

THE UNIVERSITY OF ARKANSAS GRADUATE SCHOOL GUIDE TO
PREPARING MASTER'S THESES

THE UNIVERSITY OF ARKANSAS GRADUATE SCHOOL GUIDE TO
PREPARING MASTER'S THESES

A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Science in Microelectronics-Photonics

By

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ABSTRACT

The University of Arkansas Graduate School Guide to Master's Theses will save you heartache, headache, irritation, and delay if you will read it thoroughly and completely, follow the directions carefully, and adhere to all standards and requirements. The guidelines are here to help you, and if you have a question about something that is not contained in the guidelines or is not clear, please contact the Graduate School at (479) 575-4401.

This thesis is approved for
Recommendation to the
Graduate Council

Thesis Director:

Dr. David Livingstone

Thesis Committee:

Prof. Harry Carey Derryberry

Dr. Ruth Westheimer

Dr. Benjamin Spock

Dr. John Dolittle

THESIS DUPLICATION RELEASE

I hereby authorize the University of Arkansas Libraries to duplicate this Thesis when needed for research and/or scholarship.

Agreed

_____ *Taylor Doe*

Refused

_____ *Taylor Doe*

ACKNOWLEDGEMENTS

Special thanks are due to the staff of the University of Arkansas Graduate School for all of their help with theses. It would be impossible to make it through the semester without their help.

Also, a special thanks goes out to the faculty and staff at the University of Arkansas for their commitment to the University and to the students.

DEDICATION

This edition of the *Guide to Theses* is dedicated to all master students at the University of Arkansas.

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I. INTRODUCTION

Congratulations on reaching this stage in your academic program! You are beginning preparation of your master's thesis for final submission to the Graduate School.

This "Guide for Preparing Theses and Dissertations" will save you heartache, headache, irritation, and delay **if you will read it thoroughly and completely, follow the directions carefully, and adhere to all standards and requirements.**

This office highly recommends that a preliminary copy of the master's thesis or doctoral dissertation be presented to the Graduate School to check for formatting problems and adherence to page numbering specifications. This will most likely save you time, hassle, and money in the event that any changes are needed.

**Do NOT use a previous master's thesis
as a sole model for your paper!**

Because the master's thesis is the culmination of the student's study and learning in a graduate degree program, this work should represent and reflect the excellence of the student's abilities and competency. The subject should be current and pertinent to the discipline; the language should be clear and free from jargon; the grammar should be perfect; and the style, format, and quality of paper **MUST** meet requirements stated in this Guide. For other matters of style and directions on preparation of final copy, the student should consult the style book accepted in the specific field.

For your convenience, there is a check-list at the end of each section of the Guide that you can use as a reminder of items which need your attention and a check-off for items you have completed.

If you have any questions or if you are in any doubt at all, please call the Graduate School at (479) 575-4401 before you proceed further. We prefer that you call and ask for information before you proceed, rather than have you proceed in error and be required to make what may be costly corrections and/or adjustments later, and perhaps delay completion of your degree.

II. MASTER'S THESIS

Two unbound copies of the master's thesis must be submitted to the Graduate School preferably in a covered box(es). This must be done at least one week (5 working days) prior to the date the degree is to be awarded. These dates are posted on the website of the Graduate School (<http://grad.uark.edu>).

Students should not wait until the last minute to secure approval of their master's thesis. They should allow time to make any corrections or adjustments that may be required by their committee of the Graduate School. If no corrections or adjustments are required, there is no harm in receiving approval well before the deadline. However, if some corrections or adjustments are required and the student has not allowed sufficient time to make these corrections or adjustments, graduation and the awarding of the degree may be delayed until the next semester and/or until approval has been received.

The two copies of the master's thesis which are submitted to the Graduate School must meet all specified paper and duplication requirements, all form and format standards, and must not be punched or bound in any way.

