University of Arkansas
Guide to Theses and Dissertations

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INTRODUCTION

Congratulations on reaching this stage in your academic career! This *Guide* will assist you in preparing your master's thesis or doctoral dissertation for final submission to the world-wide-web as part of the University of Arkansas Electronic Thesis and Dissertation Collection. The Graduate School wishes you every success in preparing your document, and we are pleased to serve as a resource throughout the process.

The purpose of this *Guide* is to acquaint you with the Graduate School's requirements for the format of your thesis or dissertation and explain the submission process. It is your responsibility as a student to follow the formatting guidelines and submission instructions found within. We reserve the right to refuse a document that does not adhere to formatting guidelines.

The subject of your thesis/dissertation should be current and pertinent to your discipline. Your document should demonstrate your capacity for research and original thought. It should be written in English, employ correct grammar, and cite sources according to the style manual recommended by your program. Your thesis/dissertation not only represents you, it also represents your committee, your department, and the University.

Remember to follow the formatting guidelines found in *the most current Thesis and Dissertation Guide, according to the semester/year of your graduation.* The most current *Guide* is always available for download on the Graduate School website: https://graduate-and-international.uark.edu/graduate/current-students/commencement-graduation.php

For assistance with the writing process, we recommend consulting Writing Support at CLASS+: https://class.uark.edu/

You're welcome to contact the thesis/dissertation office within Graduate School and International Education for further information:

- **gradtad@uark.edu**

- **(479) 575-4401**

- **Gearhart Hall 207/208**

Note: If you believe that your thesis or dissertation qualifies for a service learning designation on your transcript, please contact the Service Learning Initiative at svclrn01@uark.edu.

OVERALL SUBMISSION PROCESS
Preparation:
- Initiate formatting pre-check process by emailing paper to the Graduate School at **gradtad@uark.edu** *prior to defense*
- Schedule defense date with your committee; we strongly recommend that it takes place at least 2 weeks prior to the final submission deadline
- Doctoral students must announce defense at least two weeks before defense date via https://graduate-and-international.uark.edu/graduate/current-students/dissertation-defense.php
- Make sure your thesis/dissertation title and committee forms are on file in the Graduate School: https://graduate-and-international.uark.edu/graduate/current-students/forms.php
- Gather necessary documents for submission packet (see below)
- Successfully defend paper and obtain all required signatures in submission packet
- Confirm that your advisor/dept is completing your Degree Audit.

Submission Packet: (the packet is required for the paper submission process and should be submitted after formatting is approved.)
The email with your approved pre-check form will have instructions for submitting the submission packet (This process is changing, so that email will have the most update information regarding submitting the forms.) *See Guide for information about what will be accepted regarding electronic signatures*
1. Pre-check form stamped "Approved"
2. Thesis/dissertation title page with original committee signatures
3. Thesis/Dissertation Submission form: http://graduate-and-international.uark.edu/graduate/current-students/forms.php
4. Intellectual Property Disclosure form: http://graduate-and-international.uark.edu/graduate/current-students/forms.php
5. *(Doctoral students only)* Survey of Earned Doctorates certificate: https://sed-ncses.org

Submission:
- Complete submission packets must be received before you will be given the Submission Instructions
- Graduate School does not require a paper copy of your thesis/dissertation
- Do not submit the Packet until your committee has signed off on your document so it is complete and ready for upload to ProQuest
- Upon receipt of submission packet, the student will be emailed instructions to upload thesis/ dissertation to ProQuest (and must do so within 24 hours or by 4:30pm on final due date, whichever comes first). This completes the

student's publication agreement. No fees are associated with this process unless student opts to copyright, purchase thesis/dissertation copies, or allow open access publishing.

- If an embargo is needed for your paper it must be added as part of the initial upload. For questions regarding extending the embargo email scholar@uark.edu after you receive the Congratulations email but before the original embargo ends.

Submission Packet must be accepted by the Graduate School before the thesis/dissertation is uploaded to ProQuest.
Papers submitted to ProQuest after 4:30pm on the final due date will not be accepted and student's graduation date will automatically roll to the following semester.

