ACKNOWLEDGEMENTS

This Thesis and Dissertation Manual has been created on behalf of our Georgia Tech graduate students. The rules in this Thesis and Dissertation Manual take precedence over previous publications issued by the Graduate Studies Thesis Office.

Questions regarding the format of the thesis/dissertation not adequately answered in this handbook should be directed to:

Georgia Institute of Technology
Office of Graduate Studies
631 Cherry Street
Savant Building, Suite 318
Atlanta, GA 30332-0215

404-894-3092
thesis@grad.gatech.edu

Office hours: 8 AM - 4 PM

PROJECTED LIFE CYCLE OF A MASTERS STUDENT

Semester 1
- Student successfully admitted into Georgia Tech
- Student completes RCR requirement

Semester 2
- Request for MS Topic Form
  - Paper form or electronic
  - Completed by student
  - Approved after RCR requirement
  - School Chair, Grad Coordinator, and All Committee Members
- Formulate your MS Committee

Semester 3
- Certificate of Approval Form
  - Paper form or electronic
  - Received from Department
- Student submits application for graduation

Semester 4
- Submit Final Thesis to EDT/Vireo Site
- Submit thesis for format review
- Graduation
- Student defends the Thesis
  (if required by department)

PROJECTED LIFE CYCLE OF A PH.D STUDENT

Year 1
- Admitted into Georgia Tech
- RCR requirement within first 90 days

Year 2
- In-person RCR Requirement
  (second semester)
- Submit PhD Candidacy Form
  and PhD Minor Form
- Schedule and Pass PhD Proposal
- Participate in Professional Development (3MT or CRIDIC)
- Pass Qualifying Exam

Year 3
- Schedule and Pass PhD Defense
- Begin Writing Dissertation

Year 4
- Submit thesis for format review
- Online App for Graduation (OAG)
  and Diploma Mailing Address
- Submit Dissertation forms to OGS
- Submit Final Thesis to EDT/Vireo Site
- Graduation
- Submit PhD Defense Announcement to Grad Studies (OGS)
Welcome to the Office of Graduate Studies Thesis and Dissertation Manual. This manual is for students who are in the beginning stages of writing and formatting their dissertations. This Thesis and Dissertation Manual will address formatting only, not content relevant to your specific degree program.

FAQ and Common Resources:

Have you completed RCR (Responsible Conduct of Research) training for Master's and PhD Students?
For further information, consult: rcr.gatech.edu

Have you been admitted to PhD Candidacy, submitted the Doctoral Minor or completed your MS Topic form?
If not, see the forms here: grad.gatech.edu/theses-dissertations-forms

Have you submitted or reactivated your Online Application for Graduation?
If not, consult the Registrar’s office here: registrar.gatech.edu/info/online-application-graduation-oag-graduate-students

Are you aware of the semester’s Thesis and Dissertation Deadlines?
Thesis and dissertation deadlines are firm. Please make sure that you are aware of the deadlines. All deadlines are listed here: grad.gatech.edu/theses-dissertations-deadlines

Have you scheduled and passed your PhD Oral Defense?
The student's major department should advise the Graduate Studies Thesis Office of the date, time and location of the presentation at least 10 working days in advance. The oral defense committee members should be listed on this announcement. The oral defense should be scheduled no later than two weeks prior to the thesis deadline so that you will have sufficient time for revisions and copying. Please send all defense announcements to announcements@grad.gatech.edu

Registering for Commencement
Register five weeks prior to graduation. Please visit the Commencement Office website gatech.edu/commencement for more information.

Rules for Enrollment During Last Semester
Georgia Tech policy requires that graduate students must be enrolled during the semester in which they graduate and also that the minimum credit hour load for graduate students is three credit hours except as described in the Policy on Hour Loads for Graduate Students.

Waiver of Enrollment
The requirement that a graduate student be enrolled during the semester of graduation may be waived if the student is no longer using Institute or faculty time during the semester of graduation AND:

1. the student was duly registered the previous term (usually the term in which the successful final defense took place), and

2. the final and complete electronic thesis is submitted, all thesis-related forms are received by the Graduate Studies Thesis Office, and all other graduation-related requirements are satisfied before the end of the registration period the semester of graduation.
The intent is that a student who has been properly registered during the period of thesis completion and who has completed all work at Georgia Tech and therefore has nothing to register for should not be required to enroll another term just to graduate. The Enrollment Waiver is available from the “Forms” menu at the Graduate Studies Thesis Office web site [grad.gatech.edu/theses-dissertations-forms](http://grad.gatech.edu/theses-dissertations-forms).

The Waiver of Enrollment ("Enrollment Waiver") form signed by the student and his or her department should be turned into the Graduate Studies Thesis Office at the same time as the Certificate of Thesis Approval form.

The waiver of enrollment does not waive the requirement that the student file or reactivate a degree petition (OAG) by the deadline for the term in which the degree is to be awarded. There are no exceptions to the enrollment waiver deadline for thesis students. Students must meet the deadline or register as required.

**One Hour Rule**

A student who does not meet the enrollment waiver requirements may enroll for just one hour in the term of graduation. This exception to the normal minimum of three hours for graduate students may be used only once per degree. No special form or permission is needed provided that you are a degree candidate.

Students who have enrolled for one hour only more than one time per degree are not eligible to take advantage of the waiver of enrollment. They must enroll for the normal minimum of three hours in the semester of graduation.

Students should address any questions or concerns regarding enrollment during the last semester to the Graduate Studies Thesis Office before the end of registration; no additions or changes in registration are allowed after the close of Registration.

Please note that these exceptions do not alter the credit hour load a student must take in order to meet financial aid, fellowship or assistantship eligibility, etc. Students on F-1 visas should speak with the Office of International Education before carrying a reduced course load or not enrolling. Students intending to enroll in the Student Health Insurance Plan must be enrolled in a minimum of 4 credit hours to participate in the plan.