Upon presentation of two copies of the master's thesis to the Graduate School, the student must complete the following forms, available in the Graduate School or on the Graduate School website at <http://grad.uark.edu>:

1. Library Transmittal Form
2. Intellectual Property Disclosure Form (if not already on file with the Graduate School; also requires thesis director's signature)
3. Master's Thesis Publishing Agreement Form

Some departments require a master's degree student to submit a third copy of the thesis to the department. The student should consult the department chairperson regarding this requirement. If a copy is required by the department, it should also meet all Graduate School standards and requirements.

A. PAPER REQUIREMENTS

One copy of the master's theses submitted to the Graduate School and the University Libraries in partial fulfillment of degree requirements must be presented on 8 ½ x 11 inch, high-quality white bond paper in at least twenty (20) pound weight, watermarked 100% cotton fiber. Inverted or reversed watermarks are acceptable. **THERE ARE NO EXCEPTIONS TO THIS REQUIREMENT.** The University Bookstore carries acceptable paper in stock. **The second copy may be on regular copy paper.**

B. DUPLICATION

Master's theses presented for deposit in the University Libraries may be machine duplicated/reproduced provided that appropriate methods are used and high standards of quality are maintained.

If a master's thesis is duplicated or reproduced, the original copy must be clear, black, and neat so that it will yield a very clean, distinct contrast between paper and type. Printers must produce letter quality pages. The University's Copy Services (located in the Arkansas Union) may be used for duplication. After duplication or reproduction, you must check that both copies are clear and readable and the pages are in the proper placement.

C. STYLE REQUIREMENTS

A consistent style must be used throughout the master's thesis. For other matters of style and directions on preparation of final copy, the student should consult the style book accepted in the specific field. Textual or other material must be on only one side of each sheet of paper. If two pages need to face each other (as in a thesis for the Master of Fine Arts degree), the page facing down should be numbered on its back so that the number will face up (consistent with all other pages).

Style books are available in the University Bookstore or in the University Libraries. These books in no way supersede directions given in this Guide. They answer most of the questions confronting writers; other questions should be referred to the thesis director.

The Graduate School reserves the right to reject a thesis if a style guide is not followed.

D. FORMAT REQUIREMENTS

Type/Font

Any legible font except script, italic, or ornamental font equivalent in scale to 10pt Arial or 12 pt. Times New Roman is acceptable. Size of headings or tables should be no more than 1pt larger or smaller than the size of the document text

Margins

All pages of the master's thesis must have the following margins:

Left:	1 ½ inches
Right:	1 inch
Top:	1 inch
Bottom:	1 inch

ABSOLUTELY NO EXCEPTIONS WILL BE MADE TO THE MARGIN STANDARDS. IT IS THE STUDENT'S RESPONSIBILITY TO SEE THAT THE MASTER'S THESIS CONFORMS TO THEM.

Placement of Page Numbers

In a master's thesis, page numbering may be top right corner, top center, or bottom center, but consistency is essential. An exception is that chapter title pages may be numbered at the bottom center. When page numbers are top center or bottom center, they are placed ¾" from top or bottom of the page. If page numbers are at top right, they should be no less than 1" from right margin and ¾" from top. **ALL** pages after page one, including chapter title pages, section-dividing pages, appendices, etc., **MUST** be consecutively numbered using Arabic numbers. Also, page numbers should not contain running headers or any other symbols. The placement of the page numbers should be consistent throughout the entire document.

Placement of Page Numbers on Landscape Pages

Page numbers on landscape pages should appear in the exact same location as portrait pages. Please see page 20 of the guide for an example. The following link shows instructions on how to place portrait page numbers on landscape pages: <http://support.microsoft.com/?kbid=211930>

Spacing

The main body of the master's thesis must be double spaced. The bibliography should be single spaced within the item and double spaced between items. Lengthy quotations should be single spaced and indented. The abstract must be double spaced.

Page Numbering – Master's Thesis (not copyrighted)

The full title page, abstract, signature page, and thesis duplication release page are NOT actually numbered. However, the pages are allowed for in the numbering sequence. Therefore, the page immediately following the duplication

release page (i.e. a dedication page, acknowledgment page, table of contents, etc.) will be actually numbered “v” or “vi” (lower case Roman numerals), and numbering will continue with lower case Roman numerals until the first text page, when Arabic numerals begin.

