GENERAL INFORMATION

The bound thesis will be retained at the IIT library, and a digital copy will be stored in the IIT Digital Repository; therefore, it is imperative to present the thesis in an acceptable form according to the rules and standards established in this Thesis Manual. These standards reflect those of the University Microfilms and Dissertation Abstracts for Ph.D. dissertations; the standards apply to master's theses as well.

Contents of a Thesis

Every thesis, typed double spaced, must consist of three major divisions:

1. Preliminaries
2. Text
3. Supplementary information

These divisions may in turn be composed of sub-divisions. Each item will be discussed in the following chapters. The divisions must be prepared in the following order (starred items are requested in all cases):

Preliminaries

- Title page*
- Blank page (or copyright notice page)*
- Acknowledgments (optional but usually included)
- Authorship Statement*
- Table of Contents*
- List of Tables (if thesis contains tables)
- List of Figures (if thesis contains figures)
- List of Abbreviations (if thesis contains symbols and abbreviations)
- Abstract (mandatory)*

Text

- Introduction*
- Historical Review or Survey of the Literature*
- Body of the Report*
- Methods and Procedures
- Results
- Conclusions
- Summary (and recommendations for further studies)*

Supplementary Information

- Appendix (if thesis requires appendix)
- Vitae (optional)
- Bibliography*

Spelling

Many words in English may be spelled correctly in more than one way. A student must be consistent in such usage, and ordinarily the spelling given first in a recent edition of a standard dictionary is preferred. Simplified spellings should be avoided, such as "thru" for "through" and "nite" for "night."

Thesis Copies

The Thesis Examiner approves the final copy of the thesis and provides instructions about the final deposit and forms requirements. The final copy of the thesis is converted to PDF and is uploaded to the ProQuest ETD Administrator. After the uploaded copy is reviewed and approved, and Graduate Academic Affairs has officially awarded graduates' degrees, all approved PDF copies are digitally sent to ProQuest, where the three bound copies are produced. The bound copies are shipped to IIT for distribution to Galvin Library and the appropriate colleges/departments. The thesis fee includes the cost of binding three copies for IIT. However, additional copies for personal use may be ordered through the ProQuest ETD Administrator or taken to Office Services for binding.

Manuscript Preparation

Students may prepare the thesis manuscript by using a computer. A description of the allowable structure, spacing and fonts is provided in the following sections.

A set of instructions and a "style" file for using the LaTeX word processing system may be obtained, by contacting the Thesis Examiner. By following the style file, students can format their thesis to conform to the IIT thesis style. The style file and LaTeX are a collection of "macros" written for the powerful mathematical typesetting program TeX.

Students may use other word processing programs such as Microsoft Word, Corel Word Perfect, etc. A template for the IIT thesis in Microsoft Word format is available at: https://web.iit.edu/gaa/thesis

Fonts

The final manuscript of a thesis should be prepared in a standard type face with black letters using either 10 point or 12 point. The fonts recommended are: 12 point Times New Roman, 12 point Courier, 10 point Geneva, 12 point Palatino or 12 point New Century Collegebook. Special sizes or styles of non-standard typefaces must be recommended in writing by the student's adviser and approved in advance by the Thesis Examiner.

Characters that slant to the right are typically italic fonts. Bold characters are presented darker and thicker than normal fonts. Most word-processing programs and printers allow the use of italics and bold type. However, italics and bold fonts used in text are not distinctive enough and not always easily recognizable in electronically prepared manuscripts. Therefore, bold type is allowed for first-, second-, and third-order headings. Italic type is allowed in headings but is not encouraged within the text of the thesis, unless it used for a scientific or medical term that is always written in italic.

To avoid uncertainty and ambiguity, underlining should be used rather than italics for emphasis in non-typeset manuscripts. Use italics or underlining to emphasize words and letters, but do so sparingly and out of necessity. Underline or italicize foreign words on first reference only. Underline special terminology, for example scientific terms such as genus or species, or other technical terms requiring emphasis. The use of bold type, italics, or underlining words or phrases in the text simply for emphasis is rarely appropriate in research writing and strongly discouraged.

Lists

There are several types of lists, both ordered and unordered. For ordered lists, Arabic numbers (i.e., 1., 2., 3., etc.) are aligned on the periods following them. Ordered lists may be set flush with the text or indented. Additional lines for list items must be aligned with the first word following the numeral. In case additional paragraphs are subordinate to the numbered or ordered list item, the relevant text should also be indented appropriately and aligned with the first word following the numeral.

Unordered lists are sometimes referred to as bulleted lists. In this case, a standard bullet symbol [•] instead of a number precedes each list item. Unordered lists may be set flush with the text or indented. Additional lines for list items must be aligned with the first word following the symbol character. In case additional paragraphs are subordinate to the unordered list item, the text should also be indented appropriately and aligned with the first word following the symbol.

For punctuation of listed items, refer to your department's preferred style manual. In general, the first word in each listed item is capitalized and includes the appropriate end punctuation, if each listed item is a complete sentence. If the items are syntactically part of the previous sentence, however, then the first word is not capitalized and appropriate end punctuation is applied to only the last item in the list. Under no circumstances is mixing of complete sentences and sentence fragments allowed in the same list.

