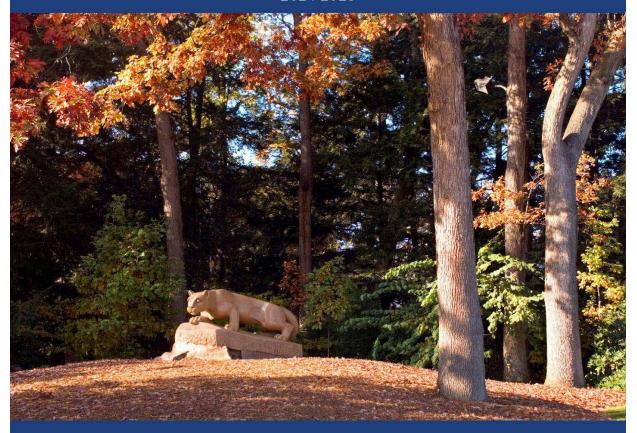
THESIS AND DISSERTATION HANDBOOK

Requirements and Guidelines for the Preparation of Master's Theses and Doctoral Dissertations

2024-2025



Office of Theses and Dissertations

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INTRODUCTION

The primary purpose of a thesis or dissertation is to train the student in the processes of scholarly research and writing under the direction of members of the Graduate Faculty. After the student has graduated and the work is published, it serves as a contribution to human knowledge, useful to other scholars and perhaps even to a more general audience.

Therefore, the Graduate School, the University Libraries, and the Graduate Faculty of Penn State have established format standards that theses and dissertations must meet before receiving final approval as fulfillment of graduate requirements. This publication sets forth those standards.

The requirements in this publication apply to all Penn State theses and dissertations. They are, however, designed to allow for maximum flexibility in minor matters, which vary among academic disciplines. Thus, while you will need to comply with the specifications given here, you will probably also need to consult a specialized manual of scholarly style in your field or the style sheet of a leading journal.

Be careful if using another thesis/dissertation as a model for your own; remember that this guide is revised from time to time, and you must meet current requirements. You have a fair amount of discretion regarding style, but you must be consistent in format throughout. The work should be written in clear, grammatically correct English, with words spelled correctly and punctuation that is standard and appropriate.

Please note that master's scholarly papers and capstone projects are not reviewed by the Office of Theses and Dissertations. If you are unsure of the requirements for your degree, please check with your department. If you would like to publish such work, please refer to the <u>University Library's ScholarSphere page</u>.

The Role of the Office of Theses and Dissertations

The Office of Theses and Dissertations (OTD), a division of Graduate Enrollment Services, is the branch of the Graduate School responsible for certifying that theses and dissertations have been prepared in accordance with the regulations in this guide. When a thesis/dissertation is submitted to the Office of Theses and Dissertations, it must meet the requirements set forth here. However, the Office of Theses and Dissertations reviews the document for format and compliance to Graduate School requirements only.

Responsibility of the Author for the Thesis or Dissertation

The author is ultimately responsible for meeting all of the Graduate School requirements. The author must pay the thesis/dissertation fee, apply to graduate on LionPATH, defend their dissertation, meet deadlines for format review and final submission, and receive electronic approval from all committee members and the head or chair of the graduate program. The best advice is to start early and make certain that the requirements outlined in this guide are fully met. After final approval by the Office of Theses and Dissertations, changes are not permitted.

SUBMISSION AND REQUIREMENTS

Deadlines and Format Review

Every thesis and dissertation at Penn State **must be reviewed and approved by the Office of Theses and Dissertations** (a division of Graduate Enrollment Services) in order to be considered for graduation. Therefore, ensure that you give yourself enough time to submit your work by the necessary deadlines. **There are no exceptions**. Thesis/dissertation deadlines (calendar) for each semester can be found on the <u>Thesis</u>, <u>Dissertation</u>, <u>Performance and Oral Presentation Deadlines</u> Calendar.

Please note that master's papers and projects are **not reviewed** by the Office of Theses and Dissertations. If you are unsure of the requirements for your degree, please check with your department.