ALL pages after page one, including chapter title pages, section-dividing pages, appendices, etc., and continuing to the final page, **MUST** be consecutively numbered with Arabic numerals (i.e., 1, 2, 3, etc.).

Page Numbering – Master’s Thesis (copyrighted)

The full title page, abstract, signature page, copyright page, and thesis duplication release page are **NOT** actually numbered. However, the pages are allowed for in the numbering sequence. Therefore, the page immediately following the thesis duplication release page will be numbered “v” or “vi” in lower case Roman numerals and numbering will continue with lower case Roman numerals until the first text page, when Arabic numerals begin.

ALL pages after page one, including chapter title pages, section-dividing pages, appendices, etc., and continuing to the final page, **MUST** be consecutively numbered with Arabic numerals (i.e., 1, 2, 3, etc.).

E. ABSTRACT

The abstract for a master’s thesis should be double-spaced. There is no actual page number on the abstract; however it is assumed page number ii or iii if needed.

F. SPECIAL PROBLEMS

Use of Copyrighted Material

University Microfilms International assumes no responsibility for direct quotations used without permission. When any copyrighted material is used extensively, (that is more than 150 words in a direct quotation), the student must conform to all laws pertaining to the use of copyrighted material. The use of a figure or legend directly from a publication that is not cited, is considered plagiarism. Also, excessive use of materials, including figures and legends, from a single publication, even if cited, is a copyright violation. In this case, it is acceptable to contact the author of the publication for permission to use his /her work. Consult with the Office of Technology Transfer, (479) 575-5806, for information about copyright laws. The Graduate School reserves the right to check any thesis for plagiarism using

Color

Color is not allowed the form of text (i.e. hyperlinks, headings, etc.).

Extra Large Pages

Extra large charts, maps, etc., should be rolled, placed in a tube, and turned in with the master's thesis; proper folding will be done by the library. (See page 7 for additional information.)

G. BINDING

DO NOT BIND THE MASTER'S THESIS IN ANY MANNER. The two copies of the master's thesis **MUST** be submitted in loose leaf form. The University Libraries will be responsible for binding the papers.

H. PUBLICATION OF MASTER'S THESES AND ABSTRACTS

The University of Arkansas is participating in the Doctoral Dissertation Series project conducted by University Microfilms International, Ann Arbor, Michigan. Theses and abstracts are published in microfilm form, and copies are available from this company. All candidates for the master's degree who are submitting a thesis as part of their degree requirements are required to complete a Master's Thesis Agreement form (available online) at the time the thesis is submitted to the Graduate School. A fee of \$45.00 to cover the cost of microfilming the thesis and publication of the abstract will be charged to the student's account once the thesis has been submitted to the Graduate School.

The abstract is published in the quarterly journal *Masters Abstract International*.

I. COPYRIGHTING MASTER'S THESES

Theses may be copyrighted, if desired, at an additional charge of \$65.00. A certified check or money order in this amount should be made payable to P.Q.I.L. to accompany the thesis. UMI accepts certified checks but often these checks have expiration dates and may become invalid due to processing time. A separate page bearing copyright notice, as specified in the agreement form, must be provided. (See page 18 for a sample of the copyright page).

J. PATENTABLE INVENTIONS OR PROPRIETARY MATERIAL

Defenses of master's theses which contain information relevant to proprietary material or possible patent applications shall be held in the usual manner with the exception that those portions of these documents which deal specifically with proprietary material or patent related information will be presented and discussed only after the meeting has been closed to all persons except the candidate and the specifically assigned members of the review committee. The meeting will be re-opened when discussion moves to other portions of the work.

Master's theses containing information relevant to proprietary material or possible patent applications will be made available only to the members of the

review committee. After the work has been successfully defended, copies will be deposited in the University Libraries but under special conditions of limited access, i.e., listed in the library catalog but not placed on the shelf, and will be available for access only with the express permission of the director of the Technology Licensing Office. Such documents will remain in this restricted status and will not be forwarded to Proquest until specific authorization for release has been given by the Technology Licensing Office. Any questions referring to patentable inventions or proprietary material should be referred to the Technology Licensing Office at (479) 575-2995.

