THE UNIVERSITY OF ARKANSAS GRADUATE SCHOOL GUIDE TO PREPARING DOCTORAL DISSERTATIONS

# THE UNIVERSITY OF ARKANSAS GRADUATE SCHOOL GUIDE TO PREPARING DOCTORAL DISSERTATIONS

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Microelectronics-Photonics

By

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December 2007 University of Arkansas

#### **ABSTRACT**

The University of Arkansas Graduate School Guide to Doctoral 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. 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 dissertation is approved for Recommendation to the Graduate Council

Dissertation Director:
(typed name and signature; e.g., Jane R. Doe)
Dissertation Committee:
(typed name and signature)
(typed name and signature)
(typed name and signature)

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## **DISSERTATION DUPLICATION RELEASE**

I here	by author	ize the Un	iversity of	Arkansas	Libraries to	duplicate this
dissertation	when nee	ded for re	search an	d/or schola	rship.	

Agreed		
J	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 dissertations. It would be impossible to make it through the semester without their help.

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

## **DEDICATION**

This edition of the *Guide to Dissertations* is dedicated to all master and doctoral 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 doctoral dissertation for final submission to the Graduate School.

This "Guide for Preparing 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 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.

# <u>Do NOT use a previous doctoral dissertation</u> as a sole model for your paper!

Because the doctoral dissertation 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 your convenience, there is a check-list at the end 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. DOCTORAL DISSERTATION

**Two unbound** copies of the doctoral dissertation 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 (www.uark.edu/grad).

Students should not wait until the last minute to secure approval of their doctoral dissertation. They should allow time to make any corrections or adjustments that may be required. 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 a subsequent semester.

The two copies of the doctoral dissertation 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 the two copies of the dissertation to the Graduate School, the student must complete the following forms, available in the Graduate School or on the Graduate School website at <a href="https://www.uark.edu/grad">www.uark.edu/grad</a>:

- 1. Library Transmittal Form
- 2. Intellectual Property Disclosure Form (if not already on file with the Graduate School; also requires dissertation director's signature)
- 3. Survey of Earned Doctorates
- 4. Dissertation Publishing Agreement Form

A doctoral student is required to submit a copy of the dissertation to the major department. This copy should also meet all Graduate School standards and requirements.

#### A. PAPER REQUIREMENTS

One copy of the doctoral dissertation 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**

Doctoral dissertations 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 doctoral dissertation 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 the copy is both clear and readable and the pages are in the proper placement.

#### C. STYLE REQUIREMENTS

A consistent style must be used throughout the doctoral dissertation. 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, 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 doctoral dissertation director.

#### D. FORMAT REQUIREMENTS

#### Type/Font

Any legible font except script, italic, or ornamental fonts equivalent in scale to 10pt Arial or 12 pt. Times New Roman are acceptable.

#### **Margins**

All pages of the doctoral dissertation must have the following margins:

Left 1 ½"
Right 1"
Top 1"
Bottom 1"

ABSOLUTELY NO EXCEPTIONS WILL BE MADE FOR THE MARGIN STANDARDS AND IT IS THE STUDENT'S RESPONSIBILITY TO SEE THAT THE DOCTORAL DISSERTATION CONFORMS TO THEM.

#### Placement of Page Numbers

In a doctoral dissertation, 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.

#### Spacing

The main body of the doctoral dissertation must be double spaced. The bibliography should be single spaced within the item and double spaced between items. Quotations should be single spaced and indented. The abstract must be double spaced.

#### Page Numbering - Doctoral Dissertation (not copyrighted)

The full title page, abstract, signature page, and dissertation duplication release page are **NOT** 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, acknowledgement 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.

**ALL** pages after page one chapter 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.).

#### <u>Page Numbering – Doctoral Dissertation (copyrighted)</u>

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

**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 doctoral dissertation should be double-spaced. There is no actual page number on the abstract; however it is assumed page number ii, 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 dissertation for plagiarism using

#### Photographs - Color

Color photographs may be used when the color is absolutely necessary in presenting information, such as staining of tissue samples. Color is not allowed for presentation appearance.

#### Extra Large Pages

Extra large charts, maps, etc., should be rolled and turned in with the doctoral dissertation; proper folding will be done by the Library. (See page 5 for additional information.)

#### G. BINDING

**DO NOT BIND THE DOCTORAL DISSERTATION IN ANY MANNER.** The two copies of the doctoral dissertation **MUST** be submitted in loose leaf form. The University Libraries will be responsible for binding the papers.

#### H. PUBLICATION OF DOCTORAL DISSERTATIONS AND ABSTRACTS

The University of Arkansas is participating in the Doctoral Dissertation Series project conducted by University Microfilms International, Ann Arbor, Michigan. Dissertations and abstracts are published in microfilm form, and copies are available from this firm. All candidates for the doctoral degree are required to complete a doctoral dissertation agreement form (available online) at the time the dissertation is submitted to the Graduate School. A fee of \$55.00 to cover the cost of microfilming the dissertation and publication of the abstract is included in the \$85.00 graduation fee paid to the Cashier's Office when the student applies for graduation.

The abstract is published in the quarterly journal *Dissertation Abstracts International (DAI).* 

#### I. COPYRIGHTING DOCTORAL DISSERTATIONS

Dissertations may be copyrighted, if desired, at an <u>additional</u> 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 dissertation. 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. INTELLECTUAL PROPERTY

Defenses of doctoral dissertations 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.