**Policy on Advisement of Graduate Students and the Appointment of Thesis Advisory Committees**

**Doctoral Theses:**

There are two committees which function to advise, approve and conduct the final doctoral oral examination of the thesis and the student’s knowledge of the field in which it lies.

The first committee is called the Thesis Advisory Committee or the Thesis Reading Committee and consists of at least three persons, one of whom is the Thesis Advisor. This committee approves the research topic, provides advice and guidance during the research and is charged with approving the thesis when the research is completed and presented as the doctoral thesis. When the Thesis Advisory Committee considers the thesis to be satisfactory, a recommendation is made to the Dean of the Graduate Division for the appointment of the second committee, which is called the Final Doctoral Examination Committee, and it consists of at least five individuals.

The Thesis Advisory Committee consists of at least three members satisfying the following: (1) the thesis advisor shall be a member of the Academic Faculty (with approval of the school or college Graduate Committee, an adjunct * faculty member appointed for the specific purpose of advising graduate students may serve as the thesis advisor); (2) the majority of committee members shall be members of the Academic Faculty. The Committee is approved by the Graduate Committee in the School of College, recommended by the School Director through the College Dean, and appointed by the Vice Provost for Graduate Education and Faculty Development.

The Final Doctoral Examination Committee, which consists of at least five persons, always contains the Thesis Advisory Committee members and others as appropriate, who are recommended by the school or college to the Vice Provost for Graduate Education and Faculty Development for approval. At least one member of the Final Doctoral
Examination Committee must be from the academic faculty of a School (or College) which is distinct from the unit in which the student is enrolled.

It is recognized that some Schools and Colleges may wish to appoint a Thesis Advisory Committee which consists of five or more persons and to recommend this committee to serve as the Final Doctoral Examination Committee. Where the constraints outlined above are met for both committees, this is permissible.

**Master's Theses**

For Master's Thesis advisement, the Thesis Advisory Committee consists of at least three members, the majority of whom must be members of the Academic Faculty. The thesis advisor who serves as the Chairman of the Thesis Advisory Committee must be a member of the Academic Faculty (with approval of the school or college Graduate Committee, an adjunct faculty member appointed by the specific purpose of advising graduate students may serve as the thesis advisor.) The committee is recommended by the School Director through the College Dean and appointed by the Vice Provost for Graduate Education and Faculty Development.

*“adjunct” does not indicate formal appointment, but rather appointment as indicated in this policy statement.*

**Note on Joint Degrees and Departments**

For joint (inter-institutional) departments or degree programs, committees should have at least one faculty member from each institution, and a majority should be joint program faculty. Joint program faculty will have undergone a nomination and appointment process in the joint program in order to qualify for the right to advise students in the joint program.

**Policy on Publication of Thesis**

A policy of the Georgia Institute of Technology is that Doctoral and Master's Theses are openly published. Extraordinary delays are not to be allowed to protect proprietary interests of sponsors. It is anticipated that all Ph.D. theses and a significant fraction of master's theses be published in the open, refereed literature.

In all cases, doctoral research should meet the “Guidelines for Ph.D. Dissertation Research”, and in no situation should these be compromised to allow for concealing important research results because of security classification or a sponsor's proprietary interest.

A student may routinely elect to have publication of his or her thesis withheld for a period of one year, if recommended by the student’s thesis advisor. Requests for extensions beyond one year must be justified and approved by Vice Provost for Graduate Education and Faculty Development.

A Georgia Tech doctoral dissertation in its final form may not be used or have been used to meet the requirements for a separate degree at another institution.

**Guidelines for PhD. Research**

1. The research should provide a useful educational experience for the student emphasizing creativity, independent action and learning, research methodology, and scholarly approach.

2. The research must be relevant to the field in which the student is pursuing a degree.

3. The contributions to knowledge must be original and as such, should represent a substantial addition to the fundamental knowledge of the field or a new and better interpretation of facts already known. The research must demonstrate creativity. Dissertations based on well-known principles, techniques, and models applied to situations only somewhat different from previous applications are not acceptable.
4. The dissertation should contain clear statements about (a) the relevance and importance of the problem and
   (b) the significance, originality, and generality of the research results. The relationship of the research to the
   literature of the field should be described.

5. The research should possess the major characteristics of the scientific method, namely objectivity and
   reproducibility. Assumptions should be clearly stated in both experimental and theoretical research.

6. The dissertation should reflect a level of competence indicative of significant achievement beyond the master’s
   level. Thus, the research is expected to draw directly upon advanced learning in the student’s major field and
   demonstrate mastery of that knowledge.

7. The dissertation must demonstrate understanding of the theory and methodology related to its main thrust.
   Further the dissertation should reflect knowledge of the application area.

8. The research should result in at least one paper publishable in a suitable refereed journal of engineering,
   science, management or architecture, as appropriate.

9. The dissertation should demonstrate a high degree of proficiency in written communication of research results.
   It should conform to the Institute’s requirements as outlined in the Office of Graduate Studies and Research
   “Manual for the Preparation of Graduate Dissertations and Thesis”.

10. The scope of the research should be such that it requires at least the time and effort equivalent to one year of
    full time graduate study.
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PART 1: THE ETD PROCESS AND PUBLICATION

1. ELECTRONIC THESSES AND DISSERTATIONS (ETDs)

All degree candidates must submit their final work electronically. Although the dissertation or thesis itself must be submitted electronically, most supporting documents must be submitted via DocuSign. See the Checklist of Documents to be Turned in at the Same Time as Electronic Thesis/Dissertation at the following site: grad.gatech.edu/theses-dissertations-forms

1.1 WHAT ARE THE ADVANTAGES?
• You save time and money on purchasing expensive paper, printing, and reprinting corrections.
• There are fewer signatures to get (committee members must sign only the Certificate of Thesis Approval).
• Your work becomes public as soon as you graduate (unless you specify otherwise).
• You can refer prospective employers to your ETD as a convenient sample of your work.

