Thesis/Doctoral/Doctoral Project (TDDP) Manual

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Preface

The purpose of the Prairie View A&M University (PVAMU) Thesis, Dissertation, and Doctoral Project Manual is to provide guidance and clarity in the support of students, faculty advisors, and research committee members with the preparation and production of a manuscript of scholarly attributes. The guidelines laid out here are meant to maintain high standards for the content and rigor of the documents. Moreover, the manual ensures that University guidelines are followed in order to achieve the style and format uniformity of the highest quality while allowing for timely clearance for graduation.

This Manual is meant to serve as a guide to both students and faculty involved in chairing or serving on theses, dissertations, and doctoral committees. It provides an overview of the thesis/dissertation/doctoral project forms and procedures and the responsibilities and roles of the student, chair, and committee members. Faculty and students should refer to this Manual and follow its directions in planning and preparing the thesis/dissertation/doctoral project for document approval and final submission of the finished thesis, dissertation, or doctoral project.

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SECTION ONE – INTRODUCTION TO THE THESIS/DISSERTATION/DOCTORAL PROJECT PROCESS

Part 1: Writing the Thesis/Dissertation/Doctoral Project

1.1 PVAMU Standards and Requirements

This Manual was prepared by the Graduate School (GS) to help graduate students and their committee members prepare a thesis, dissertation, or doctoral project. Its purpose is to provide uniform standards of style and format and to allow enough flexibility to satisfy the practices of each academic discipline.

Prairie View A&M University (PVAMU) requires a dissertation or doctoral project from all doctoral candidates and a thesis from all thesis option master's candidates. The thesis/dissertation/doctoral project should be presented in a scholarly, well-integrated, and properly documented manner and should contain the original work done by the student under the supervision of an advisory committee.

Because Prairie View A&M University is a public institution, the research conducted at PVAMU is ultimately for the benefit of the public. To support this goal, all theses, dissertations, and doctoral projects are made available through PVAMU's John B. Coleman Library and other PVAMU libraries. The availability may be delayed temporarily only for patent/proprietary or publication reasons. PVAMU requires that all theses, dissertations, and doctoral projects be submitted to GS.

1.2 Presentation of the Material

The finished manuscript is to be an independent professional effort. In the thesis or dissertation, the student must use American Standard English, show an overall understanding of the literature in the field and present clearly the method, significance, and results of the research. Full documentation and useful tables and/or figures are especially important. The thesis, dissertation, or doctoral project length can vary widely depending on the research topic, academic discipline, and the degree sought. However, the document should adhere to the average length for the respective discipline (see Appendix A*).*

1.3 Selecting and Using a Journal Model or Publication Manual

Each graduate program has a designated template and checklist available on the Graduate School webpage(https://www.pvamu.edu/graduateschool/pv-college-school-thesis-dissertation-doctoral-project-template/) to guide the preparation of theses, dissertations, and doctoral projects. The final document must adhere to the formatting style approved by the respective college, APA 7th Edition Publication Manual, used by the College of Business, College of Education, College of Juvenile Justice, and College of Nursing. American Chemical Society (ACS) Manual, used for Chemistry, and IEEE Manual, used by the College of Engineering.

The document must follow the respective manual's guidance regarding the placement and formatting of Table titles (above or below the table), Figure titles (above or below the figure), the format and content of the references section, and the in-text citation style. Additionally, the name of the targeted journal for publication must be listed on the first page of the text **(Chapter I Introduction)**. A recent article from the selected journal must be submitted along with the final, fully edited thesis, dissertation, or doctoral project document for review by the Graduate School.

1.4 Procedural Workflow for Thesis/Dissertation/Doctoral Project

Selection of T/D/DP Chair (Form #1)

- Thesis/Doctoral students should consult the PVAMU Approved Thesis/Dissertation Faculty List to select a Chair.
- The **Chair** initiates the Chair Agreement form #1 which is routed to the student and others for approval.
- After all the approvals are collected, the **Chair** uploads the completed Chair Agreement form and student's degree plan to Graduate School **Sharepoint** Site.