Electronic Signatures
If you are using electronic signatures on the submission packet, you can send the submission packet to us via email (see approved pre-check email for more information) and you will be sent the submission instructions.

COMMITEES & DEFENSE

Committees
- Thesis/dissertation committee forms should be submitted to the Graduate School as soon as your committee is selected.
- Thesis/dissertation committees should be comprised of *a minimum of three faculty who hold the appropriate graduate faculty status at UA*
- Additional members without UA grad faculty status are acceptable with the title "Ex-officio Member" on the document's title page
- If a committee member/dept. head is not available to sign submission paperwork in person, contact the Graduate School for instruction at gradtad@uark.edu or 575-4401

Defense
- Doctoral defense must be announced at least two weeks prior to defense date: http://graduate-and-international.uark.edu/graduate/current-students/dissertation-defense.php
- Students are not allowed to bring snacks, gifts, etc. to defense
- Students can defend via electronic means if approved by committee director

and after providing the Graduate School a written statement (email) that he/she is defending remotely

REQUIRED PRE-CHECK PROCESS

- Submit a copy of your thesis/dissertation to the Graduate School to allow for a check of formatting as early as possible and *at least two weeks before defense*
- Continue the pre-check process until formatting is stamped approved; multiple checks are usually necessary
- Formatting must be approved by the Graduate School before final upload to ProQuest

E-Mail
- Send your Microsoft Word or PDF document to gradtad@uark.edu
- Expect 0-2 business day turn around for pre-checks during low volume time
- Expect 3-5 business day turn around for pre-checks during high volume time (the 2-3 weeks prior to submission deadlines)
- For larger files, use the University's drop box at http://its.uark.edu/
- HINT: Documents may appear differently to reviewer if created on a Mac. We recommend using a Windows based computer for final revisions in order to maintain consistency.

Formatting assistance – Spring 2021 Virtual meetings only
After your initial pre-check is returned, if you are having trouble with the formatting requests, you can request a virtual meeting by emailing gradtad@uark.edu - Provide a time between 8 AM -5PM, M-F when you will be available to go over formatting questions**.**

OVERALL FORMATTING

Page Order
Front Matter:
- Title Page (single space each section, evenly distribute sections down the page; see sample page for exact formatting)
- Abstract (500 word max, double space)
- Copyright (optional, single space, no lower than halfway down the page; see sample page for exact formatting)
- Acknowledgements (optional, double space)
- Dedication (optional, double space)
- Epigraph (optional, format according to your style manual)
- Table of Contents (main chapter headings and references at minimum; format per your style manual; starts with Intro/Lit Review/Chapter 1 as page 1)
- List of Tables/List of Figures/Abbreviations (optional)
- List of Published Papers (required if one or more chapters has been published or submitted for publication)

Font

Body:

- Introduction/Literature Review/Chapter 1 (double spaced)
- Remaining chapters/sections (double spaced)
- Bibliography/References/Works Cited (each entry single spaced, double spaced between entries)

Back Matter:

- Appendix (if applicable; includes any supplemental information, i.e. research protocol approval letters, excess tables/figures, questionnaires, etc.)
- Vitae (optional; delete/black out personal contact information for identity protection)11 pt. Arial *or* 12 pt. Times New Roman is strongly preferred, but another font equivalent in scale is acceptable at the discretion of the Graduate School reviewer. Decorative fonts and colored text are not acceptable.
- Use same font/size *throughout the entire paper, including page numbers, headings, and table/figure titles/captions.*
- Footnotes should be sized per your style manualFont size <u>within</u> a table/figure may be reduced (as long as legible in print and electronic formats) in order to accommodate margins or prevent splitting of table; if reduction isn't sufficient, a larger paper size should be used to accommodate table/figure

Margins

- All pages of the thesis or dissertation must have 1inch top, bottom, left and right margins
- Excepting the copyright statement page, every page of your document should begin at the top 1" margin (this includes title on title page, headings, lines of text, tables, etc.)
- White space at the bottom of a page is permissible for the purpose of keeping text with tables/figures, to prevent splitting a table, or to prevent orphaning a heading or single line of text

