



Western Kentucky University

**Architectural and Manufacturing Sciences Department
Master of Science in Technology Management**

Thesis (AMS 599) and Graduate Project (AMS 690) Procedures

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Introduction

Within this manual, you will find procedures and recommendations for developing a thesis or graduate project. Read and follow this document carefully to avoid time delays in the completion of your thesis/project. The final manuscript that you submit must be in publishable condition. This means your paper should be without error—no spelling, grammatical, or formatting errors. The content of the manuscript should be written clearly and should follow the MSTM writing guides for Thesis or Graduate Projects, the Office of Graduate Studies and Research Guidelines, and the American Psychological Association (APA) writing style manual. Consult with your advisor/committee chair frequently to ensure your thesis/ project is within the time needed for completion. If you have any questions about the information contained within this document, contact the Architectural and Manufacturing Sciences (AMS) department.

Purpose of the Thesis or Capstone Project

A final project or thesis is an essential part of graduate education. All graduate students should become knowledgeable about scholarship and research in their particular fields of study and should engage in the process of conducting, analyzing, interpreting, and reporting their own personal projects/research.

A thesis/project is the result of research, scholarly, or creative activity that gives evidence of independent, critical, and creative investigation. The thesis/project experience demonstrates the ability to define and develop a problem/project; to understand and synthesize relevant literature; to use appropriate methodology; to analyze and interpret data; and to draw reasonable conclusions based on the investigation/activity.

Project or Thesis?

Selecting a project or a thesis depends much on personal preference. AMS graduate faculty apply the same criteria/grading principles for a project as they apply for a thesis. The degree of expected rigor is the same, but the student experience is different. The difference between the two lies primarily in the structure of the reporting output. Table 1 lists the differences and similarities between a Graduate Project and Thesis.

Table 1. Graduate Project versus Thesis

	Thesis	Project
Reporting Output	Structured (5 chapters)	Flexible (advisor/student)
Focus	Original Research	Original, Creative Work
Intent	Knowledge	Applied Endeavor
Output	Concept or Idea	Tangible or Artifact
General Approach	Plan, Data Collection, Analyze	Plan, Execute, Report
Rigor	High	High
Defense/Examination	Oral	Oral

Graduate students should review the following before selecting a project or thesis.

- [AMS 599 Thesis Writing Guide](#) (AMS 599)
- [AMS 690 Graduate Project Writing Guide](#) (AMS 690)
- [Western Kentucky University \(WKU\) Guidelines for Master’s Thesis and Specialist Project](#)

Students who decide to write a thesis should additionally review the Western Kentucky University (WKU) Guidelines for Master's Thesis and Specialist Project Document. This document is on the WKU Graduate Studies and Research website under Current Students, Thesis Guidelines (<http://www.wku.edu/graduate/index.php?page=thesis-guidelines>). Thesis students should also review the AMS 599 Thesis Writing Guide.

Students who decide to do a project should review the AMS 690 Project Writing Guide. NOTE: THE GRADUATE PROJECT IS NOT THE SAME AS A SPECIALIST PROJECT. Graduate project students have a certain degree of flexibility regarding the project organization and number of report chapters, signatures required, and the levels of review. All other mechanics of the project are developed with input from the project chair/advisor.

Graduate Student Responsibility

Requirements will not be waived, and exceptions will not be granted because of ignorance of policies, requirements, or procedures. The responsibility to adhere to the policies and procedures as stated in the Graduate Catalog, these guidelines, and college and departmental regulations lies with the student.

Academic Honesty and Plagiarism

Academic honesty is a prerequisite for academic achievement; all members of the academic community are expected to act in accordance with this principle. The University recognizes plagiarism as a serious academic offense. Please consult the WKU Student Handbook regarding academic offenses (http://www.wku.edu/handbook/2009/index.php?option=com_content&view=article&id=59:academic-offenses&catid=36:academic-offenses&Itemid=60) and work with your advisor regarding any questions related to academic and research conduct. Students who fail to follow appropriate academic and research procedures will be subject to failure in the course and other sanctions, up to and including dismissal from the university, or civil charges.

Appointment of the Graduate Committee

The adviser plays a very significant role in the graduate career of all students. A close, cordial, and professional relationship is therefore of the utmost importance. Both student and adviser should work at achieving mutual understanding and respect. If any difficulty is experienced in this relationship, the department head/graduate coordinator should be consulted.

A committee consists of a minimum of three graduate faculty members. Your graduate advisor will work with you to select your committee. The chair of your committee is your thesis/project first reader. The first reader must be a full-time faculty member of the department, possess an earned doctorate or a recognized terminal degree in his/her professional field, and designated as a Graduate Faculty member. In addition to the first reader, at least one additional graduate faculty member is selected as a second reader. The third member of the committee may be graduate faculty from the department or another department. Additional committee members may be chosen, but must be approved by the WKU Graduate Council.

The student should contact specific potential committee members to ensure their time, interest, and availability to serve. Upon mutual agreement, each member of the committee should sign the MSTM Graduate Committee Form (MSTM GC). This form should be sent to the Department office with a copy for the MSTM Graduate coordinator.