It is the responsibility of the thesis/dissertation author to be aware of and to meet deadlines for submission. Failure to meet the specified deadlines will result in the removal of your name from the graduation list. It is not necessary to submit for format review a second time if graduation is postponed to a later semester.

The length of time required for review of the thesis or dissertation varies according to the number of documents awaiting review at any given time. If you submit early in the semester, you will most likely get it back in less than a week. If you wait until the final deadline, it may take longer. In either case, you will be notified by email when the review is completed.

Please refer to the following flowcharts for a concise summary of the steps it takes to get the author's work approved by the Office of Theses and Dissertations

Use this flowchart to stay on track with thesis and dissertation requirements that all Penn State graduate students must meet to graduate on time.

Tip: Know Your Deadlines!

Familiarize yourself with the four major and mandatory deadlines:

- 1. Apply to graduate
- 2. Submit initial format review
- 3. Defend your thesis
- 4. Submit final thesis/dissertation

Find upcoming deadlines:



1. Format Review

Upload your thesis or dissertation to the Electronic Theses and Dissertations (ETD) website. Make sure your file has the following:

- · Title page
- · Table of contents
- · Committee page
- · At least three chapters

Within three weeks, the Office of Theses and Dissertations (OTD) will upload your file in the ETD with comments in the for you to address. Students only need to do a format review once. Please remember to "Apply to graduate" in LionPATH by the specified deadline. If you have not applied, your final thesis or dissertation cannot be approved.

2. Defense

Doctoral students: If you have not done so already, schedule your doctoral defense.

Master's students: Please direct all questions concerning master's theses defenses to your program.

3. Upload Final Submission

To upload your final submission:

- 1. Pay the fee through the payment portal.
- Use comments from OTD and your committee to make all necessary corrections
- 3. Submit your final submission to ETD.

No changes can be made after the final is submitted.

4. Committee Approval

This is a separate process from committee approval of your defense.

After uploading your final submission, the ETD website will indicate that it is in "Pending Status." When this happens, a series of approvals will need to take place in the order below. **Each approver will receive an email when it is their turn to review and approve**. The student also gets notified.

- 1. Advisor
- 2. Committee members
- 3. Graduate program head or professor in charge

Committee approval is not final approval for your thesis or dissertation.

5. Final Fox Graduate School Approval

After the committee approves, OTD will review one final time. If further corrections are needed, your dissertation will be rejected and sent back. Once it is free of errors, OTD will mark your dissertation as approved, and you will receive an email confirming this.

When you receive email confirmation, you will know your thesis or dissertation is complete.

The End!

Now that you have finished your submission, you have completed your thesis/dissertation requirements. If not, contact your program immediately. Theses and dissertations are released to the University Libraries approximately one week after your degree is awarded depending on your embargo status. If you chose a restricted embargo your work will be on hold for two years.

SUBMISSION PROCESS IN WORDS

Use this flowchart to stay on track with thesis and dissertation requirements that all Penn State graduate students must meet to graduate on time!

Tip: Know your deadlines! Familiarize yourself with the four major and mandatory guidelines below.

- Apply to graduate.
- Submit initial format review.
- Defend your thesis or dissertation.
- Submit final thesis or dissertation.

Find upcoming deadlines on the <u>Thesis</u>, <u>Dissertation</u>, <u>Performance and Oral Presentation</u> <u>Deadlines Calendar</u>. Below are the steps necessary to submit a dissertation or thesis.

Step 1: Format Review

Upload your thesis or dissertation to the Electronic Theses and Dissertations (ETD) website. Make sure your file has a title page, table of contents, committee page, and at least three chapters. Within three weeks, the Office of Theses and Dissertations (OTD) will upload your file in the ETD with comments in the for you to address. Students only need to do a format review once. **Please remember to "Apply to graduate" in LionPATH by the specified deadline.** If you have not applied, your final thesis or dissertation cannot be approved.

Step 2. Defense

If you are a doctoral student, schedule your doctoral defense as soon as possible. If you are a master's student, please direct all questions concerning master's theses defenses to your program.