Page Numbering

- Front matter should not be numbered or included in the Table of Contents
- Page numbering begins with the first page of the body of the document (Introduction/Literature Review/Chapter 1)
- Consecutive page numbering continues through to the final page of document, including References and Appendices
- Only Arabic numerals (i.e., 1, 2, 3, etc.) are allowed
- HINT: Page numbers will default to Calibri; be sure to convert back to body text font

Page Number Placement

- Page numbers can be placed top right corner or bottom right corner, or bottom center; choose one location and use consistently throughout paper
- Use default settings of .5" for both header and footer to assure correct placement at ¾" from bottom or top of paper
- On landscape pages, page number must appear in the same location with the same orientation as portrait pages (if you turned the page once counter clockwise to portrait; see example in Sample Pages)
- HINT: For landscape pages, use a text box (minus the border) to cover the existing page number. Place another text box in the correct position, add the page number, then rotate to correct orientation or see Formatting Resources on page 7.

Tables/Figures

- Text *within* tables and figures can differ from the body of the paper in font/size, but must be legible both in print and electronic formats
- Color is allowed *within* a table/figure/image
- Titles/captions must remain same font/size as body of paper
- Titles/captions must be single spaced
- Charts, maps, graphs, diagrams, photographs, artwork, etc. should be labeled as figures
- Figure captions should be placed *under* the figure; table titles should be placed *over* the table
- Figures not created by the student should include a source credit as part of the caption
- If a table is too long for a single page, place "Table X (Cont.)" at the top left margin of the following page and repeat column/row headings before continuing table (see example in Sample Pages)

- If tables/figures can comfortably share a page with text or other tables/figures, without causing a split table, this is preferable in order to minimize white space
- Table title should always remain on the same page with the corresponding table
- HINT: Turn on the grid lines in the view tab to see where the figures/tables fit

Headings
- Front matter page headings should be consistent in placement, bolding, capitalization, underlining, ie: all caps, all mixed case, all left justified, all center justified, etc.
- All body headings should be consistent in placement, bolding, capitalization, underlining, etc. as dictated by style guide (not required to match style/placement in front matter)

Headers/Footers
- Should not extend beyond the 1" allowable margin
- Running headers are not acceptable, regardless of style manual
- Set at .5" in order to assure correct placement of page numbers

Spacing
- Title page sections are single spaced and should be evenly spaced so that sections take up entire page
- The body of the document is double spaced
- Abstract, acknowledgments, and dedication are double spaced
- Bibliography/references/works cited: single space each reference and double space between each entry
- Block quotes are indented and single spaced
- Table notes and figure captions are single spaced
- Footnotes are single spaced
- Bullet point items are indented and double spaced
- If tables/figures can comfortably share a page with text or other tables/figures, this is preferable in order to minimize white space, as long as it does not create a split table

White Space
- Minimize white space as much as possible
- White space in text of more than three double spaced lines is not acceptable, unless it appears at the end of a chapter
- A single heading/sub-heading at very end of a page (orphaned text) should be moved to the following page
- Acceptable when text is followed by table/figure, etc. that doesn't fit on same page; table title should always remain on the same page with the corresponding table

Justification
- Left justification of the thesis/dissertation is strongly preferred
- Full justification is *allowed only at the discretion of the Graduate School reviewer* (as long as unsightly spaces between words are not present in software's attempt to justify margins of a short line)

Color/Design
- Colored text is only allowed <u>within</u> images, tables, figures, graphs, computer code, etc. if student's committee considers it essential to the document
- Decorative lettering, lines, images, etc. are not allowed

Supplementary Material and Size Restriction
- The Supplementary Files step of the ProQuest submission process allows the uploading of supporting files like videos, sound clips and data sets
- Files are submitted to ProQuest along with the PDF version of your dissertation/thesis
- Multiple files are allowed; ProQuest asks that a description of each file (or set of files, if more appropriate) is *included in the abstract*
- The thesis or dissertation PDF along with any supplemental files cannot exceed 1000 MB total, *no exceptions*