K. UNIVERSITY LIBRARIES REQUIREMENTS

Any questions about the following library regulations should be referred to the Binding Unit of Mullins Library, 575-5512.

In order to ensure proper preservation, accuracy in processing master's theses for shipping, binding, and shelving, as well as ease of access by the public, the University Libraries require that the student adhere to the following guidelines when applicable.

Oversized Materials

1. Oversized pages **THAT ARE TO BE** inserted and placed in the text of the master's thesis (no more than 11" high) **SHOULD NOT BE CREASED** when submitted to the Graduate School but securely inserted in the proper place within the text. These pages will eventually be creased by the Binding Unit before binding. Page numbering of oversized sheets that can be placed in the text must be on the **INSIDE** rather than the outside of the page to be folded.
2. Oversized materials **THAT ARE NOT TO BE** folded within the text (more than 11" high) and that will be housed separately from the body of the thesis must not be folded or creased but must be submitted in either **TUBES** (which can be purchased in the Arkansas Union Bookstore) or in **COVERED BOXES**. Tubes and boxes must be **CLEARLY** marked with the student's name and master's thesis title (do not use adhesive labels). Each individual sheet should have the proper placement clearly identified (if applicable) so that the reader can easily refer to it in the context of the text without confusion. Any necessary page numbering or page identification on oversized sheets that are separate from the thesis/dissertation should be done. Each oversized sheet should have the student's name and title of the master's thesis in **TYPE** or **PRINT** directly on each sheet. Adhesive labels should not be used to identify separate oversized materials.

Non-Print Materials

These materials include slides, cassettes, diskettes, CDs, etc. The student must submit two identical sets in **COVERED BOXES**. Appropriate covers should be provided by the student to protect any cassettes, diskettes or CDs that are submitted, and each item should be clearly identified with the student's name and title of the thesis, and title of the item. Diskettes and CDs can be inserted in the box in which the master's thesis is submitted. (See page 6 for additional information concerning diskettes/CDs.)

Patented Master's Theses

Both copies of master's theses awaiting patents will remain unprocessed and will be kept in the vault in Mullins Library until such time as the library receives a statement of release from the Office of Technology Transfer.

Master's theses awaiting patents may not be accessed by any library user except by the author unless expressly permitted by the Office of Technology Transfer. Additional information about patents is available on page 6.

L. DIGITAL REQUIREMENTS (OPTIONAL)

Digital submission of master's theses to the Graduate School and the University Libraries in partial fulfillment of degree requirements must be submitted on high-quality CDs or diskettes. The student must submit two (2) sets. CDs or diskettes must be in protective cases, and each item should be clearly identified with the student's name and the name or title of the item. **Submission of a thesis on CD or diskette must be approved in advance by the Associate Dean of the Graduate School, and must be in Adobe PDF format without compression or password protection.**

IN ADDITION, the student must also submit one (1) set of the following pages on 8 ½ x 11 inch, high-quality white bond paper in at least twenty (20) pound weight, watermarked 100% cotton fiber. A second set may be submitted on regular copy paper.

- Fly leaf (a blank page)
- Half Title
- Title Page
- Abstract
- Approval Sheet
- Copyright page (optional)
- Thesis Duplication Release
- Acknowledgements (optional)
- Dedication (optional)
- Table of Contents
- Preface (different from introduction), (optional)
- Bibliography/References
- Fly leaf (a blank page)