Selection of Committee Members & T/D/DP Approval (Form #2 &3)

- The **Chair** and **Student** proceed to select Committee Members and the student completes the Rationale for Committee Members form.
- The **Chair** initiates the Committee Member Agreement and TDDP Approval Form #2&3.
  NOTE: PVAMU employees will be required to login with your PVAMU email address and password.

- **NON-PVAMU Member:**
  - Non-PVAMU employees, please complete the Non-PVAMU Committee Member Agreement and TDDP Approval Form #2&3
  - ***NOTE: Non-PVAMU employees will be required to login with your institution email address and password.***

Scheduling of Proposal Meeting (Form #4)

- *The **Chair** completes the Request to Schedule a Proposal Defense form #4* **(Required for doctoral students and optional for thesis students)**.
- The **Chair** schedules the Thesis/Dissertation/Doctoral Project **Proposal** Defense. The selected/desired date must meet a **minimum of 10-day criteria** for scheduling the defense requirements.
- The **Chair** is responsible for attaching inside Form 4, the **proposal** defense dissertation/thesis/Doctoral Project& Turnitin plagiarism report with a maximum similarity percentage of **10% or less**.

Proposal Feedback (Form #5A* – 5B)

- *The **Chair** initiates form 5A and the Committee Members complete the Proposal Feedback forms listed below **(Required for doctoral students and optional for thesis students)**.
  - Proposal Defense Evaluation by Committee Member-Form #5A*
    - PVAMU Employees
    - Non-PVAMU Employees
- *The **Chair** submits the completed Thesis/Dissertation/Doctoral Project Proposal Feedback forms to Graduate School **SharePoint** site **(Required for doctoral students and optional for thesis students)**.
- The **Chair** initiates the Form 5B, summarizing the Committee Members' comments and required changes from Forms 5A.
  - Proposal Defense Outcome-Form #5B*

IRB/IBC/IACUC Approval

(Form #6)

The **Chair** initiates the IRB/IBC/IACUC Approval form #6 and the student completes it. The chair then uploads the completed form to Graduate School **SharePoint** site. For all research that falls under IRB, IBC, or IACUC, the approval letter must be included with the final thesis/dissertation/Doctoral Project submission.

Final Scheduling of the Final Defense

(Form #7)

- The **Chair** completes the Request to Schedule Final Defense form #7.
- The **Chair** submits the completed **Final Defense** Schedule form to Graduate School SharePoint site. The selected/desired date must meet a **minimum of 10-day criteria** for scheduling the defense requirements.
- The **Chair** is responsible for attaching inside Form 7, the final defense thesis/dissertation **draft** & Turnitin plagiarism report with maximum similarity percentage of 10% or less.

Final Defense Evaluation

(Form #8A* – 8B)

- *The **Chair** initiates form 8A and the Committee Members complete the **Final** Defense Evaluation by Committee Member forms listed below.
  Final Defense Evaluation by Committee Member-Form #8A*
    - PVAMU Employees
    - Non-PVAMU Employees
- The **Chair** submits the completed Thesis/Dissertation/Doctoral Project **Final** Defense Outcome forms to Graduate School **SharePoint** site.
- The **Chair** initiates form 8B, summarizing the Committee Members' comments and required changes from Forms 8A.
    - Thesis/Dissertation/Doctoral Project Final Defense Outcome-Form #8B

Final TDDP Approval for Publication

(Form #9A – 9B)