Style Guide Requirements
- Use a consistent style throughout the master's thesis and doctoral dissertation
- Acceptable style manuals include but are not limited to: Chicago, APA, MLA
- Style manuals are available in the University Bookstore or in the University Libraries; also see examples here: https://class.uark.edu/resources.php
- Style manuals do not supersede *Guide* requirements but can address issues where the *Guide* offers no specific requirement. If your style manual doesn't address the issue at hand, defer to your advisor's recommendation.
- The Graduate School reserves the right to reject a thesis or dissertation if a style manual is not followed properly

FORMATTING RESOURCES

LaTeX and Mac
- LaTeX software can create formatting issues when converted to Word or .pdf; take this into consideration when planning your timeline
- Documents may appear differently to reviewer if created on a Mac. We recommend using a Windows based computer for final revisions in order to maintain consistency and follow formatting guidelines.

UARK Library Guides: https://uark.libguides.com/

ETHICAL ISSUES

Plagiarism
- Plagiarism is the appropriation of another person's ideas, processes, results, or words without giving appropriate credit
- The use of a quotation, figure, table, graph or legend directly from a publication that is not cited is also considered plagiarism
- The Graduate School reserves the right to check any thesis or dissertation for plagiarism
- Self-plagiarism occurs when authors reuse portions of their previously published writings in subsequent research papers, without citing the published work
- Extended quotes from the student's previously published works must be treated as block quotes, by either indention and single spacing, or quotation marks around entire section
- Consult the Center for Learning and Student Success (CLASS+): http://class.uark.edu/resources.php for more information

Copyright Violations, Excessive Use of Materials
- When copyrighted material is used, you must conform to all laws pertaining to the use of copyrighted material
- Use of materials, including figures, legends, and pictures from a publication, even if cited, can be a copyright violation. It is recommended that the student contact the publisher of the document for further instructions on obtaining permission for use
- We highly recommended keeping copies of all associated correspondence/permission; it can be included in your document's appendix, but this is not required
- Consult the Technology Licensing Officer: http://vpred.uark.edu/units/techventures/ or 479-575-7243 for more information

Citations
- When citing another person's ideas, processes, results, or words, you must consistently follow rules set out by your chosen style manual throughout your document
- All charts, tables, graphs, photos, etc. directly used from another work must be cited in the figure caption (including images of maps derived from internet sources such as Google Maps)
- Permission to reproduce must be obtained for all copyrighted tables, figures, photos; keep copies of all correspondence requesting permission to use
- All original photos must include the name of the photographer in the figure caption of the photo along with the statement "used with permission" or "photo by author"
- Photos of samples/equipment taken by thesis/dissertation author do not require a photo citation

Patented Material
- The use of patented material in a master's thesis or doctoral dissertation is expressly prohibited without the prior consent of the patent holder
- Documentation of permission must be included in paper's Appendix
- Consult the Technology Licensing Officer: http://vpred.uark.edu/units/techventures/ or 479- 575-7243 for more information

RESEARCH COMPLIANCE AND INTELLECTUAL PROPERTY

Research Compliance

- The Office of Research Compliance (RSCP), a unit of the Office of the Vice Chancellor for Research and Innovation, is responsible for assisting faculty, staff and students in complying with federal and state regulatory requirements for sponsored and unsponsored research and with the associated University policies. These areas include, but are not limited to Biological Safety, Export Control, Human Subjects, Radiation Safety, Responsible Conduct of Research, Toxic Substances, and Vertebrate Animals
- Theses/dissertations containing research requiring research compliance approval *are required to include a copy of the Research Compliance Protocol Letter (and Modification letter if applicable) as a document in Appendix.* This should be an image of the original letter on University letterhead reduced in size to fit within the required margins
- Failure to be added to the protocol will prevent students from using research completed as part of their thesis or dissertation.
    - IRB – Approval memo must have students name listed and must be in the Appendix.
    - IBC and IACUC – Approval memo with advisor's name listed must be in the Appendix. Either a memo from the advisor or information directly from the protocol that states the student was trained to properly handle the materials used in the research will need to be submitted as part of the submission packet.
    - If a student is using data from a previously conducted study, a memo from the advisor stating this must be submitted as part of the submission packet.
- For more information please see: [http://vpred.uark.edu/units/rscp/ for more information](http://vpred.uark.edu/units/rscp/)