Step 3. Upload Final Submission

To upload your final submission, first pay the fee through the payment portal if you have not already done so. Next, use comments from OTD and your committee to make all necessary corrections. Lastly, submit your final submission to ETD. Remember that **no changes can be made after the final is submitted.**

Step 4. Committee Approval

Please note this is a separate process from committee approval of your defense. After uploading your final submission, the ETD website will indicate that it is in "Pending Status." When this happens, a series of approvals will need to take place in the following order:

- 1. Advisor
- 2. Committee Members

3. Graduate Program Head or Professor in Charge. Each approver will receive an email when it is their turn to review and approve. The student also gets notified.

Please note that committee approval is not final approval for your thesis or dissertation.

Step 5. Final Graduate School Approval

After the committee approves, OTD will review one final time. If further corrections are needed, your dissertation will be rejected and sent back. Once it is free of errors, OTD will mark your dissertation as approved, and you will receive an email confirming this. When you receive email confirmation, you will know your thesis or dissertation is complete.

The End!

Now that you have finished your submission, you have completed your thesis/dissertation requirements. If not, contact your program immediately. Theses and dissertations are released to the University Libraries after your degree is awarded depending on your embargo status. If you choose a restricted embargo your work will be on hold for two years.

Embargo Statuses

Both the format review and final copy must be submitted through the <u>eTD site</u>.

The author, when submitting an eTD, must choose one of three options for release of the document:

- Open access: Allows free worldwide access to the entire work beginning immediately after degree conferral. Appropriate for most dissertation submissions in immediately fulfilling the requirement for making the work available to the public.
- Restricted (Penn State Only): Immediately after the conferral of the degree, the abstract becomes accessible worldwide. Access to all other parts of the document are restricted to individuals having a valid Penn State Account, for a period of two years. Allows restricted access beginning immediately after degree conferral. At the end of the two-year period, the status will automatically change to Open Access. Intended for use by authors in cases where prior public release of the work may compromise its acceptance for publication.
- <u>Restricted</u>: Immediately after the conferral of the degree, the abstract becomes accessible worldwide. All other parts of the document are restricted for the purpose of filing a patent. At the end of the two-year period, the status will automatically change to Open Access. Selection of this option requires that an invention disclosure (ID) be filed with the Office of Technology Transfer (OTT) prior to submission of the final thesis/dissertation and confirmed by OTT.

With Options 2 and 3, the work will be released automatically for access worldwide at the end of the two-year period, unless a written request is made for a one-year extension. This request must be submitted to the Office of Theses and Dissertations by the author at least 30 days prior to the end of the restriction. For additional information on these options, visit the eTD website.

Please keep in mind that all doctoral dissertations and master's theses have an abstract available for immediate worldwide access, but the student can decide when the body of the work will be available. This should be considered carefully, taking into consideration publishing, proprietary issues, and issues associated with public disclosure. Public access to abstracts and dissertations is a form of public disclosure, so think carefully about your embargo status.

The "official" copy of an eTD is the electronic file, and this is the copy that will be on file with University Libraries. Keep in mind that electronic submission does not prevent the author from producing hard copies for the committee, department, or for personal use. If you would like a hardcopy bound version of your thesis/dissertation, please reach out to the <u>multimedia and print center</u>. All copies are the author's responsibility. The Graduate School does not provide copies.

The eTD is available to anyone who wishes to access it on the internet (unless the author chooses one of the options that will restrict availability for two years). This open access distribution makes the work more widely available through the <u>library</u>. For more information on eTD preparation and submission, please visit the <u>Thesis and Dissertation Information page</u> on the Graduate School site.

Patents

Any enabling public disclosure of patentable inventions has an immediate and irreversible effect on both U.S. and foreign patent protection including the possible loss of certain patent rights. For more information, contact Penn State's <u>Office of Technology Management</u>.

Applying to Graduate

You must apply to graduate on LionPATH during the semester in which you plan to graduate. Your thesis/dissertation cannot be approved until you have <u>applied to graduate</u>. If you fail to meet the thesis/dissertation deadlines, you will be removed from the graduation list. You must reapply to graduate if you intend to graduate in a future semester.