- The **Chair** submits the completed Thesis/Dissertation/Doctoral Project Publishing form (attach the revised dissertation based on the committee comments) for **Dissertation** to Graduate School SharePoint site.
    - Dissertation/Doctoral Project Dissertation Form #9A
- The **Chair** submits the completed Thesis/Dissertation/Doctoral Project Publishing form (attach the revised thesis based on the committee comments) for **Thesis** to Graduate School SharePoint site.
    - Thesis Form #9B
- The **Chair** is responsible for attaching inside Form 9 the **final** thesis/dissertation & **Turnitin** plagiarism report with a maximum similarity percentage of **10% or less**.
- The **student** is responsible for submitting the **final** thesis/dissertation directly to Graduate School (GS) via: jadwilliams@pvamu.edu in **MS Word** format along with the **Turnitin** plagiarism report with a maximum similarity percentage of **10% or less**.
- The **final edition** of the Thesis/Dissertation/Doctoral Project must be approved by the Graduate School **30 days** from the commencement ceremony.

Digital Commons Publication
(Form #10)

- The **Students** are not to complete Form 10 until they have received confirmation from GS that final edits have been approved.
- The **Student** submits the Electronic Thesis and Dissertation (ETD) Repository Submission Agreement Form (attaching the **final approved edited version** of Dissertation/Thesis/Doctoral Project **from GS**).
    - Electronic Thesis and Dissertation (ETD) Repository Submission Agreement- Form 10

Part 2: Forming a Thesis/Dissertation/Doctoral Project Committee

2.1 Committee Composition: Thesis, Dissertation, or Doctoral Project

The **Thesis Committee** consists of at least three graduate committee faculty members, and at least two should come from the department or program granting the degree. The **Doctoral (Dissertation/Doctoral Project) Committee** consists of at least four graduate committee faculty members, and at least three should come from the department granting the degree. Some doctoral programs may require more than four members. Students must consult the department head of their discipline to find out the minimum number of committee members required for a thesis, dissertation, or doctoral project committee in their major field. In some cases, a student may be advised to have at least one committee member from outside the department or outside of PVAMU. However, in the Doctor of Business Administration (DBA) program requires a three-member dissertation committee (comprising a primary faculty advisor and two secondary advisors, one of whom may be an "external" business executive with significant business expertise/knowledge).

2.2 Choosing a Thesis/Dissertation/Doctoral Project Committee Chair

Students choose a thesis/dissertation/doctoral project chair, or, in some cases, a chair may be assigned to the student. The student and the chair will choose other committee members, with approval from appropriate University officials. The chair and the student have the responsibility of following the guidelines described in this Manual.

2.3 Role of the Thesis/Dissertation/Doctoral Project Chair

The thesis/dissertation/doctoral project chair has primary responsibility for supervising the thesis/dissertation/doctoral project process. ***The chair, working closely with the student, is responsible for accessing and uploading all the*** **thesis/dissertation/doctoral project forms** ***to the Graduate School Thesis/Dissertation/Doctoral Project SharePoint Site***.

As stated on **Thesis/Dissertation/Doctoral Project Form 1**, the Chair agrees to:

a) Review student's degree plan and submit with Chair Agreement form.
b) Meet with the student for individualized supervision for one hour each week or the equivalent time spent on reviewing the student's work, during the semesters in which I am chair or co-chair.
c) Guide the student in the selection of committee members, if needed.
d) Ensure that student's research is supervised or guided by an identified methodologist or faculty familiar with the student's experimental design.
e) Direct the committee in guiding the student in proposal development and finalizing the thesis/dissertation/doctoral project.
f) Schedule the proposal and final defense meetings for the student, including submission of necessary forms to the Graduate School.
g) File the student's academic record, all required documents, signature forms, and annual progress reports until the student completes degree requirements, withdraws, or is terminated.

All questions regarding the topic, form and format, and specific procedures should first be discussed with the chair. The chair determines which direction the thesis/dissertation/doctoral project will take. *The chair bears the ultimate responsibility for assisting the student during the writing process.* This includes, but is not limited to, assisting in the conceptualization of the general project, the study design, project implementation, issues that may arise during the analysis, and conclusions to be drawn. Other committee members also are expected to make contributions in these areas. ***The chair has the responsibility for reading the thesis, dissertation, or doctoral project in its entirety and for ensuring the proposal and final versions reflect original, high quality, graduate-level research which makes a substantive contribution to the candidate's discipline.*** In the event of differences in opinion between committee members and/or the student, the chair determines which direction the thesis/dissertation/ doctoral project will take. In all instances, it is the chair who acts as the final arbiter and decision-maker.