1.2 WHAT ARE THE DISADVANTAGES?
• Some journals may consider an ETD to be previously published work. We encourage you to carefully read any publishing agreements you sign and to try, whenever possible, to obtain an agreement that allows you to include your research in a freely available ETD. You can elect to withhold publication of your ETD for one year with the approval of your advisor, which may satisfy a publisher. In addition, journal articles and books are typically written quite differently than theses or dissertations.
• Some “tricks” used to make formats come out right in printed documents may not work in electronic documents.
• For most Georgia Tech students, there are no other disadvantages.

1.3 HOW ETD SUBMISSION WORKS

Go to the Electronic Thesis and Dissertations web site: thesis.gatech.edu.

Enter basic information about yourself and your thesis via an online form. You will also be required to upload your thesis and dissertation in PDF format. The Graduate Studies Thesis Office checks your electronic document and lets you know about any corrections you must make via email. Make the corrections and submit the corrected file. If the Graduate Studies Thesis Office has all of your pre-thesis and thesis-related documents, they will approve your thesis and notify the Registrar's office that you are eligible to graduate.
1.4  FILE FORMATS

It is the responsibility of the author to reformat the document into a PDF file, check the reformatted document for accuracy, and submit the PDF document to the Georgia Tech ETD website for publication. No compression should be used. No changes can be made to the electronic thesis once it is approved.

The Georgia Tech Library has software to create PDF files and technical support staff if you need assistance with it.

All fonts used should be embedded in the document. Internal links to multi-media files are acceptable. If multi-media elements are used in the document, file formats should be identified in the dissertation/thesis abstract. Acceptable file formats include the following:

<table>
<thead>
<tr>
<th>IMAGES</th>
<th>VIDEO</th>
<th>AUDIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIF (.gif)</td>
<td>Apple Quick Time (.mov)</td>
<td>AIF (.aif)</td>
</tr>
<tr>
<td>JPEG (.jpeg)</td>
<td>Microsoft Audio Video</td>
<td>CD-ROM/XA</td>
</tr>
<tr>
<td>Interleaved (.avi)</td>
<td>CD-DA</td>
<td>MIDI (.midi)</td>
</tr>
<tr>
<td>PDF (.pdf) use Type 1</td>
<td>MPEG (.mpg)</td>
<td>MPEG-2</td>
</tr>
<tr>
<td>PostScript fonts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TIFF (.tif)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PNG (.png)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.5  FILE NAMING CONVENTIONS

Naming conventions are no longer necessary for the upload of your ETD file. The new Vireo System (implemented Spring 2013) allows for each file, once uploaded, to have its own unique extension.

In order to add multimedia files, students must be logged into thesis.gatech.edu and follow the instructions.

1.6  DATASETS AND SUPPLEMENTARY FILES

The ETD/Vireo system allows students to upload supplementary files including datasets. The size limit of all files (including the PDF of the ETD) is 2 GB with each individual file size to not exceed 512 MB. We encourage all students to upload their datasets and supplementary files along with their final thesis/dissertation. Advisors must approve all supplementary files and datasets which are uploaded to the ETD.

In the event that the supplementary files and datasets exceed the allotted file size, or if you would like your dataset to have its own record separate from your thesis/dissertation, please contact the Library’s Research Data Librarian at http://library.gatech.edu/experts?s=&specialties=1280. A separate record will be created for your supplementary files which will be linked to your SmarTech submission of your thesis/dissertation.
1.7 WHAT CHANGES AND WHAT DOES NOT WITH ELECTRONIC SUBMISSION

- Students no longer have to submit any paper copies of your thesis to the Graduate Studies Thesis Office. We recommend you send a PDF for a format check to thesis@grad.gatech.edu. Paper copies for your advisor and department are your responsibility.

- The Thesis Approval Page will still be the second page in the thesis, but it will not have signatures and there should not be any lines for signatures. You must list the committee members who approved your thesis or dissertation with their affiliations, and be certain you type in the "Date Approved". That should be the date the last committee member approved the final draft of your thesis (MS students) or the date of your defense (or presentation for MS students).

- Everyone must still submit a copy of the Certificate of Thesis Approval to the Graduate Studies Thesis Office preferably via DocuSign. That form must have original or digital signatures of all committee members, all on the one form, as well as the Chair or Graduate Coordinator of your department. If by any chance a committee member is remote and unable to sign the form, the school chair or graduate coordinator can sign on their behalf with written permission from said committee member (via email). Email should be attached to the Certificate of Thesis Approval form. However, remote committee members can use DocuSign to sign forms. If there is an issue with their location and they are unable to access the form, contact the Office of Graduate Studies.

- Doctoral students must still turn in required forms located in the checklist (http://grad.gatech.edu/sites/default/files/documents/thesis_checklist_spring_2020.pdf). You must submit two copies of your abstract and two copy of the dissertation title page along with your supporting documents. Those documents can be submitted as a PDF to thesis@grad.gatech.edu.

- You must still have all documents and the thesis/dissertation submitted and approved by the Graduate Studies Thesis Office by the thesis deadline. See Deadlines: grad.gatech.edu/theses-dissertations-deadlines

See Checklist for Documents to Turn in with Electronic Submissions on the web at grad.gatech.edu/theses-dissertations-forms.

2. THE UMI DISSERTATION PUBLISHING SERVICES AND FEES

Doctoral students may elect to submit the abstract of their dissertation or the entire dissertation to Dissertation Abstracts for processing and distribution. Students should discuss this option with their major professor prior to making a decision to utilize this service. The Office of Graduate Studies is no longer involved in this process.