Fees

A processing fee is assessed by the Graduate School for every thesis and dissertation. <u>Pay your</u> fees online.

Electronic Approval

After the author uploads their final submission, each committee member will receive an email directing them to the ETD link (Electronic Thesis and Dissertation application). This email is sent out sequentially; the advisor(s) **must approve** first, and once approved, the email will be sent out to the rest of the committee members, except the program head or professor in charge/director of graduate studies who will approve last.

A master's thesis must be approved by the thesis advisor, Head or Chair of the program, and at least one other committee member. For a doctoral dissertation, at least two-thirds of the committee, as well as the program head or director of graduate studies must approve. The approval of the program head or director of graduate studies is required, even if he/she is not a member of the committee.

<u>Email the Office of Theses and Dissertations</u> staff if you have any concerns about the electronic approval process or if you need clarification of the regulations stated above.

Final Submission and Approval

When the final thesis/dissertation is uploaded, it is examined once more to make certain that the required revisions have been made and all the pages are present. If everything is in order, the document will be approved, and the author will be notified of the approval. If there are further corrections, the Office of Theses and Dissertations will reject the work and send it back for revision until it is free of error. Each time the student will have to upload a new file to the eTD. The corrections will be emailed to you in PDF form.

The eTD will be available online shortly after the degree conferral date (unless restriction is requested). Without exception, no changes can be made by the student or committee after approval by the Office of Theses and Dissertations, so it is important to proofread carefully before the final submission.

Letter of Certification

If you require documentation stating that you have met the requirements for the degree before graduation, please refer to the letter of certification desktop guide. You should apply for this letter at least two weeks before you need it. The deadline to request a letter of certification is the last day of classes. The letter will be provided only after all departmental requirements are completed and the Office of Theses and Dissertations has approved the final thesis/dissertation.

After degrees have been conferred, a letter of certification is no longer issued by the Graduate School because an official transcript can be requested from the University Registrar, which provides evidence of degree completion.

FORMATTING REQUIREMENTS

Type Specifications

Most important in typing a thesis or dissertation is consistency of format and adherence to the specific instructions given in this guide. The text of an eTD may be single-, double- or one-and-a-half-spaced.

Use a standard typeface of 10-, 11-, or 12-point size. Limit the use of italic (script) print to foreign words, book and journal titles, and special emphasis. If you wish, you may use larger size type for the title of the thesis and for chapter headings, as long as it is not larger than 18- point. Boldface type may also be used on the title page and for headings, as well as in the text, for special symbols or for emphasis.

Reduced type may be used within tables, figures, and appendices. It should be at least 9-point in size and must be completely legible. It is permissible to use color in the document.

Begin each chapter on a new page. Do the same with each element of the front matter (list of tables, acknowledgments, etc.), the reference section, and each appendix. Try to avoid typing a heading near the bottom of a page unless there is room for at least two lines of text following the heading. Instead, you should simply leave a little extra space on that page and begin the heading on the next page. If you wish to use a "display" page (a page that shows only the chapter title) at the beginning of chapters or appendices, be sure to do so consistently and to count the display page when numbering the pages.

Margins

A ³/₄-inch or 1-inch margin on all sides is acceptable, but keep in mind that a wider left margin (e.g., 1 ¹/₂-inch) may be more appropriate for binding purposes.

Page Numbers

The title page does not show a page number, although it is actually page i. The committee page is page ii, and the Abstract begins page iii.

DO:

- Number every page in the document, including those with tables and figures (except for the title page and vita)
- Allow a reasonable distance between the page number and any text (in no instance may the page number overlap the text)
- Use lowercase Roman numerals for the front matter and Arabic numbers for the text
- Begin the thesis/dissertation on page 1
- Add a vita as your final page (this is mandatory for doctoral dissertations and optional for master's theses)
- Place page numbers in the upper right-hand corner, lower right-hand corner, or centered at the top or bottom of the page

DO NOT:

- Number a page with "a" or "b" or skip numbers
- Place page numbers on the left side of the page
- Embellish page numbers with punctuation (dashes, periods, etc.)
- Type the word "page" before the page number
- Use running headers
- Add a page number to the vita