2.4 Thesis/Dissertation/Doctoral Project Committee Co-Chair

The thesis/dissertation/doctoral project may be co-chaired when there is a clear need for the distribution of the chair's responsibilities. The co-chair may share research mentorship responsibilities with the chair or, in some cases, may be the primary mentor or content expert for the student. The chair and co-chair will provide clear delineation to the student and all committee members about the respective roles of the chair and co-chair.

2.5 Non-PVAMU TAMUS Co-Chair

Based on the Graduate School guidelines, qualified faculty members at TAMUS-affiliated institutions may serve as co-chairs for PVAMU thesis/dissertation/doctoral project committees with the approval of the Graduate Dean. The individual must have graduate faculty status at his or her system university.

2.6 Committee Member Selection

The members of the committee are normally chosen for their expertise in the proposed topic or for expertise in a particular methodology. Students should select committee members based on their substantive and methodological credentials. All voting members of the committee must have been granted thesis/dissertation/doctoral project committee status. A list of graduate faculty members from departments across campus is available on the PVAMU Graduate School website at https://www.pvamu.edu/graduateschool/committee-faculty/.

As stated on **Thesis/Dissertation/Doctoral Project Form 2&3**, a committee member agrees to:

a) Meet with the student for individualized instruction as requested or needed to help guide student in proposal development and/or thesis/dissertation/doctoral project work.
b) Read and evaluate the student's thesis/dissertation/doctoral project work.
c) Attend all meetings related to the student's proposal or final defense.

In addition to encouraging and supporting the student in completion of the work, the Committee's role as peer reviewers assisting the chair/co-chair is necessary and ethical to challenge the assumptions, hypotheses, research, and analysis of the student's work. These challenges are part of standard academic practices and requisite for producing rigorous scholarship.

The student is responsible for documenting the rationale for each committee member on Form 2&3. Each committee must include a methodologist or experimental design expert to guide the student through research design, analysis, and findings. The chair will verify that potential committee members have thesis/dissertation/doctoral project graduate faculty committee status.

2.7 Role of the Thesis/ Dissertation/Doctoral Project Committee Members

All thesis/dissertation/doctoral project committee members should have expertise directly related to the proposed thesis or dissertation research topic or methods. They must also have a reasonable degree of currency and activity in the field and have been granted thesis/dissertation/doctoral project committee status as specified by Graduate Faculty Guidelines by the Graduate School. ***All committee members are responsible for reading the thesis, dissertation, or doctoral project in its entirety.*** The chair of the thesis, dissertation, or doctoral project committee is responsible for discussing and consulting with the Department Head and Dean of Graduate School about any committee members who are from outside of PVAMU and TAMU campuses. Committee members agree to:

a) Meet with the student for individualized instruction as requested or needed to help guide student in proposal development and/or thesis/dissertation/doctoral project work.
b) Read and evaluate the student's thesis/dissertation/doctoral project work.
c) Attend all meetings related to the student's proposal or final defense.

2.8 Role of the Methodologist/Experimental Design Expert

Each committee must include a member whose role is to guide the student's methodology or experimental design and data analysis. It is expected that this person would have one or more of the following:

a) Recent publications in peer-reviewed journals demonstrate familiarity with the student's research/experimental design.
b) Course work or certification related to the student's research/experimental design.
c) Recent courses taught that align with the student's research/experimental design.

Colleges may utilize methodological/research resources outside the department or PVAMU to ensure that students are receiving adequate methodological/experimental design support.