Intellectual Property

- Theses/dissertations containing information relevant to proprietary material or possible patent applications are made available *only* to the members of the review committee
- After the work has been successfully defended, the thesis or dissertation will be available for access only with the express permission of the University of Arkansas Technology Licensing Officer
- Such documents will remain in restricted status and will not be forwarded to ProQuest until the patents have been applied for, at which time, specific authorization for their release will be given by the Technology Licensing Officer
- Consult the Technology Licensing Officer: https://economicdevelopment.uark.edu/technology-ventures/ or 479-575-7243 for more information

PUBLISHED PAPERS VS. MANUSCRIPT STYLE

Published/Submitted Papers
- This is a particular thesis/dissertation style whereby multiple individual works are compiled into a single entity; each chapter stands alone as a complete work
- Consult your thesis/dissertation chair and department head/program director before committing to this format in case restrictions apply
- Students wishing to reuse published work without significant modification must use this style

Graduate School requirements for Published/Submitted Paper Style:
- A master's thesis in this style may consist of one or more published/submitted papers
- A doctoral dissertation in this style must consist of at least two papers
- Thesis/dissertation must include an overall abstract
- Thesis/dissertation must include a separate "Introduction," which presents the topic of the overall paper and explains the rationale for compiling several articles into one document
- Thesis/dissertation must include a separate "Conclusion" which summarizes the overall paper, providing concluding remarks
- If any articles in the document have been published previously or submitted/accepted for publication, proper publication citation is required:
    - The thesis/dissertation must include a List of Published Papers page, listing the original published/submitted articles with a full publication citation for each.
    - The List of Published Papers is placed just before the Introduction (See Thesis/Dissertation Page Order)
    - Each citation should include the chapter number for the specific citation and the status of the article (in press, in review, submitted for review, published etc.)
    - Regarding a previously published journal article, consult the journal's website for proper citation in a thesis/dissertation. It's the student's responsibility to know the requirements for proper usage.
- Each article must be a separate chapter
- References and appendices (if applicable) are included within each chapter
- If the same references or appendices are used in multiple chapters, they must be repeated in each applicable chapter

Co-Authored Papers
- If articles are written by multiple authors, the author of the thesis or dissertation must be the first author of the article to be used in the thesis or dissertation.
    - Documentation must be given by the co-authors or the student's

major professor stating that the student is the first author of the article and completed at least 51% of the work for the article.
- o The documentation can be an email or memo
- o The documentation is submitted to the Graduate School as part of the final submission packet.
- o All co-authors must also be listed on the title page of the chapter to which they pertain.

Manuscript

- This is the standard thesis/dissertation style in which the document is intended to be a whole work that stands together from one chapter to the next
- In some disciplines and journals, students who publish their work are allowed to use that work in their thesis or dissertation with appropriate, journal-specific, citation. This may mean the work is split among different chapters
- In situations where more than one graduate student from the University of Arkansas has co-authored a published paper, it is acceptable for both graduate students with guidance

  and advice from their major professor(s) (thesis/dissertation advisor) to use the published work in their thesis/dissertation as appropriate for that individual student
- Theses/dissertations are intended as original bodies of work and no student may submit a thesis/dissertation that is identical to, or contains extensive content that is identical to another student's thesis/dissertation
- It is not acceptable for a student to submit a thesis/dissertation that is completely comprised of co-authored works in which they are not the lead author. (Lead author is defined as the writer/researcher who was the major contributor to the work involved in creating the paper)
- Students who are the lead author of an article may reuse the entire article without significant modification using the Published/Publishable Papers style above