Documentation of Sources in the Text

Source citations are required in the text whenever you use a direct quotation, paraphrase another author's words, or include specific information that is not common knowledge (and is not the result of your own research reported in the thesis/dissertation). Systems of source citation fall generally into one of athree categories:

- parenthetical author-date-page documentation
- citation by number, keyed to a numbered reference list
- footnotes or endnotes. Select one of these systems and use it throughout the thesis/dissertation. A thesis/dissertation using one of the first two systems could also include footnotes presenting non-source information or comments

References in the text must correspond exactly to the listing of sources at the end of the thesis/dissertation. Be certain that all items are included in the bibliography or reference list, authors' names are spelled consistently and correctly, and dates are the same in both the text and the reference list.

FRONT MATTER

The term "front matter" refers to all the pages in front of the main text of the thesis/dissertation. Front matter pages are numbered with lowercase roman numerals. These pages are:

- title page (unnumbered)
- committee page (page ii)
- abstract (begins on page iii)
- table of contents
- lists of figures, abbreviations, maps, tables, or multimedia items (each a separate list)
- acknowledgments (optional)
- preface (optional)
- epigraph, frontispiece, or dedication (optional; do not include in Table of Contents)

The abstract is required in all theses and dissertations and should begin on page iii. The table of contents is also required. Acknowledgments are optional and should be at the end of the front matter unless an epigraph, frontispiece, or dedication is added. An introduction may be chapter 1 or it may precede chapter 1, but it must be numbered as part of the text, not as part of the front matter.

Title Page

The title page must appear <u>exactly as the example title page</u> of this guide. Type the title of the thesis/dissertation using capital letters throughout. If it occupies more than one-line, double space

between lines. Use word substitutes for formulas, symbols, superscripts, Greek letters, and other non-alphabetical symbols in the title of the thesis/dissertation.

Master's candidates should use "Thesis," and doctoral candidates should use "Dissertation" on the title page. Use your chosen name as it appears on LionPATH. Your name must appear in exactly the same form each time it is used in the thesis/dissertation. On the copyright line, use the word "Copyright" or the symbol © (not both), followed by the year and your name. (Note: You own the copyright on your work whether you choose to include this notice or not.)

On the date line, indicate the month and year of degree conferral, not the date of the defense or the date you submit your thesis/dissertation. Degrees are conferred only in May (Spring semester), August (Summer semester), and December (Fall semester).

Committee Page

The committee page must appear exactly as <u>example committee page</u> of this guide. The final copy of the thesis or dissertation must include a committee page that lists the names and titles of those faculty members who have approved the work. The names on this page must match exactly those entered on the eTD submission by the student. The committee page is page ii and appears immediately before the Abstract.

Do not list the same person more than once on the committee page. If one of the signatories has a dual role, list both roles under the professorial title.

The Advisor must be designated on the committee page. If two or more individuals served as Advisors, list each as "Dissertation Co-Advisor." The committee chair must also be designated on the committee page. If there is more than one committee chair, list each as "Co-Chair of Committee." There should be no chair indicated on a master's thesis. If master's have two or more Advisors, list as "Thesis Co-Advisor."

All electronic signatories on a doctoral dissertation must be members of Penn State's Graduate Faculty, except in special cases approved by the Office of Graduate Enrollment Services. A person who receives special approval but does not attend the oral defense is designated as a Special Signatory. If the person does attend the defense, the term used is Special Member. On a master's thesis, the designation would always be Special Signatory.

Be sure that all committee members are identified by their correct professorial titles. Check with the program for current information. **Do not use such designations as "Ph.D." or "Dr." on the committee page.** Administrative titles should not be included, except for the head or chair of the major program. Only one administrative title should be used, as only one person is signing on behalf of the major program.

Abstract

Every thesis/dissertation must contain an abstract. An abstract is a concise summary of the thesis/dissertation, intended to inform prospective readers about its content. It usually includes a brief description of the research, the procedures or methods, and the results or conclusions. An abstract should not include internal headings, parenthetic citations of items listed in the reference section, diagrams, or other illustrations.