It is the responsibility of the MSTM thesis/project committee to supply the student with appropriate advice and to assist in planning the major elements of the thesis/ graduate project. The committee is not responsible for reminding students of published deadlines or for monitoring procedural details. The student must manage such affairs independently.

Steps in Completing a Thesis/Graduate Project

1. The student should arrange for the appointment of a Graduate Committee. The members of the committee should be chosen based on the student interests, the student's experience with faculty members, and the adviser's knowledge and expertise. The committee members and student must agree on the makeup of a thesis/project committee. The department head may reassign with mutual agreement based on workloads or other extenuating circumstances. It is advisable for the student to assume the responsibility of securing these approvals and getting signed agreements (MSTM GC document).
2. The student should submit a proposal for a thesis/graduate project to their thesis/project committee chair. The proposal for a thesis should include the first three chapters as specified in the AMS 599 Writing Guide. The graduate project proposal should include all of the planning documentation specified in the AMS 690 Writing Guide and associated with a professional project plan. The student may not proceed with the development of the thesis or engage in the execution of the project until approval of the proposal by all committee members. Revisions to the proposal may be required. The committee chair typically coordinates this process. Once approved, the committee signs the approval form (MSTM PA) and submits to the Department office with a copy for the MSTM Graduate coordinator.
3. Once the proposal is approved by the thesis/project committee, the student can then begin data collection/analysis and/or project execution.
4. Completed thesis/graduate project drafts should be submitted to the committee chair/first reader. With committee chair approval, the candidate will copy and distribute drafts to committee members for review. Once all committee members review the final thesis/graduate project for content, mechanics, and format, the student in collaboration with the committee chair, may schedule a thesis/graduate project defense.
5. The thesis/graduate project defense also serves as the comprehensive examination for AMS graduate programs. The format for a defense is that of a professional presentation followed by a question and answers session by the committee and invited guests. The committee then convenes at a designated time or immediately thereafter to discuss and approve/reject the results of the examination. Further revisions to the thesis/project may be required.
6. Upon acceptance of the comprehensive examination, committee members sign Form E approval and send it to the Graduate Studies office. For a thesis, the committee also signs the required number signature pages (see the WKU Guidelines for Master's Thesis and Specialist Project Document for the exact number and procedure). Students may elect to have a signature page included in their project.
7. Students who complete a thesis must then submit a corrected copy (if needed) of the approved thesis to the Ogden College reader at least three weeks before the end of the semester. Once the thesis is reviewed and approved by the College Reader, the student submits the required number of copies to the Graduate Studies Office for binding and digital upload. See the WKU Guidelines for Master's Thesis and Specialist Project Document.

Course Credit

The six credit hours required for the thesis or project may be taken over multiple semesters by mutual agreement by the student and the thesis/project committee chair. The minimum acceptable evaluation for a master's thesis or graduate project is a grade of B.

For the thesis (AMS 599) or graduate project (AMS 690), an *in-progress* grade must be reported for each enrollment if the work is not completed. The *in-progress* grade may be changed after the thesis/project is successfully defended and the student has completed 6 credit hours. If the thesis or project is not completed after six credit hours, the student must maintain matriculation until the thesis or project is approved.

Help with Writing a Thesis/Capstone

The student should be in frequent contact with the thesis/project committee. Typically, several drafts are needed so provide committee members with plenty of time to read the work and provide feedback. Students should be open-minded about accepting constructive criticism. The goal is to complete an excellent thesis/ project with a minimum amount of stress. The committee is the resource for a successful completion of the thesis/project.

The Writing Center (<http://www.wku.edu/Dept/Academic/AHSS/English/wccenter/wcpage.html>) can be of assistance. The Writing Center staff will not write the thesis/project, but they can help students learn how to write more effectively and how to produce a paper that is formatted correctly.

The Library staff liaisons (http://www.wku.edu/Library/dlps/lia_dept.htm) can help locate relevant resources for the thesis/project. Consider ordering items through Interlibrary Loan if they not on-site. Allow time for these materials to arrive.

There are several websites at the end of these guidelines to assist in the formatting and writing of the thesis/project.

The Thesis/Project Proposal

The department requires that you submit a thesis/graduate proposal and have it approved by your committee before proceeding with the collection of data and/or project execution. Each proposal type has specific requirements. See the MSTM Writing Guides for specific requirements.

Thesis: The proposal should consist of three chapters. The first chapter, titled INTRODUCTION, consists of a problem statement, significance of the research, limitations, assumptions, hypothesis, and definition of terms. The second chapter, titled REVIEW OF LITERATURE, should include a thorough synthesis and analysis of literature related to the study. The third chapter, titled METHODOLOGY, describes the plan for conducting the study and explains what the researcher will do. This includes clear explanations of each step with justification. Upon committee approval, you may begin data collection and analysis for the development of the final chapters. For a detailed description of each thesis chapter, see the AMS 599 Thesis Writing Guide.

Graduate Project: The proposal should include all of the planning documentation typically associated with a project plan. Product planning typically include definition of the problem, the development of a scope of work, a work breakdown structure (WBS), preliminary project schedule, estimated resource allocation, planned project controls, project evaluation strategy, and project performance measures.