2.1 DISSEMINATING YOUR THESIS OR DISSERTATION

There are a number of free or low-fee options to disseminate your thesis. Please discuss with your advisor the best option. We recommend the following:

- **Academia.edu**: Includes 5 million uploaded papers, shared with 22 million members. Requires free account. academia.edu

- **ResearchGate**: Accepts publications and data; 6 million members have posted 75 million documents, figures, and datasets. Requires free account registration. researchgate.net
• **Figshare**: Began as a data and figure repository, now includes publications, code, and thousands of theses/dissertations. Requires free account registration. [figshare.com](http://figshare.com)

• **ProQuest (formerly UMI)**: ProQuest has been archiving theses for many years, and recently stopped charging for digital submission. A subscription is required to access the full texts of the ETD’s submitted to ProQuest. Indexed in several science and technology databases. Contact [disspub@proquest.com](mailto:disspub@proquest.com) for submission information. Georgia Tech stopped requiring submission to ProQuest in 2012. [proquest.com](http://proquest.com)

### 2.2 Extra Bound Copies of the Dissertation

Students are responsible for printing their own copies and give them to a private binding company. A number of commercial printing companies such as FedEx Office and Print and Staples provide binding options. The Office of Graduate Studies recommends [www.PhDBookBinding.com](http://www.PhDBookBinding.com) for your academic publishing needs.

### 3. Copyrighting Theses/Dissertations

#### 3.1 SMARTech Agreement Form

The Library also manages Georgia Tech’s institutional repository SMARTech, an archive for GT-produced scholarly materials and research. Authors depositing their materials in SMARTech retain copyright to their research materials, and grant Georgia Tech a non-exclusive license to distribute and preserve the materials for educational purposes. Therefore, you must include the SMARTech Repository Agreement form along with your final documents available here: [www.grad.gatech.edu/theses-dissertations-forms](http://www.grad.gatech.edu/theses-dissertations-forms)

Students and their advisors should give careful consideration to the desirability of registering the copyright. It is not necessary to register your work with the U.S. Copyright Office in order to claim copyright protection; but you can retain more legal protection. Students automatically have copyright for life plus 70 years after death. It is required, however, to mark your work with a copyright notice. General information regarding copyrights can be obtained from the U.S. Library of Congress Office at [www.copyright.gov/](http://www.copyright.gov/) or [www.library.gatech.edu](http://www.library.gatech.edu)

It is required that students add a copyright to the cover of the thesis. Copyright information should be placed at the bottom of the title page using the following format:

```
Copyright © John Roger Stephens 2014
```

#### 3.2 Use of Copyrighted Materials and Permissions

If you have used figures or documents from other sources (i.e. scholarly journals), the onus is on the student to seek permission for the reuse of copyrighted materials. The student is required to obtain written permission from the author or publishers to quote extensively from copyrighted material. Such permission is usually granted on condition that acknowledgment is made. If payment is required, this is the author’s responsibility. Permission for the use of all such materials must be obtained before the thesis/dissertation is submitted to the Graduate Studies Thesis Office.
You must have prior permission from the publisher to reprint large sections of published work even if you are the author. If written permission is granted, please include these permission letters granted by the source in a separate appendix in your thesis/dissertation or upload as supplementary files as part of the ETD.

### 3.3 Creative Commons Licensing

Creative Commons licenses help creators (licensors) retain copyright while allowing others to copy, distribute, and otherwise reuse their work. You can specify non-commercial reuses only.

Licenses work around the world and last as long as applicable copyright lasts.

Find more information at creativecommons.org/licenses.

### 4. Errata and Redactions

#### 4.1 Changes After Submission of the Thesis: Errata and Redaction

All changes made to a thesis, after the thesis has been submitted to the Georgia Institute of Technology Library by the Graduate Studies Thesis Office, must have prior approval from both the student's advisor and the Vice Provost of Graduate Education and Faculty Development (VPGEFD). The Office of Graduate Studies will approved on behalf of the VPGEFD.

#### 4.2 Errata in a Thesis or Dissertation

When the purpose is to correct significant errors in content, the student should create an errata sheet using the form and instructions and obtain approval from both thesis supervisor or program chair and the Vice Provost of Graduate Education and Faculty Development.

#### 4.3 Redactions in a Thesis or Dissertation

If the purpose of change is to excise classified, proprietary, or confidential information, the student should fill out the application and have the request approved by the thesis supervisor or program chair and the Vice Provost of Graduate Education and Faculty Development. Students and supervisors should vet thesis content carefully before submission to avoid both scenarios whenever possible.

Both forms can be found at grad.gatech.edu/theses-dissertations-form
5. DOCUMENT APPEARANCE

It is now a requirement for all theses and dissertation students to submit their work electronically. Because of this, the only time that paper copies of theses and dissertations will be accepted is for an initial format check.

For thesis format checking, emailing a PDF of the document is acceptable. You may send a PDF for format check to thesis@grad.gatech.edu.

The overall appearance of the thesis should be professional and consistent. Text should not wrap around tables or figures. Tables and figures in the body of the thesis should be large enough to read clearly. Text should be all black with the exception of Figures, Tables, and Appendices. There should be enough space between text and figures/tables to make it easy to tell where the text ends and restarts. Any figures, illustrations, diagrams, tables, etc. must be of high image quality.

5.1 FONTS

It is preferred that only one font be used throughout the document. A proportional font such as Arial or Times New Roman will take less room than a fixed font such as Courier.

The Graduate Studies Thesis Office recommends that you choose from the following fonts (all except Courier are proportional):

<table>
<thead>
<tr>
<th>FONT</th>
<th>SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arial</td>
<td>11 pt</td>
</tr>
<tr>
<td>Courier</td>
<td>11 or 12 pt</td>
</tr>
<tr>
<td>Century Gothic</td>
<td>11 or 12 pt</td>
</tr>
<tr>
<td>Geneva</td>
<td>11 pt</td>
</tr>
<tr>
<td>Helvetica</td>
<td>11 or 12 pt</td>
</tr>
<tr>
<td>Times/New Roman</td>
<td>12 pt</td>
</tr>
</tbody>
</table>

Common symbols, such as scientific fonts, may be used in the body of the thesis, but not in the title of the work. Thesis or dissertation titles containing formulas, symbols, superscripts, Greek letters, or other non-alphabetical symbols should use word substitutes for those symbols; e.g. “Gamma Ferric Oxide Dispersion…”, “…Alpha- and Beta-Globulin…”, “…The Neodymium-Barium-Copper Oxide System…”. 
5.2 MARGINS

- Right Margin Always 1”
- Bottom Margin Always 1”
- Left Margin Always 1.5” (because copies still may be printed and bound)

Master’s Only: If you are sure that your thesis will not be bound, then a 1” left margin is permissible.