Doctoral dissertations 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 Office of Technology Transfer. Such documents will remain in this restricted status and will not be forwarded to University Microfilm International until the patents have been applied for, at which time, specific authorization for their release will be given by the director of the Office of Technology Transfer.

#### K. UNIVERSITY LIBRARY 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 doctoral dissertations 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 doctoral dissertation (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 doctoral dissertation 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 doctoral dissertation 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 dissertation should be done. Each oversized sheet should have the student's name and title of the doctoral dissertation 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 (2) 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/or title of the item. Diskettes and CDs can be inserted in the box in which the doctoral dissertation is submitted.

#### Patented Doctoral Dissertations

The doctoral dissertations awaiting patents will remain unprocessed and will be kept in a vault in Mullins Library until such time as the library receives a statement of release from the Office of Technology Transfer. Doctoral dissertations 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 8.

#### L. DIGITAL REQUIREMENTS

Digital submission of doctoral dissertations 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 dissertation on CDs or diskettes 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 copypaper.

Fly leaf (a blank page)

Half Title

Title Page

Abstract

Approval Sheet

Copyright page (optional)

**Dissertation 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 DOCTORAL DISSERTATION

- 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 page 15 and 16. On the title page, the following information is listed:
  - a. the title of the doctoral dissertation
  - b. "A dissertation submitted in partial fulfillment of the requirements for the degree of (Doctor of Philosophy, Doctor of Education). 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 example 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 doctorial dissertation 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 dissertation is approved for recommendation to the Graduate Council"
  - b. spaces for the signatures of the doctorial dissertation 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. Dissertation 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 dissertations or vi or vii for copyrighted dissertations);
- 9. Dedication (optional), (printed page number vi or vii for non copyrighted dissertations or vii or viii for copyrighted dissertations);
- 10. Table of contents with page references (continued or begin page numbering with small Roman numerals);

- 11. Preface (optional), (continued or begin page numbering with small Roman numerals);
- 12. Body of doctorial dissertation. Begin page numbering with Arabic numerals and continue consecutively to end of master's dissertation. Do not skip or assume any pages within the body of the doctorial dissertation:
- 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)

# N. DISSERTATIONS CONSISTING OF PUBLISHED OR PUBLISHABLE PAPERS

It is acceptable in some fields for students to submit a doctoral dissertation 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 dissertation chair before beginning the project and should notify the Graduate School when submitting the dissertation.

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

- The dissertation must include an abstract.
- If the papers have been published previously, the dissertation must include a list of the original papers included in the dissertation with a full publication citation for each. This should be inserted after the Abstract and Table of Contents but before the first paper.
- The dissertation must include an introduction, separate from the papers, which presents the topic of the dissertation and explains the rationale for compiling these papers into one document.
- The dissertation must include a final section entitled "Conclusion" which summarizes the papers and provides concluding remarks.

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

This office highly recommends that a preliminary copy of the doctoral dissertation 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 dissertation for this check, please let the Graduate School know that you are following the "published paper" format.

Do NOT use a previous dissertation as a sole model for your paper!

# O. DOCTORAL APPENDICES

#### **DOCTORAL DISSERTATION CHECK-LIST**

- 1. If you are submitting and electronic dissertation, have you received the approval of your major advisor and the Graduate School?
- 2. Did you present a preliminary copy of the doctoral dissertation to the Graduate School for a format and page numbering check?
- 3. Did you inform the Graduate School if you intend to submit a dissertation consisting of published or publishable papers?
- 4. Have you thoroughly proofread the doctoral dissertation even after duplication/reproduction?
- 5. Have you used one of the approved style manuals as a guide in writing your doctoral dissertation?
- 6. Have you checked for typing, spelling, and grammatical errors?
- 7. Have you double checked the title of your dissertation for correct spelling?
- 8. Is the type clean, neat, and dark?
- 9. Do all margins conform to the following standards? At least:
  - 1. 1 1/2 inches from left
  - 2. 1 inch from right
  - 3. 1 inch from top
  - 4. 1 inch from bottom
- 10. Have you received PRIOR permission for the use of color photographs in the dissertation?
- 11. Is page numbering consistent throughout? (Refer to page 5 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 doctoral dissertation 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 doctoral dissertation been made well in advance so the deadline for depositing the Doctoral dissertation can be met?
- 17. Have you signed the dissertation duplication release page on 100% white bond paper?
- 18. Have you had the Intellectual Property Disclosure form signed by your dissertation director?

- 19. If you are submitting your dissertation 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 dissertation?

## SAMPLE OF DOCTORAL DISSERTATION HALF TITLE PAGE

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

#### SAMPLE OF DOCTORAL DISSERTATION TITLE PAGE

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

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy

Ву

John Henry Jones, B.S., M.S. University of Missouri, 1986 University of Alabama, 1991

August 2004 — University of Arkansas

Contact the Graduate School for the correct graduation month and year

#### SAMPLE OF APPROVAL SHEET FOR DOCTORAL DISSERTATION

Graduate Council
Dissertation Director:
(typed name and signature; e.g., Jane R. Doe)
Dissertation Committee:
(typed name and signature)
(typed name and signature)
(typed name and signature)

This dissertation is approved for

Recommendation to the

[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 dissertations that are copyrighted.]

# SAMPLE OF DISSERTATION DUPLICATION RELEASE

	eby authorize the University of Arkansas Libraries to duplicate this when needed for research and/or scholarship.
Agreed	(signature of student)
Refused	(signature of student)