The abstract follows the committee page and has the heading ABSTRACT at the top. It always begins on page iii.

After the conferral of the degree, **abstracts** for all doctoral dissertations and master's theses, whether Open Access, Restricted (Penn State) or Restricted, become accessible worldwide.

Table of Contents

To see an example please refer to the <u>table of contents in Appendix A</u> of this guide. The table of contents is essentially a topic outline of the thesis/dissertation. It is compiled by listing the headings in the thesis/dissertation. You may choose to include first-level headings, first- and second-levels, or all levels. Keep in mind that there usually is no index in a thesis/dissertation, and thus a fairly detailed table of contents can serve as a useful guide for the reader. The table of contents must appear immediately after the abstract and should not list the abstract, the table of contents itself, the frontispiece, the epigraph, or the vita. It should include everything else that appears after the table of contents, including the list of figures, list of tables, etc. (See example in Appendix A of this guide.)

Be sure that the headings listed in the table of contents match word-for-word the headings in the text. **Double check to be sure that correct page numbers are shown**. In listing appendices, indicate the title of each appendix. If using display pages, the number of the display page should appear in the table of contents.

List of Figures, List of Tables, etc.

Include a list of figures (illustrations) and a list of tables if you have one or more items in these categories. Use a separate page for each list. Show the caption and page number of every figure and table in the thesis/dissertation. Also include lists for abbreviations, nomenclature, maps, etc.

Acknowledgments and Funding

An acknowledgments page is required only if the author has received permission to use copyrighted material or must acknowledge grant sources. As described in the Research Terms Clarification to 2 CFR § 200.328 (see pp. 20-21), all federal funds used for a thesis or dissertation project must be explicitly acknowledged in the thesis or dissertation, along with a disclaimer indicating that the findings and conclusions do not necessarily reflect the view of the funding agency. As part of the submission process, you will be asked to affirm that if federal funds were used to support the work described in your thesis or dissertation, you have included the appropriate acknowledgments and disclaimers. If you are unsure if your dissertation was supported by federal funds, check with your thesis or dissertation adviser, or the faculty member/principal investigator providing your funding. Your submission cannot be processed without this required acknowledgment.

Refer to the following section for acknowledgment requirements for specific funding sources.

Federal Funding Acknowledgement in Theses and Dissertations

The <u>Research Terms and Conditions</u> derived from <u>Title 2 CFR § 200.329</u> applies to grants and cooperative agreements issued by: the National Science Foundation (NSF), the National Institutes of Health (NIH), the National Aeronautics and Space Administration (NASA), the US Department of Energy (DOE), the National Institute of Food and Agriculture (NIFA/USDA), the US Department of Commerce (USDC), and certain awards issued by the US Department of Homeland Security. They include the following provisions:

The recipient is expected to publish or otherwise make publicly available the results of the work conducted under the award. An acknowledgment of awarding agency support must appear in any publication, including World Wide Web pages, of any material, whether copyrighted or not, based on or developed under this project, and, is orally acknowledged during all news media interviews, including popular media, such as radio, television, and news magazines as follows:

- 1. The acknowledgment will be: "This material is based upon work supported by the [name of awarding agency(ies) under Award No. [recipient should enter the awarding agency(ies) award number(s)]."
- 2. For all materials, except scientific articles or papers published in scientific journals, the disclaimer will be: "Any opinions, findings, and conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the [name(s) of awarding agency(ies)]."

The Stevens Amendment (<u>Public Law 101-166</u>, <u>Section 511</u>), which applies to the US Department of Health and Human Services, the US Department of Labor, and the US Department of Education, requires the following:

When issuing statements, press releases, requests for proposals, bid solicitations, and other documents describing projects or programs funded in whole or in part with Federal money, all grantees receiving Federal funds, including but not limited to State and local governments, shall clearly state

- 1. the percentage of the total costs of the program or project which will be financed with Federal money,
- 2. the dollar amount of Federal funds for the project or program, and
- 3. percentage and dollar amount of the total costs of the project or program that will be financed by nongovernmental sources.