- Major Headings (Title Page, Chapter, etc.) – see below:
  » Option 1: 1-inch top margin for all pages including major headings (standard APA Format)
  » Option 2: Major headings begin 2-inches from the top of the page. Whichever you choose, you must be consistent.

5.3 SPACING

The text of the thesis or dissertation should generally be double-spaced. Line spacing of 1.5 may be used for most fonts, however, so long as the distance between two lines measured from bottoms of vowels in each line, is at least 5/16”. So, for example, Helvetica may be done in 1.5 line spacing whereas Arial 11 must be double-spaced. When in doubt, double space.

Footnotes, references (double-space between entries), quotations, and table and figure captions and legends are single-spaced. Leave at least two blank lines before and after tables and figures except at the very top or bottom of pages.

5.4 PAGE NUMBERS

- Page numbers should be centered at the bottom of the page within the 1-inch margin but no less than 1/2” from the bottom of the page.
- The pages before Chapter I are numbered consecutively using small Roman numerals.
- Although the title page and approval page count as pages i and ii, respectively, numbers should not appear on these pages.
- The first page to bear a Roman numeral is the Acknowledgments, which will be numbered page iii unless there is a Dedication or Epigraph preceding it. Numbering with Roman numerals continues through the Summary, which is the last page with a Roman numeral.
- Arabic numbers begin at the first page of Chapter I. The numbering begins at 1 and continues to the end of the document, including Appendices, References, and the Vita, when present.
- All pages beginning with page 1 are counted, including blank pages and section divider pages. The sole exception is the title pages for multiple volumes.
5.5 Footnotes

There is a wide diversity of practice in the footnoting among publications. The Graduate Studies Thesis Office has no overall requirement beyond consistency. All footnotes must be single-spaced and conform to margin and font requirements.

6. ARRANGEMENT OF CONTENTS

6.1 Introduction

Every thesis/dissertation is composed of three content divisions:

- Preliminary Pages
- Text Pages
- End Pages and Reference List

Each content division has several sections, which are to be arranged in the order described below and conform to examples that are given at the end of the guidelines.

6.2 Volumes

A thesis or dissertation must be divided into volumes when it will be thicker than 2 1/2 inches when printed and bound. Division into volumes is necessitated only by physical constraints of binding. It is suggested but optional for electronic Master’s theses. More information is given in the section on “Multiple Volumes”, Chapter 11.

Some theses are composed of two or more bodies of research that are only loosely connected or are a collection of journal-style chapters. In these cases, the thesis/dissertation may be divided into two or more parts.

6.3 Order of Pages

Preliminary Pages

- Title Page
- Approval Page
- Epigraph (Optional)
- Dedication (Optional)
- Preface (Optional)
- Acknowledgements
- Table of Contents
- List of Tables
- List of Figures
6.4 Preliminary Pages

In the sections that follow, “at the top of the page” will mean just above the 2-inch margin if you use the traditional format or just below the 1-inch margin if you use the new format (cover page of each new Chapter ONLY). Whichever you use, you must be consistent.

Title Pages

Thesis or dissertation titles containing formulas, symbols, superscripts, Greek letters, or other non-alphabetical symbols should use word substitutes for those symbols; e.g. “Gamma Ferric Oxide Dispersion…”, “…Alpha- and Beta-Globulin…”, “…The Neodymium-Barium-Copper Oxide System….”

Center, single-space and type each of the following on a new line; leave enough space between each groups of sentences below so that text covers the page vertically.
Title in Title Case Capitalization and Bold Letters

A Dissertation (or Thesis) Presented to
The Academic Faculty

By

Student’s Name

In Partial Fulfillment
Of the Requirements for the Degree Doctor of Philosophy in [Major] or
Master of Science in [Major]

School or Department

Georgia Institute of Technology

[ Month, Year of graduation]

Note: If you are part of a joint program (i.e. Public Policy or Biomedical Engineering), please include the additional institution(s) name. (i.e. Emory University, PKU, or Georgia State).

The mandatory copyright information is placed at the bottom of the title page using the following format:

Copyright © student’s name and year

For information on copyrighting, see Part I, Chapter 5 of this manual or visit www.copyright.gov.

Approval Page

Because all theses/dissertations are submitted electronically, you no longer have to obtain signatures on the Thesis Approval Page. The Thesis Approval Page will still be the second page in the thesis, but it will not have signatures. You must list the committee members who approved your thesis or dissertation and their respective affiliations (departments, universities, organizations, etc.). If you have fewer than 4 committee members, use the 1 column style. If you have 4 or more committee members, use the 2 columns style. (see Appendix A for samples) Be certain you type in the “Date Approved”. That should be the last date the last committee member approved the final version of your thesis.

Note: Only the thesis Reading Committee members (those who signed the Master’s Thesis Topic Approval form or Admission to Candidacy form) must sign the Certificate of Thesis Approval form. Any additional members on the Oral Defense committee may also sign the Certificate if you wish.
In addition, please adhere to the following guidelines:

- Count page, but do not print the page number.
- Type the title centered at the top of the page (should be at same line placement as title on the cover page).
- Space down several times (ten single lines or 5 double spaced lines).
- Type on the first line of each entry, the full name of the committee member approved your thesis, school affiliation (e.g. School of Chemistry), on the third like the institution or organization in italics (e.g. Georgia Institute of Technology). If there are more than four members, use two columns.
- Leave one or two blank lines. Type “Date Approved” and the date the thesis was approved. If using the two column format, the date approved should be under the right-hand column.