PROQUEST SUBMISSION PROCESS

Upload Process

- Receive instructions to submit your document electronically to ProQuest following receipt of submission packet by Graduate School
- A hard copy of your thesis/dissertation is no longer accepted by the Graduate School or University Libraries
- Students have 24 hours or until 4:30pm on the due date, whichever comes first, to upload to ProQuest, completing the publication agreement
- Students who submit to ProQuest after 4:30pm on the due date will not graduate that semester
- No fees are associated with the electronic submission process unless you

choose to copyright, purchase copies of your thesis/dissertation, or choose the open access publishing option (all of which are optional)
- Theses/dissertations submitted to ProQuest before the submission packet is received by the Graduate School are denied until required documents are received

Copyrighting
- Theses and Dissertations are protected by copyright law upon creation. However, there are benefits to registering for copyright. For more information: http://media2.proquest.com/documents/whycopyright.pdf
- Theses or Dissertations may be copyright registered during the ProQuest submission process for a charge of $55
- Copyright statement page must be included in document if you elect to register for copyright (see Sample Pages)
- For further information regarding copyright: http://media2.proquest.com/documents/copyright_dissthesis _ownership.pdf

Publication Agreement
- Students submitting a thesis or dissertation to ProQuest are required to complete a Publication Agreement at the time of final submission.
- The Graduate School highly recommends researching all publication agreement options early in the thesis/dissertation preparation process

- Students should research journal or publishing company policies if their document includes previously published/submitted works. Each publisher or editorial board of a scholarly or peer-reviewed journal sets policy on prior publication of a work, even if the work was used as a degree requirement.
- For further information, contact ProQuest at 1-800-521-0600 ext. 77020 or review:
- Traditional Publishing Agreement: http://media2.proquest.com/documents/agreement_tra ditionalpub.pdf
- Open Access Agreement: http://www.proquest.com/documents/Dissertations_-_Open_Access_Overview.html

Embargo
- During upload to ProQuest, students decide whether to embargo their theses/dissertations, delaying access to the release of the full text through ProQuest for a limited period of time: 6 months, 1 year or 2 years
- This decision should be made in consultation with faculty and/or research collaborators
- There is no option for a permanent embargo during the upload process. However, students may email ProQuest at disspub@proquest.com to request a permanent embargo after receiving the final approval email from ETD. It is recommended that students copy their advisor and gradtad@uark.edu in this request.
- Here is ScholorWorks @UARK 's user guide to embargos: https://uark.libguides.com/c.php?g=536547 &p=5883357

ScholarWorks@UARK
- This is the University's institutional repository, which is a collection of the research, scholarship, and creative work of the UA community
- Your paper will be included in the repository unless you elect to embargo during the ProQuest submission process
- ScholarWorks@UARK web address is https://uark.libguides.com/c.php?g=5365 47&p=5820733

PLEASE NOTE:

When you upload to ProQuest, you are indicating that your

thesis/dissertation has been carefully proofread and that all content,

wording, spelling, grammar, table/figure/page numbering, etc. has been

thoroughly checked. It is your final version.

MOST FREQUENT ERRORS

Page number font doesn't match document's font	Page numbers often default to Calibri 11, so double check your page numbers
Title page isn't formatted correctly	Follow the example page in Sample Pages for exact formatting
Tables/figures exceed 1" margin	Try turning on gridlines for exact measurement; okay to shrink to fit and/or if text within table/figure is reduced as long as legible
Abstract is too long	Strict 500 word maximum
Table of Contents and/or List of Tables/Figures page numbers don't correspond to page numbers in body	Be sure to double check this, even if you're using automated page numbering
Front matter pages are numbered with Arabic or Roman numerals	Front matter should not be page numbered
Table of Contents includes front matter	Table of Contents should start with Introduction/Literature Review/Chapter 1 as page 1
References are double spaced	Single space each reference, and double space between references
Page number in wrong location on landscape page	Cover current page with white text box, open text box where number should be, add number, and rotate to correct orientation
Text starts too low on page, sits below 1" top margin	Make sure text, headings, titles, figures, tables, etc. begin at top 1" margin; view your paper as multiple pages and scroll through to better review for this
Blue hyperlinks within text	Colored text is not allowed unless within a table/figure. Change blue hyperlinks to black
Document preparation on a Mac	Macs often do not translate well to our Windows based computers; we may see errors not visible on your end. We recommend completing both final edits and upload via Windows based computer.
Document preparation with LaTeX	Students often find it difficult to keep 1" margins as required in the Guide when using this software. Please let us know in advance if you're utilizing LaTeX.
Items on title page and/or headings/subheadings are not true center (generally right of center)	Turn on top ruler, place cursor at beginning of line, and make sure first line indent is set at left margin