M. DETAILED ARRANGEMENT OF THE MASTER'S THESIS

1. Fly leaf (a blank page, no page number)
2. Half Title (page bearing title only, no actual page number); See Appendix, page 15 of this Guide.
3. Title Page (no actual page number, assumed (not printed) page number i); The half title page and title page should be centered between the 1 ½" left margin and 1" right margin. See pages 15 and 16. On the title page, the following information is listed:
 - a. the title of the master's thesis
 - b. "A thesis submitted in partial fulfillment of the requirements for the degree of (Master of Arts in, Master of Fine Arts in, Master of Music in, Master of Science in, etc)." Contact the Graduate School for the exact degree for all engineering degrees.
 - c. the full name of the author (this must be the name of the student record)
 - d. previous degree or degrees with the name of the institution and the year awarded (see sample on page 16)
 - e. the month and year in which the degree sought is to be awarded (contact the Graduate School for the correct month and year);
 - f. "University of Arkansas"
4. The abstract of a master's theses must:
 - a. be double-spaced
 - b. have no actual page number, assumed (not printed) page number ii, iii if needed
5. Approval sheet with the following information (no actual page number, assumed page number iii or iv);
 - a. "This thesis is approved for recommendation to the Graduate Council"
 - b. spaces for the signatures of the master's thesis director and members of the committee
 - c. Original signatures are needed on cotton bond paper only. The approval sheet printed on copy paper should not contain the signatures of the committee members. The name of each committee member will be typed directly under each signature line. See page 17
6. Copyright page (required for copyrighted theses only, no actual page number, assumed (not printed) page "iv" or "v"); See page 18
7. Thesis duplication release (no actual page number, assumed (not printed) page number "v" or "vi") See page 19
8. Acknowledgements (optional), (printed page number v or vi for non-copyrighted theses or vi or vii for copyrighted theses);
9. Dedication (optional), (printed page number vi or vii for non copyrighted theses or vii or viii for copyrighted theses);
10. Table of contents with page references (continue or begin page numbering with small Roman numerals);

11. Preface (optional), (continue or begin page numbering with small Roman numerals);
12. Body of master's thesis. Begin page numbering with Arabic numerals and continue consecutively to end of master's thesis. Do not skip or assume any pages within the body of the master's thesis:
13. Bibliography/References, (continue Arabic numbering);
14. Appendix (optional), (continue Arabic numbering);
15. Index (optional), (continue Arabic numbering);
16. Vitae (optional), (continue Arabic numbering): A short one-page vitae of the author may be included. This should be a single-spaced, brief account of the student's training and experience and of professional memberships and contributions.
17. Final fly leaf (a blank page)

THESES CONSISTING OF PUBLISHED OR PUBLISHABLE PAPERS

It is acceptable in some fields for students to submit a master's thesis composed of some number of previously published or publishable papers. A student who contemplates this type of submission should seek the approval of his/her thesis chair before beginning the project.

Graduate School requirements with regard to this type of submission include the following:

- The thesis must include an abstract.
- If the papers have been published previously, the thesis must include a list of the original papers included in the thesis with a full publication citation for each. This should be inserted after the Abstract and Table of Contents but before the first paper.
- If the papers have been published previously or have been submitted/accepted for publication, the papers should be included in the thesis in the same format as required by the publisher.
- The thesis must include an introduction, separate from the papers, which presents the topic of the thesis and explains the rationale for compiling these papers into one document.
- The thesis must include a final section entitled "Conclusion" which summarizes the papers and provides concluding remarks.
- References should be placed after each individual chapter or paper, including the introduction, conclusion, and literature review if applicable.

Each paper must be presented in its entirety within the thesis, including all references. All other applicable Graduate School rules with regard to the submission of the thesis must be followed.

This office highly recommends that a preliminary copy of the master's thesis consisting of published or publishable papers be presented to the Graduate School to check for formatting problems and adherence to page numbering specifications. This will most likely save you time, hassle, and money in the event that any changes are needed. When presenting the thesis for a thesis check, please let the Graduate School know that you are following the "published paper" format.