Many other Federal awards and some non-Federal awards also require public acknowledgment of funding. As a general principle, it is *always* a good idea to acknowledge your source(s) of funds in any publication. If uncertain about the specific contractual obligations associated with your source(s) of funding, please consult with your Adviser and/or the faculty member providing your funding.

If an acknowledgment is not required to acknowledge copyrighted material or grant sources, it may be included at the student's discretion. If included, it is used to express the author's professional and personal indebtedness.

Preface

A preface usually is not necessary and is called for only when the genesis of the work needs to be explained or the author's contribution to a multiple-authored work needs to be noted. If there are separate sections for preface and acknowledgments, the preface must precede chapter 1.

Epigraph or Frontispiece

Some authors include a quotation (epigraph) or illustration (frontispiece) as the last page of the front matter. These should not be listed in the table of contents. The source of an epigraph is indicated below the quotation but need not be listed in the bibliography.

BACK MATTER

The back matter (or end matter) of the thesis/dissertation may include some or all of the following items:

- bibliography or references (may be in back matter or at the end of each chapter)
- appendices (may come either before or after references)
- endnotes or notes (if any, they may be in back matter or at the end of each chapter)
- vita (required in doctoral dissertation, always as the last page and unnumbered)

Bibliography or References

A thesis/dissertation must include a bibliography or reference section listing all works which are referred to in the text, and in some cases other works also consulted in the course of research and writing. This section may either precede or follow the appendices (if any) or may appear at the end of each chapter. Usually, a single section is more convenient and useful for both author and reader.

The forms used for citing sources in the bibliography/reference section are detailed and complicated, and they vary considerably among academic disciplines. For this reason, you will need to follow a scholarly style manual in your field or perhaps a recent issue of a leading journal as a guide in compiling this section of the thesis/dissertation.

Appendices

Material that is pertinent but is somewhat tangential or very detailed (raw data, procedural explanations, etc.) may be placed in an appendix. Appendices should be designated A, B, C (not 1, 2, 3 or I, II, III). If there is only one appendix, call it simply Appendix, not Appendix A.

Titles of appendices must be listed in the table of contents. Appendix pages must be numbered consecutively with the text of the thesis/dissertation (do not number the pages A-1, A-2, etc.).

Vita

Required only in doctoral dissertations, the vita must be the last page of the document. It must not have a page number and must not be listed in the Table of Contents. The word Vita and the author's name should appear at the top. A standard outline style or a prose form may be used. In no case may the vita be more than one page in length. Examples of vitas can be seen on the library eTD page.

TABLES AND FIGURES

A **table** is a columnar arrangement of information, often numbers, organized to save space and convey relationships at a glance. A rule of thumb to use in deciding whether given materials are tables or figures is that tables can be typed, but figures must be drawn.

A figure is a graphic illustration such as a chart, graph, diagram, map, or photograph.

Captions and Numbering

Each table and each figure in the text must have a number and caption. Number them consecutively throughout, beginning with 1, or by chapter using a decimal system.

Placement of Tables and Figures

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A DESIGN METHODOLOGY OF MULTI-FLOW CONDENSER WITH FLAT EXTRUDED TUBES

A Dissertation in

Mechanical Engineering

by

John J. Doe

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Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Science

May 2023

The Pennsylvania State University The J. Jeffrey and Ann Marie Fox Graduate School

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May 2023

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Stefan T. Thynell Associate Professor of Mechanical Engineering

Kenneth K. Kuo Distinguished Professor of Mechanical Engineering

Jeffrey L. Kohler Associate Professor of Mining Engineering

Richard C. Benson Professor of Mechanical Engineering Head of the Department of Mechanical Engineering **Master's Committee Page Example**

The thesis of John J. Doe was reviewed and approved by the following:

Charles L. Merkle

Professor of Mechanical Engineering Thesis Advisor

Stefan T. Thynell

Associate Professor of Mechanical Engineering

Kenneth K. Kuo

Distinguished Professor of Mechanical Engineering

Jeffrey L. Kohler

Associate Professor of Mining Engineering

Richard C. Benson

Professor of Mechanical Engineering

Head of the Department of Mechanical Engineering

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