2.9 Non-PVAMU/TAMUS Committee Members

In some cases, an individual from outside the PVAMU/TAMUS system may be requested to serve as a committee member. In such cases, the individual usually has recognized national expertise in the subject or methods area. Such outside committee members agree to:

a) Meet with the student for individualized instruction as requested or needed to help guide student in proposal development and/or thesis/dissertation/doctoral project work.
b) Read and evaluate the student's thesis/dissertation/doctoral project work.
c) Attend all meetings related to the student's proposal or final defense.

The chair is responsible for submitting the necessary documents for outside members to be approved by the Graduate Faculty Status Committee.

2.10 Change in Thesis/Dissertation/Doctoral Project Committee Members

The thesis/dissertation/doctoral project committee may be reconstructed at the student's discretion. The student should consult first with the chair of the thesis/dissertation/doctoral project committee and then with the department head about such changes as soon as possible. The chair or department head should assist the student with completing the Form to request approval to change a committee member. Committee members should not be changed any more than twice during the thesis/ dissertation/doctoral project process, except in the case of a lack of faculty resources. A Change of Thesis/Dissertation/Doctoral Project Chair/Co-Chair/ or Committee Member Form 2&3 is in Appendix C.

Faculty members may also elect to withdraw from a committee. If the chair of the Dissertation Committee is the department head, the student and the department head should meet with the Dean of the College to determine a new chair.

Part 3: Overview of the Thesis/Dissertation/Doctoral Project Manuscript

3.1 Main Body of the Thesis/Dissertation/Doctoral Project

The thesis/dissertation/doctoral project (T/D/DP) is original, high quality, graduate-level empirical investigation that makes a substantive contribution to the candidate's discipline. The required five chapters for the thesis/dissertation/doctoral project (T/D/DP) are:

a) Chapter I: Introduction
b) Chapter II: Literature Review
c) Chapter III: Method (Methodology is permissible for IEEE and ACS styles)
d) Chapter IV: Results
e) Chapter V: Discussion

The following serves as general guidelines for the minimum requirements for each of the five chapters.

3.2. Selecting a Title for the Thesis/Dissertation/Doctoral Project

The thesis or dissertation title is an essential part of your manuscript. The title will provide readers with the first opportunity to learn about your research and study, which includes the context, outcomes, and important aspects of the research design. A good thesis or dissertation title should be eloquent, descriptive, and explanatory, highlighting the reason for the research and the study. The title answers the questions: What is this research for? What are the main objectives? It should be clear, concise, focused, and unique. Avoid a title that is more than fifteen (15) words or includes abbreviations, acronyms, and initials.

The title also serves as one of the main ways readers who are searching for your research are able to locate it through search engines. Avoid using excess unnecessary words in the title (e.g. adjectives and adverbs are often not needed, and words like "study", "methods", and "results" can be extraneous). The terminology you use in your title should be appropriate for your audience and field. Make sure to use punctuation correctly and capitalization strategically. Although your title is only a few words of your dissertation/thesis project, it represents your entire research study.

3.3 Chapter I: Introduction

The purpose of this chapter is to highlight the topic, frame the research, and provide an overview of the remaining sections of the study. This chapter presents the background of the study, statement of the problem, the rationale, scope and significance of the research, research questions, and definition of key terms.

3.4 Chapter II: Literature Review

The purpose of this chapter is to present a comprehensive review of earlier and current work (empirical or otherwise) that is pertinent to the thesis/dissertation/doctoral project topic. This chapter should include a thorough discussion of the conceptual, theoretical, and methodological background related to the topic. The discussion should emphasize the significant discourse on the topic, with sub-sections that address the major theoretical framework(s) that inform the study and the major methodological issues in the most prominent research studies related to the thesis/dissertation/doctoral project topic. The discussion should cover both areas of consensus and disagreement in the literature related to the topic, with the goal of establishing continuity between earlier work and the current thesis/dissertation/doctoral project. Further, the conclusion of this chapter should point to the identified gap(s) in the literature and how the current work makes a substantive contribution to the field by addressing such gaps through the thesis/dissertation/doctoral project study. This chapter ends with a review of the problem statement and research questions.