**Do NOT use a previous master's thesis
as a sole model for your paper!**

O. MASTER'S APPENDICES

MASTER'S THESIS CHECK-LIST

1. If you are submitting an electronic thesis, have you received the approval of your major advisor and the Graduate School?
2. Did you present a preliminary copy of the master's thesis to the Graduate School for a format and page numbering check?
3. Did you inform the Graduate School if you intend to submit a thesis consisting of published or publishable papers?
4. Have you thoroughly proofread the master's thesis even after duplication/reproduction?
5. Have you used one of the approved style manuals as a guide in writing your master's thesis?
6. Have you checked for typing, spelling, and grammatical errors?
7. Have you double checked the title of your thesis for correct spelling?
8. Is the type clean, neat, and dark?
9. Do all margins conform to the following standards? At least:
 - 1 1/2 inches from left
 - 1 inch from right
 - 1 inch from top
 - 1 inch from bottom
10. Have you received PRIOR permission for the use of color photographs in the thesis?
11. Is page numbering consistent throughout? (Refer to page 4 of this Guide.)
12. Have you made paper or margin adjustment for any special problems?
 - a. Illustrations
 - b. Use of copyrighted material
 - c. Mounted photographs
 - d. Extra large charts, maps
 - e. Computer printouts
13. Have you used 8 ½ x 11 inch, high quality white bond paper in twenty (20) pound weight, watermarked 100% cotton fiber for at least one copy? Do you have a second set on regular copy paper?
14. Does the date of the master's thesis title page agree with the month and year that the degree will actually be awarded?
15. Have you secured one set of original signatures on 100% white bond paper approval sheet? Do you have a second set on regular copy paper without signatures?
16. Have arrangements for copying the master's thesis been made well in advance so the deadline for depositing the master's thesis can be met?
17. Have you signed the thesis duplication release page on 100% white bond paper?
18. Have you had the Intellectual Property Disclosure form signed by your thesis director?

19. If you are submitting your thesis on CDs or diskettes, have you included two (2) sets of CDs or diskettes, and have you also included the required paper copies referred to under “Digital Requirements” on page 8.
20. Have you included an abstract of your thesis?

SAMPLE OF MASTER'S THESIS HALF TITLE PAGE

THE PREDICTIVE VALUE OF THE THURSTON PSYCHOLOGICAL
EXAMINATION: RESULTS OBTAINED WITH THREE
FRESHMAN CLASSES OF THE UNIVERSITY OF ARKANSAS

SAMPLE OF MASTER'S THESIS TITLE PAGE

THE PREDICTIVE VALUE OF THE THURSTON PSYCHOLOGICAL
EXAMINATION: RESULTS OBTAINED WITH THREE
FRESHMAN CLASSES OF THE UNIVERSITY OF ARKANSAS

A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Arts in Psychology

Line breaks
exactly as
shown

By

John Henry Jones
University of Missouri
Bachelor of Arts in Psychology, 1996

Line breaks
exactly as
shown

December 2008
University of Arkansas

Contact the Graduate
School for the correct
graduation month
and year

SAMPLE OF APPROVAL SHEET FOR MASTER'S THESIS

This thesis is approved for
recommendation to the
Graduate Council

Thesis Director:

(typed name and signature; e.g., Dr. Jane Doe)

Thesis Committee:

(typed name and signature)

(typed name and signature)

(typed name and signature)

[NOTE: Original signatures are needed on cotton bond paper only. The approval sheet printed on copy paper should not contain the signatures of the committee members.]

SAMPLE OF COPYRIGHT PAGE (optional)

©2004 by John H. Jones
All Rights Reserved

[This page should be included ONLY in theses that are copyrighted.]

SAMPLE OF THESIS DUPLICATION RELEASE

THESIS DUPLICATION RELEASE

I hereby authorize the University of Arkansas Libraries to duplicate this thesis when needed for research and/or scholarship.

Agreed _____
(typed name and signature of student, e.g. John Henry Jones)

Refused _____
(signature of student)

[NOTE: To comply with Public Law 94-553-October 19, 1976, of the 94th Congress, and Act for the General Revision of the Copyright Law, Title 17 of the United States Code, the following is to be in the thesis and signed by the student.]

This is an example of a Portrait Page Number
on a Landscape Page
Directions can be found at
<http://support.microsoft.com/?kbid=211930>