**Epigraph (optional)**

An epigraph is a brief quotation placed at the beginning of a written work that suggests its theme. It is not necessary to identify the Epigraph by labeling it Epigraph.

- Count but do not number page.
- If used, text should be brief and centered on page.
- Do not use quote marks or italics in the quote.
- Give only the name of the author and the reference title; the full reference should go in the main References section or Bibliography.
- The epigraph does not appear in the Table of Contents.

**Dedication (optional)**

- Count but do not number page
- If used, text should be brief and centered on page.
- The Dedication does not appear in the Table of Contents.

**Acknowledgements**

Acknowledgments (type “ACKNOWLEDGEMENTS” centered at the top of the page)

- Count and number page(s).

*Note: All major headings should start at the same position at the top of each page. (e.g., Title, ACKNOWLEDGEMENTS, TABLE OF CONTENTS, LIST OF TABLES, LIST OF FIGURES, .. REFERENCES etc.)*

- Leave three blank lines. Begin typing the text. The text must be double-spaced.
- Most theses and dissertations include a brief statement of appreciation for, or recognition of, any special assistance.
• Printed page numbering begins at this page with lower case roman numerals.

• The Acknowledgements is the first section to appear in the Table of Contents.

**Table of Contents**

Table of Contents (type “TABLE OF CONTENTS” centered at the top of the page)

- Count and number page(s).
- Leave three blank lines. Type listings and page numbers.
- Page numbers should line up flush right. For example, the “9” in page “79” line up with the “9” in page “129”.
- The titles of the chapters or sections, and at least the primary and secondary subdivisions should be listed. They must be worded exactly as they appear in the body of the thesis/dissertation.
- Leave one blank line between all main title entries (e.g. Dedication, Acknowledgement, List of Tables, Chapter Headings). For subsections, it is allowable to use either zero or one blank line between entries so long as the work is easily readable (as determined by the Graduate Studies Thesis Office).
- Any wrap-around text should be single-spaced
- All materials that follow the Table of Contents must be listed in the Table of Contents, including lists of tables and figures, appendices, and references Do not list the Table of Contents and its corresponding page number on the Table of Contents.

**List of Tables**

- List of Tables (type “LIST OF TABLES” centered at the top of the page)
- Count and number page(s).
- Leave three blank lines and type the listings.
- Page numbers should line up flush right. For example, the “9” in page “79” should line up with the “9” in page “129”.
- The List of Tables uses the captions as they appear above the tables in the text.

**List of Figures**

List of Figures (type “LIST OF FIGURES” centered at the top of the page)

- Count and number page(s).
- Leave three blank lines and type the listings.
• Page numbers should line up flush right. For example, the "9" in page "79" line up with the "9" in page "129".

• The List of Figures uses the captions as they appear below the figures in the text. If captions are very long, they may be truncated in the List of Figures.

• Figures with multimedia files should include the file information in the List of Figures.

List of Symbols

List of Symbols or Abbreviations (type "LIST OF SYMBOLS, LIST OF ABBREVIATIONS", or "NOMENCLATURE" centered at the top of the page)

• Count and number page(s).

• Other names of lists acceptable to the department or college may be allowed.

Summary

Summary (type "SUMMARY" centered at the top of the page)

• Count and number page(s), Roman Numerals end with this section.

• Give a concise overview of the whole thesis/dissertation.

• The Summary is double-spaced.

• The Summary may contain the same content as the doctoral Abstract but the latter is formatted differently. The Abstract is an external document with information required by the Office of Graduate Studies. The Summary is part of your thesis/dissertation. It should NOT be titled “Executive Summary”.

6.5 THE BODY OF THE WORK: THE TEXT PAGES

The body is the substance of the thesis/dissertation. All pages within the body count and are numbered consecutively with Arabic numerals.

Parts

When a thesis is divided into parts, the thesis will begin with an introductory chapter that will set up the questions to be explored in the various chapters or parts of the work, as well as any interconnections that may exist.

Each part should be preceded by a part title page. Part-title pages display only the word “part” followed by the part number, and any part title. Since the introduction is to the entire paper, whether it is titled “CHAPTER 1” or not, it precedes the “Part 1” divider. Therefore, the first part-title page will follow the introduction and the first chapter after the first part-title page will be “CHAPTER 2”. Part-title pages count and bear printed page numbers.
Chapters

All theses/dissertations should be divided into chapters. Each chapter will start on a new page. Chapters do not have title pages. After typing the chapter heading, leave three blank single spaced lines (or equivalent) before starting the text.

Sections and Subsections

Chapters are customarily divided into subsections with subheadings that have slightly differing font styles and are designated first, second, and third-level. The first-level subdivision should have greater attention value than the lower levels. Centered headings have more attention value than headings beginning at the left margin, and italic, underlining, or bold-face type has more attention value than plain text. Attention value is also enhanced by leaving some blank space above and below.

The following is an example of a hierarchy of subheadings:

1.1 Freedom and Constraint in Early Modernist Residential Plans
   1.1.1 Early Modernist Design Freedoms
   1.1.1.1 Early Modernists Design Constraints
   1.1.1.1.1 How Early Modernists Overcame Design Constraints

Introduction

The introduction contains the author’s open remarks about the thesis subject. This section may be entitled “INTRODUCTION” or “CHAPTER 1”, according to the format being followed and/or the length of the section. Whether or not it is called Chapter 1, it is equivalent to the first chapter.

- Begin numbering with Arabic numerals, starting with page 1.
- Type “INTRODUCTION” or “CHAPTER 1”
- Leave three blank single spaced lines (or equivalent) and begin typing text.

6.6 END PAGES

Appendix or Appendices

Not all students will need to include this division. Appendices are usually added to contain data and quotations too lengthy for inclusion in the text. They should not be listed as chapters in the thesis.