Style Manuals

Each graduate student should check with their respective department regarding the appropriate style manual for their thesis. Use one of the following:

American Institute of Physics. *Style Manual for Guidance in the Preparation of Papers for Journals* (4th ed.). New York: American Institute of Physics.

IEEE Editorial Style Manual
http://www.ieee.org/conferences_events/conferences/publishing/style_references_manual.pdf

Gibaldi, Joseph. *MLA Handbook for Writers of Research Papers*. 6th ed. New York: Modern Language Association of America, 2003.

The Chicago Manual of Style. 15th ed. Chicago: University of Chicago Press, 2003.

Publication Manual of the American Psychological Association. (7th ed.). Washington, D.C.: American Psychological Association (APA), 2019.

Pagination

Every page of a thesis has a number, whether the number is printed on the page or not. Pages in the preliminaries, preceding Chapter 1, are numbered consecutively in lower case Roman numerals, centered 0.5 inches above the bottom of each page.

The title page is considered page i, but the number is not printed. If the thesis is to be copyrighted, then the second page contains the copyright notice, and the page is numbered ii. However, if the thesis is not to be copyrighted, then the second page is a blank page, and the number is not printed. All other subsequent page numbers are printed, and no other page is a blank. There must be no dashes,

parentheses, or other characters around any page number. Page iii will usually be the Acknowledgments, and page iv will typically be the Table of Contents.

Beginning with the first page of Chapter 1 and continuing through the entire thesis (including the Appendix), pages must be numbered consecutively in Arabic numerals, located 0.5 inch below the 8.5-inch top edge, and 1 inch in from the 11-inch right edge on every page. On tables or figures turned with the top at the bound edge—in Landscape--the page number should still be in the same place and direction as the normal vertical text page, i.e., all page numbers will be in the same direction, when placed over each other as the upper right corner is fanned. No line of text, table, figure or photograph may extend farther right than the last numeral of the page number. The first page of Chapter 1 must always be page 1. Insertion of late pages (such as 37, 37A, 38) is never permitted in a thesis.

Margins

The margins on all pages, whether text, table, figure, photograph or bibliography, must not be less than 1.5 inches from the bound edge and 1 inch from the other three edges except for page numbers. Margins are essential not only for uniformity of appearance, but also because the outer edges of the paper are trimmed off in the binding process. The left margin is wider to provide the spine for binding and still leave the text material visible when the book is opened. All pages except the last page of a chapter should be reasonably uniform, and no letter in any line should be farther right than an imaginary vertical line passing down from the farthest right numeral in the page number. Right margin justification is optional. Do not use right margin justification, if the printer spaces are noticeably wide or uneven between words.

Consistency

The most important element of style in any writing is consistency. Alternate methods of punctuation, hyphenation, abbreviation, and capitalization may be acceptable in various fields. Once adopted, a system must be used consistently throughout the entire thesis. Use clear copies with sharp, black letters. Subscript, superscripts, and special symbols must be large enough to be meaningful (minimum 7 points). What every pattern used for section headings, sub-headings, and subsequent divisions, beginning in Chapter 1, must be continued throughout the document, where appropriate.

Prior Publications

Each academic unit has a policy on prior publications. Students should familiarize themselves with this policy.

Students should be sure to obtain any required copyright permission when including previously published work in their thesis.

Special Requirements for Ph.D. and Master Degree Candidates

IIT participates in the services offered by UMI Dissertation Publishing in Ann Arbor, Michigan. To doctoral students:

1. your thesis is "published" once it is uploaded to the ETD Administrator and sent to Proquest; and
2. an abstract is printed in Dissertation Abstracts announcing to the public that your thesis is available from UMI.

On the ETD Administrator site, the student must sign a Dissertation Publishing Agreement Form authorizing ProQuest Information and

Learning (PQIL) to deposit and publish the thesis, while holding them harmless from any damages which might arise from copyright violations. The original copy of both the thesis and the agreement are sent to UMI Dissertation Publishing. When the original copy of the thesis is returned to IIT, it is bound and becomes the archival library copy.

For publishing in Dissertation Abstracts, International, the Ph.D. student must upload a copy to the ETD Administrator and deposit one copy, in the UMI format, with the required forms that are due by the final thesis deadline. This copy is kept in the student's file in Graduate Academic Affairs. The abstract is separate from the thesis and is expected to give a succinct account of the dissertation so that a reader can decide whether to read the complete dissertation.

The heading of the UMI Dissertation Abstract must include the following:

1. title (all capitals)
2. author's name and degree title
3. school (Illinois Institute of Technology) and date of graduation
4. adviser's name

Although 350 words is the maximum length, nearly all abstracts would be shorter. An abstract of this sort contains:

1. statement of the problem
2. procedure or methods
3. results
4. conclusions

The abstract will be published without editing or revision. The copy must be printed on one side of the paper only and must be double-spaced. An abstract never contains footnotes.