SAMPLE PAGES:
-Title page
-Copyright page
-Research safety committee approval letter in Appendix
-Properly split/continued table
-Landscape page numbering

Thesis or Dissertation Title in Correct Title Case and Single Spaced:
No Bold, Underline, All Caps, or Quotations

A dissertation (or thesis) submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy in Space and Planetary Sciences

> Single space. Line breaks exactly as shown. Do not use initials for degree.

by

Leia Organa
University of Alderaan
Bachelor of Science in Physics, 1977
Tatooine University
Master of Science in Physics, 1983

> List name as it appears in UA Connect. Single space. Line breaks exactly as shown. Start with first degree earned.

May 2020
University of Arkansas

> Single space. Use month/ year of graduation--not defense or submission date.

This dissertation (or thesis) is approved for recommendation to the Graduate Council.

_____

> Director is listed first and on his/her own separate row.

Shirley Chisholm, Ph.D.
Dissertation Director

_____   _____
Ibtihaj Muhammad, Ed.D.   Yo-yo Ma, M.A.
Committee Member   Committee Member

_____   _____
Harvey Milk, Ph.D.   Sonia Sotomayor, Ph.D.
Committee Member   Committee Member

> List each member's name followed by his/her highest degree earned. Single space the lines/names/titles as shown.

Center in middle of page, no lower
than vertical center.

Name must appear exactly as
on Title Page. Single space.
Page is placed after Abstract .

This page is required only for
theses and dissertations
requesting copyright.

UNIVERSITY OF ARKANSAS

February 12, 2016

MEMORANDUM

TO:	Student Name Professor Name
FROM:	Ro Windwalker IRB Coordinator
RE:	New Protocol Approval
IRB Protocol #:	11-11-111
Protocol Title:	*Protocol Title*
Review Type:	☒ EXEMPT ☐ EXPEDITED ☐ FULL IRB
Approved Project Period:	Start Date: 02/11/2016 Expiration Date: 02/10/2017

Your protocol has been approved by the IRB. Protocols are approved for a maximum period of one year. If you wish to continue the project past the approved project period (see above), you must submit a request, using the form *Continuing Review for IRB Approved Projects*, prior to the expiration date. This form is available from the IRB Coordinator or on the Research Compliance website (https://vpred.uark.edu/units/rscp/index.php). As a courtesy, you will be sent a reminder two months in advance of that date. However, failure to receive a reminder does not negate your obligation to make the request in sufficient time for review and approval. Federal regulations prohibit retroactive approval of continuation. Failure to receive approval to continue the project prior to the expiration date will result in Termination of the protocol approval. The IRB Coordinator can give you guidance on submission times.

This protocol has been approved for 500 participants. If you wish to make *any* modifications in the approved protocol, including enrolling more than this number, you must seek approval *prior to* implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

If you have questions or need any assistance from the IRB, please contact me at 109 MLKG Building, 5-2208, or irb@uark.edu.

109 MLKG • 1 University of Arkansas • Fayetteville, AR 72701-1201 • (479) 575-2208 • Fax (479) 575-6527 • Email irb@uark.edu
The University of Arkansas is an equal opportunity/affirmative action institution.

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Table 3.1: Regulatory hubs of seed development. 23 regulators (transcription factors) that were found associated with the largest number of coexpressed modules in SANe were selected and listed in descending order according to the number of modules they regulate. Targets of these regulators in the seed and the global network, with absolute Z score > 3 were selected and tested for overlaps with BP terms in the GO database. The score columns represent (-1) * log (q-value) values from a cumulative hypergeometric test of enrichment. Only the most highly scored gene sets are reported in the table.

