARENTAL MARITAL STATUS ON OVERALL GPA

AND GRADUATION RATES IN MIDDLE

(Only the title is in bold type.)

TENNESSEE COLLEGE STUDENTS

A Thesis

Presented to

the Faculty of the Graduate School

Tennessee Technological University

by

Jan R. Doe

(Notice the title page takes up the entire page just by adding space above and below the divider lines.)

In Partial Fulfillment

of the Requirements for the Degree

MASTER OF ARTS

Educational Psychology

May 1998

(No number is printed on the title page.
This number is for this guide only.)

APPENDIX B
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Reconstructive Techniques	10
Capacitance Measuring Circuit	10
Differential Sampling Circuit	10
2. A NEW WIDE FREQUENCY BAND CAPACITANCE TRANSDUCER WITH APPLICATION TO MEASURING METAL FILL TIME	12
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APPENDIX E
LIST OF ABBREVIATIONS SAMPLE

LIST OF ABBREVIATIONS (or LIST OF SYMBOLS or NOMENCLATURE)

Abbreviation	Description
CDA	Child Development Associate
DAP	Developmentally appropriate practice
ECED	Early Childhood Education
ECERS	Early Childhood Environmental Rating Scales
ELLCO	Early Language and Literacy Classroom Observation
FRL	Free/reduced lunch
IDEA	Individuals with Disabilities Education Act
NAEYC	National Association of Education of Young Children
NCLB	No Child Left Behind
NIEER	National Institute of Early Education Research
OEL	Tennessee Office of Early Learning
Pre-K	Prekindergarten
RDD	Regression discontinuity design
SES	Socioeconomic status
SPED	Special Education
TN-DOE	Tennessee Department of Education
TN-ELDS	Tennessee Early Learning Developmental Standards
VPK	Tennessee's Voluntary Prekindergarten

APPENDIX F
BEGINNING PAGE OF CHAPTER SAMPLE

CHAPTER 1

INTRODUCTION

Instructions

You must capitalize and use bold type for the entire word "CHAPTER." Number chapters consecutively by Arabic numerals. Place both the word "CHAPTER" and its number one inch from the top edge of the page and center them four inches from the right edge. Type the chapter title in all caps and in bold type, position it a double space below the chapter number, and center it four inches from the right edge of the paper. Double space titles more than four inches long and type them in inverted-pyramid style. The first line of the text begins two double spaces (two returns) below the chapter title.

Position the page number one inch from the bottom of the page and center it four inches from the right edge. The page number position will be in the upper right corner for all pages of the text **except** the first page of the chapter. Due to software problems, the page number positioned at the bottom center on **all** pages will be acceptable.

APPENDIX G

CHAPTER AND PART HEADING SAMPLES

Division Into Chapters

CHAPTER 1

GROWTH DYNAMICS OF TUMOR CELLS *IN VITRO*

AND *IN VIVO*

You can express chapter numbers as Roman or Arabic numerals. Note the extra spacing between chapter title and beginning of text. This space provides a visual "roadmap" for readers, telling them that a major division has just occurred.

Division Into Parts

4. GROWTH DYNAMICS OF TUMOR CELLS *IN VITRO*

AND *IN VIVO*

You can express parts in Roman or Arabic numerals. Note the extra spacing between the part designation and text, showing readers that a major break has occurred.

APPENDIX H
CHAPTER SUBDIVISIONS SAMPLE

Centered Head

*

If a chapter contains only one level of division, you **must** use the centered head. Type it in upper and lowercase, bold in type, and center it 4 inches from the right edge. Place it two blank lines below the preceding text (or chapter title) and two blank lines above the text which follows. Double-space in an inverted pyramid format a centered head that is longer than 4 inches. **If a second level of subdivision immediately follows the centered head, use only one blank line between the two subheadings.**

*

Freestanding Sidehead

*

If a chapter makes use of two levels of subdivision, then a freestanding sidehead is the second subdivision. Position the freestanding sidehead flush with the left margin, two blank lines below the preceding text (**double space if preceded by a centered head**) and two blank lines above the text that follows. Capitalize the first letter of each major word. Place the sidehead in bold type; there is no end punctuation. If the heading is longer than 2 1/2 inches, use a second line. Indent the second line two spaces and double space between the two lines.

Paragraph sidehead. A third subdivision is indicated by a paragraph sidehead. Place the paragraph sidehead a single blank line below the preceding text. Indent it like a regular paragraph. Capitalize only the first letter of the first word. Place the heading in bold type, followed by a period, and in every instance begin the text on the same line.

*This space is created by hitting <ENTER> one extra time after the paragraph ending.. This works only if your line spacing is set to double space.

APPENDIX I
REFERENCES (BIBLIOGRAPHY) SAMPLES

- [1] Lacava, Ann L. *TCGS Guide to the Preparation of Theses and Dissertations*. Knoxville, Tennessee, 1992.
- [2] *Tennessee Technological University Thesis Manual*. Cookeville, Tennessee, 1989.
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