- Continue numbering all pages consecutively.
- The appendices may be divided into APPENDIX A, APPENDIX B, etc. depending on the type and amount of material used.
Each appendix may have its own cover sheet.
- For each cover sheet type APPENDIX A, APPENDIX B, etc., centered at the top of the page.
- Leave one blank line and type the title of the material.

Appendices must meet paper and margin guidelines.

Each appendix and its title should be listed separately in the Table of Contents.

Tables and figures in the appendices must be numbered, captioned, and listed in the List of Tables or List of Figures.

All materials used in the appendices must be distinct, legible, of professional quality, and conform to margin guidelines.

Include letters of permission for use of copyrighted materials in a separate appendix.

References

Any thesis/dissertation that makes use of other works, either in direct quotation or by reference, must contain a reference listing of these sources.

- Type the heading REFERENCES centered at the top of the page.
- You may use LITERATURE CITED or BIBLIOGRAPHY instead of REFERENCES if that is the convention in your discipline. Whichever you use, use the same terminology in the Table of Contents.
- Leave three blank lines. Type the list of sources single-spaced within, and double-spaced between entries.
- If you are using the “journal-style” format, references come at the end of each chapter. List the references as a subsection for each chapter (i.e. “3.5 References”).
- All hyperlinks (that will appear in blue automatically with Microsoft Word) must be changed to appear black with no underline. When web sites are used as references, the URL, author if known, title if there is one, and the date the URL was accessed by the thesis author should be listed in the References.

Vita (Ph.D. Only)

Doctoral students may provide a brief (preferably one page) vita including the place of birth, written in the third person. This vita is similar to the author biography found on book jackets.
7. TABLES AND FIGURES

7.1 DEFINITIONS

• The word “Table” designates tabulated numerical data used in the body and appendices of the thesis/dissertation.

• The word “Figure” designates all other nonverbal material used in the body and appendices such as photographs, drawings, diagrams, etc.

7.2 CAPTIONS

• Every table and figure must bear a caption and number. Numbering should be Arabic numerals not roman numerals.

• Captions are the descriptive titles of tables and figures and are generally one line. If a caption needs to be more than one line, it should be single spaced.

• Captions as they appear on the tables and figures must be the same as their listing in the List of Tables or Figures. Long captions may be abbreviated in the list if the identification is not impaired.

• The number of a table and its caption are placed above the top line of the table (“table at top”).

• The number of a figure and its caption is placed below the last line or bottom edge of the figure (“figure at foot”).

7.3 PLACEMENT

• Tables and figures are inserted as near as possible to the text they illustrate. Do not interrupt a paragraph or sentence to insert a figure.

• Tables and figures that are one-half page or less in length may appear on the same page with text. If larger than half-page, they may be centered on their own page.

• Two or more smaller tables or figures may be placed on a single page. Sufficient space should be left between them to make them visually distinct, generally a minimum of three blank lines.

• Independent figures and tables should not be place side-by-side.

• Text should not be wrapped around figures or tables.

• Three blank lines should be left before and after each figure or table except if at the very top or bottom of a page, in which case the margin can substitute for the three blank lines.

• Landscape (“on end”) tables and figures: Tables and figures may be in landscape (“on end”) orientation. The same margins and page number position must be maintained; however, as for normal text pages. Furthermore, the captions and legends for rotated tables and figures must have the same orientation as the table or figure. Thus for a landscape (on end) table, the table should be placed so that the top of the table is nearest the 1.5” (binding side) margin (or the left 11” side). The caption will be above the table, closest to the left/binding edge so that the caption can be read as the table or figure is examined.

Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mausaris. Table 1 is a wrapped table.

<table>
<thead>
<tr>
<th>Header-1</th>
<th>Header-1</th>
<th>Header-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Header-1</th>
<th>Header-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Figure 1: Property profile of the diverse library compared to the compound pool.

Figure 2: Property profile of the diverse library compared to the compound pool - not rotated.
7.4 NUMBERING

- Tables and figures within the body of the thesis each have a separate series of consecutive numbers.
- The series may run consecutively throughout the work, including the appendices, or
- The series may restart at each chapter (e.g. Figure 1.2, Figure 2.2) in which case, the figures or tables in the appendices will be numbered A.1, A.2, B.1, etc. Regardless, numbering should be Arabic numerals and not roman numerals.
- If any table continues to subsequent pages, the caption is not repeated but the top line should read:
  
  **Table # (continued)**

- If a figure continues to subsequent pages, the full caption should be placed at the foot of the first page of the figure and each subsequent page should carry an abbreviated caption at its foot, i.e.:
  
  **Figure # (continued)**

7.5 CITATIONS OF TABLES AND FIGURES

When making reference to a table/figure in the body of the text, the full word and number should be used, thus, e.g.:

**Figure 10 or Table 1.4.**

7.6 PREPARATION

- All tables and figures, including the caption, must meet the same margin, font and format requirements as the text.
- Tables and figures must be of professional quality.
- If photographs are used, they must be high resolution.
- Diagrams, drawings, figures, etc. must be sufficiently clear, sharp and large to be easily readable.
- Computer-generated tables and figures must be fully legible.
- Color images may be used.
7.7 MULTIMEDIA FILES IN FIGURES AND TABLES

Authors may include multimedia files in any of the formats given in Chapter 3.

External multimedia files must be linked by a hyperlink to the body of the ETD and must be listed in the List of Figures, e.g. Multimedia files are most commonly associated with figures.

The author may use a still figure that becomes animated when selected, or may have a mere place holder. In either case, the figure should bear a figure number, a figure title, the name of the multimedia file, and the size of the file. This same information should appear in the List of Figures, e.g. See the example below:

Figure 6.3.1: Flow visualization of the subatomic model with a flow split. (student_ann e_200412_mast_ fig631_flowsplit.mov, 82K)

If there is no still version of the figure, the author will center just the figure title and caption on the page.