Network	Seed		Global	
Transcription Factor	Biological Process	Enrichment Score	Biological Process	Enrichment Score
NAP57 AT3G57150	ribonucleoprotein complex biogenesis	57.05	ribosome biogenesis	72.07
HDT3 (AT5G03740)	ribonucleoprotein complex biogenesis	45.50	ribonucleoprotein complex biogenesis	71.39
AT4G37130	ribonucleoprotein complex biogenesis	40.00	RNA metabolism	35.36
EMB2746 (AT5G63420)	ribonucleoprotein complex biogenesis	56.44	RNA metabolism	29.30
C3H (AT5G60820)	ribonucleoprotein complex biogenesis	12.97	vesicle-mediated transport	10.38
JMJ22 (AT5G06550)	ribonucleoprotein complex biogenesis	36.76	ribosome biogenesis	75.24
WRKY13 (AT4G39410)	immune system process	3.04	N.D	NA
TFIIIA (AT1G72050)	ribosome biogenesis	49.90	RNA metabolism	49.30
VOZ1 (AT1G28520)	ribosome biogenesis	13.30	cellular biopolymer catabolism	4.77
NFD1 (AT4G30930)	ribonucleoprotein complex biogenesis	71.39	ribosome biogenesis	75.24
KAN3 (AT4G17695)	jasmonic acid biosynthesis	4.64	response to salicylic acid stimulus	2.95

Table 3.1 (Cont.)

Network	Seed		Global	
Transcription Factor	Biological Process	Enrichment Score	Biological Process	Enrichment Score
HDT1 (AT3G44750)	ribonucleoprotein complex biogenesis	41.25	ribosome biogenesis	72.44
HAT3.1 (AT3G19510)	RNA metabolism	7.88	RNA metabolism	20.48
FZF (AT2G24500)	RNA metabolism	23.67	ribosome biogenesis	68.91
IAA8 (AT2G22670)	polysaccharide metabolism	5.33	transmembrane receptor protein tyrosine kinase signaling pathway	10.47
SMAD/FHA (AT2G21530)	photosynthesis	54.25	photosynthesis	68.43
AT1G78280	cellular biopolymer metabolism	5.88	ribosome biogenesis	8.46
ZFP4 (AT1G66140)	N.D.	N.A.	ion transport	4.40
TRB1 (AT1G49950)	maintenance of root meristem identity	2.33	protein modification	6.33
SEUSS (AT1G43850)	microtubule-based process	2.71	negative regulation of gene expression	8.25
NAC017 (AT1G34190)	vesicle-mediated transport	4.70	vesicle-mediated transport	11.55
ATU2AF35A (AT1G27650)	RNA metabolism	20.60	RNA metabolism	15.07
AT1G17520	proteolysis	3.39	RNA metabolism	12.81

This is a situation where using section breaks is appropriate. It is assumed that the page numbers have already been added for the entire paper at this point.

Add a section break after the last line of the preceding the landscape page.

Add a section break after the last line of the landscape page, or if multiple pages, the last page of the series.

Open the header/footer for the first page of the new section and click on "Link to previous" thereby breaking that connection. Do this in both the head and footer.

Go to the header/footer of the section which follows the new section and do the same.

Go back to the first page of the new section, select Orientation from the Layout tab and change to landscape. This should change all pages in this new section to the landscape orientation, without affecting the sections on either side.

With the header/footer open, choose Page number from the Design tab and select page margins. (What you choose from here will depend on where you have chosen to situate the page numbers for the rest of the paper. We will use bottom center for this exercise.) Choose Large left. This will place a large number in the left side margin, in the center.

Highlight the page number and change the size and the font to match that of the body text.

On the Format tab, select Text direction, rotate 90° clockwise.

Remove original page number in the header or footer section.

Close the header/footer. Your page number should now be in the correct position and should have retained the correct sequence.

The main thing to strive for is to have the page number oriented so that if you were to rotate the page back to portrait orientation, the number will be in the same location, with the same orientation as those on the portrait pages.

This is a correct example of the page number placement (bottom center) on a landscape 8.5x14 page.

This is a correct example of the page number placement on a landscape 11x17 page.