Upon committee approval, you may begin execution of the project as planned. Deviations from the plan may be reported and/or documented in the final graduate project report. For a detailed description of the project, see the AMS 690 Graduate Project Writing Guide.

Graduate Student Research Grants

Depending on the scope of work and level of effort required, grants are available for graduate research funding. Application forms are available at: <http://www.wku.edu/graduate/index.php?page=graduate-student-research>

Research Involving Human Subjects

Federal law requires that all research involving human subjects, regardless of the source of funding, must be approved in advance by the WKU compliance office. In order to comply with governmental directives, you must complete the appropriate human subjects form and submit it to the Human Subjects Compliance Coordinator. Forms and instructions can be downloaded at <http://www.wku.edu/Dept/Support/SponsPrg/grants/index.php?page=human-subjects>

A copy of the approved form must be submitted with the final thesis/project in the appendix of the manuscript. Failure to follow the Human Subjects Review procedure will result in rejection of your thesis/graduate project.

Copyright Issues

According to the 1976 Copyright Act, your manuscript is automatically copyrighted. Until formal transfer of the copyright, you are the owner. You do not need to register the copyright (fee required) unless you desire a public record of the copyright. The manuscript need not display the copyright symbol; however, the best way to protect an unpublished work is to place a copyright notice on page of every copy. A second copyright issue involves the use of copyrighted materials in the thesis/capstone projects. If you use copyrighted materials in your project, you must receive permission from the copyright holder first.

Approval by the Graduate Studies and Research Office

One copy of the thesis and signature page should be submitted to the Ogden College Reader Graduate at least three weeks prior to the end of the semester. Contact Graduate Studies for draft submission deadlines. See the WKU Thesis Guidelines (<http://www.wku.edu/graduate/index.php?page=thesis-guidelines>)

Note: It is the responsibility of the student under the direction of the advisor/reader(s) to submit an error-free paper. Because errors do occur, it is a good idea to submit the thesis to the College Reader and Graduate Studies and Research Office well before the deadline.

These guidelines are regularly updated. Other students' papers will likely not have current, accurate formatting or style. For this reason, please refer to the present guidelines, your departmental style manual, and your committee chair.

DO NOT USE OTHER STUDENT PAPERS AS A GUIDELINE!

Format/Style Manual

The content of the manuscript should follow the guidelines for Master's Thesis/Graduate project and the Graduate College and the American Psychological Association (APA).

Body of Thesis/Graduate Project

The format of the body of the thesis/project is APA format. The number of chapters, chapter titles, headings, and subheadings within chapters should be chosen to present the material in a logical and comprehensible manner.

For a thesis, the chapters should include the following:

Introduction

Within the introduction, the major headings should include: problem statement, significance, limitations and delimitations, assumptions, hypothesis, and definition of terms.

Review of Literature

Methodology

Findings/Results

Conclusion

For a project, the chapters can be tailored to present the information using the best logical order. Students should work with their committee chair on the preferred project format.

References

The thesis/graduate project must contain documentation for all sources cited. This documentation takes the form of the References page(s). Each source that is mentioned in the text of the thesis/graduate project must be documented in the References section.

Appendices

One or more appendix may be included for material which would detract from the flow of the manuscript, but which is relevant to the thesis/graduate project. Examples include large data sets, computer programs, and ancillary materials. The appendices should have a cover sheet and each appendix should be titled alphabetically on a separate sheet.

Writing Guides

Writing Guides <http://www.nsuok.edu/graduate/capstone/thesisstudentmanual.htm#manuals>

Writer's Handbook <http://www.wisc.edu/writing/Handbook/Documentation.html>

Writing a Research Paper <http://owl.english.purdue.edu/workshops/hypertext/ResearchW/>

Thesis and Dissertation Resources

Davé's Dissertation & Thesis Tip <http://www.asgs.org/>

Writing a Thesis: Details <http://www.dartmouth.edu/~writing/materials/student/thesis.shtml>

Thesis Resources <http://www.uow.edu.au/research/rsc/student/thesis/resources/>

Dissertation Tips: Surviving Your Dissertation Sage Publications ISBN 978-1412916790

<http://www.citationonline.net/survdis.htm>

Writing Tips: Report and Thesis Layout <http://lorien.ncl.ac.uk/ming/Dept/Tips/writing/layout.htm>

A Simple approach to Thesis Writing (structure) <http://bcr2.uwaterloo.ca/~brecht/thesis-hints.html>

Academic Skills Thesis Writing [http://www.deakin.edu.au/studentlife/academic-](http://www.deakin.edu.au/studentlife/academic-skills/research/thesis.php)

[skills/research/thesis.php](http://www.deakin.edu.au/studentlife/academic-skills/research/thesis.php)

APA Style Guidelines

[APA Publication Manual Crib Sheet](#)

[Microsoft Word template of an APA-style paper](#)

[uw-madison writing center writer's handbook](#)

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[Quick Guide to the APA Style Manual](#)

[APA Formatting and Style Guide](#)

[APA Style Tutorial <http://www.kevinschoepp.ca/APAtutorial/contents.htm>](#)