8. MULTI-VOLUME THESSES OR DISSERTATIONS

- Any thesis or dissertation that is thicker than 2.50” when printed must be divided into multiple volumes. Students should take into consideration that cotton rag paper, usually used for theses, is thicker than standard copy paper.

- Each volume should be separated at the end of a major division. The Volume I, II, etc., title page (not counted or numbered) is placed at the beginning of each volume and is identical except for the words Volume I, Volume II, which should be printed just below the title.

- All preliminary pages will remain in Volume I.

- In numbering the text and reference pages, numbering is continuous from Volume I through all subsequent volumes. EXAMPLE:

A Guide to the Preparation of Master's Thesis and Doctoral Dissertations

VOLUME I

By Dale Elliott

Although thesis and dissertations are submitted electronically, separation into Volumes should be used for thesis that would be more than 2.5” thick if printed and bound.
9. THE ABSTRACT (DOCTORAL STUDENTS ONLY)

9.1 PURPOSE

The Abstract is not a part of the dissertation itself, but Graduate Studies Thesis Office asks you to submit two additional copies for our use. The Abstract is turned in as a document separate from the dissertation and can be printed on regular copy or laser paper. It can be single spaced or double spaced but must have at least one inch margins all around. Your abstract should provide a concise descriptive account of your work. It may contain the same text as that of the Summary in the preliminary pages of the dissertation, but the format should be as described. Note that you do not use the title “Abstract” on the Abstract.

9.2 FORMAT OF THE ABSTRACT

EXAMPLE:

Title Of Your Dissertation Centered and Divided Onto Two Lines If Necessary Due to Its Length

[blank line]

Author S. Name

[blank line]

nn Pages

[blank line]

Directed by Dr. You R. Advisor

[one or more blank lines]

Here begins the text of your abstract. Brevity is important so it is in your interest to do any editing that may be necessary......................................... End of example.

The number of pages given in the header of the Abstract should be the same as last numbered Arabic numeral in your dissertation, usually the page number of your vita or the last page of your references. You do not count the preliminary pages.

Note: You must submit paper copies of your Abstract and Title page even if you submit your thesis electronically. Both items are required by the Office of Graduate Studies.
10. COMMON FORMATTING MISTAKES TO AVOID

The Graduate Studies Thesis Office processes a large number of theses and dissertations each semester. Documents are reviewed mainly for consistency, appearance, and adherence to the formatting requirements given in this manual. A single document usually takes about 10 minutes to check, depending on the length and number of errors encountered. Students are encouraged to have the Graduate Studies Thesis Office look over the format by the Initial Format Check deadline to allow the student plenty of time to correct any formatting errors and also to obtain any missing documents or signatures before final submission. No initial thesis checking will be done after the initial format deadline has passed. Initial Format Check deadlines are listed on the Theses and Dissertation Deadlines website.

Below are some of the most common format mistakes along with helpful videos (WORD based) which may help correct those issues:

10.1 TABLE OF CONTENTS FORMATTING ISSUES

We highly encourage students to not use the automatic table generator via Microsoft Word for the table of contents. Many errors can occur when using this tool such as bookmark errors, improper alignment of numbers, and sections missing from the table of contents. Video
10.2 INCORRECT MARGINS AND ORIENTATION

Margin specifications must be met throughout the entire thesis/dissertation, including the preliminary pages, the text, and the reference material as well as all tables and figures. Tables and figures in a rotated orientation must still be placed on portrait-oriented pages. Video
10.3 FONTS AND SPACING PROBLEMS

The text must be double-spaced except as described in Chapter 8. The Table of Contents, Lists of Figures and Tables, and References should all be double-spaced between entries and only single-spaced within entries.

10.4 INCORRECT PAGE NUMBER PLACEMENT

Page numbers must be in the same location and orientation on all numbered pages, including figures and tables. Page numbers are generally centered at the bottom of the page, one inch from the bottom margin. Be sure there are no missing pages.

The cover page, the thesis approval page, the dedication, and volume cover pages do not bear printed page numbers; however, count them in the number of pages. Video
10.5 Flawed Image Quality

Any figures, tables, or illustrations used in the body of the text must be of high image quality. It is the student's responsibility to sharpen and/or clean up images imported from external programs before converting it into a PDF.

Video

Your browser does not currently recognize any of the video formats available. Click here to visit our frequently asked questions about HTML5 video.
APPENDICES

APPENDIX A: WRITING AND FORMATTING RESOURCES

A.1 BOOKS


*The Chicago Manual of Style* by University of Chicago Press Staff


A.2. WEBSITES

Georgia Tech Communications Center: communicationcenter.gatech.edu

MIT Online Writing and Communication Center: cmsw.mit.edu/writing-and-communication-center/resources

Purdue University OWL Writing Center: owlenglish.purdue.edu/

“Writing and Presenting Your Thesis or Dissertation” by S. Joseph Levine, Ph.D. Michigan State University

www.learnerassociates.net/dissthes/

Word for Research Writing II: Figures and Tables https://graduateschool.nd.edu/assets/283522/wfrw_ji_figures_and_tables.pdf
APPENDIX B: LaTeX COMMON ISSUES AND CONCERNS

Forcing Table Captions above Tables [https://tex.stackexchange.com/questions/22751/how-to-force-table-caption-on-top](https://tex.stackexchange.com/questions/22751/how-to-force-table-caption-on-top)


Figure and Table Placement [https://robjhyndman.com/hyndsight/latex-floats/](https://robjhyndman.com/hyndsight/latex-floats/)

Overleaf Professional (link is external) accounts for all students, faculty, and staff who would like to use the collaborative, online LaTeX editor for their projects.

LaTeX Template (.zip) updated May 2020

WordtoLaTeX Help/Software (link is external)

LaTeX Project (link is external)

Texmaker 4.5 (link is external)

MiKTeX 2.9 (link is external)