3.5 Chapter III: Method (Methodology is permissible for IEEE and ACS styles)

This chapter includes a detailed explanation of the research design, analytical techniques/methods, data collection, participants/subjects, procedure, data/statistical analysis, limitations, etc. It should be written in a way that provides the reader with sufficient information to replicate the research study.

3.6 Chapter IV: Results

This chapter includes the research findings, meaning the data (quantitative and/or qualitative). It is presented along with a detailed analysis of the data, description, and discussion of the findings to the problems, and questions posed in previous chapters. Inferences and specific summary statements are included in this discussion.

3.7 Chapter V: Discussion

General or specific conclusions are drawn on the study. The student should articulate the meaning, implications and limitations of the findings and possible future work.

3.8 References

This section contains the entire source materials cited in the body of the document. The specific citation and reference style are based on the student's discipline. In some disciplines that use selected journal models, the selected journal dictates the style and format for in-text citations and references.

3.9 Appendices

One or more appendices may be included as part of the final document. For any research that falls under the Institutional Review Board (IRB), Institutional Biosafety Committee (IBC), or Institutional Animal Care and Use Committee (IACUC), a copy of the official approval letter must be included in the appendix. Additional appendices may include items such as copyright permissions, survey instruments, or other relevant supporting materials.

3.10 Alternative Dissertation Formats

The traditional dissertation format — one work divided into five chapters (introduction, literature review, methodology, results, and discussion) — is not the only option for presenting your research. In some fields of study, students may opt for a manuscript style format, a document that includes one or more scholarly manuscripts written in a manner suitable for publication in appropriate peer-reviewed journals. A manuscript-style dissertation allows a student to prepare and present his or her graduate research work in a format that facilitates publication. This approach alters the format, but not the extent or rigor of the scholarship and commitment required for dissertation research. The most common type of manuscript-style dissertation format is a triple article dissertation (TAD) format. The TAD consists of:

a) an introduction,
b) three (or more) peer-reviewed, full-length journal articles* forming a cohesive body of work, and
c) conclusion that describes how the articles collectively contribute to the discourse.

The dissertation and journal articles must be the student's original idea. The introduction should cover the same content required in a traditional dissertation (see 3.2) and must also include a description of the three (or more) studies and an explanation of how they collectively respond to the problem statement and research questions. The discussion section serves as a summary making clear the importance of the studies, integrating the major findings from each article, discussing the interconnections, and describing how the individual articles collectively form a cohesive body of work that advances the discourse. It is assumed that critical areas typically covered in the Literature Review (see 3.3) will be incorporated and discussed across the multiple articles, as part of the introductions or background sections for the

individual articles comprising the TAD.

3.10.1 Advantages and Disadvantages of the Triple Article Dissertation (TAD)

The Triple Article Dissertation (TAD) works best for projects that involve multiple experiments and various data sets, mixed methods studies to report separately on qualitative and quantitative parts, publishing state-of-the art conceptual discussion along with pertinent follow-up research, publishing a systematic review to support intervention research, and/or publishing a series of papers that are submitted and critiqued as the research progresses. There must be a clear rationale for grouping the three (or more) articles together.

Some of the benefits of the TAD include publishing the dissertation in manageable chunks, getting published and cited prior to or very soon after defending your thesis/dissertation/doctoral project, and gaining early feedback on one's work from peer-reviewed journal editors. One caveat to the TAD is that students may find it difficult to manage their time between writing the thesis/dissertation/doctoral project and the "revise and resubmit" publishing cycle. Also, the TAD may entail more work or a greater time investment than the traditional dissertation.

3.10.2 PVAMU Graduate School Requirements for Triple Article Dissertation (TAD)

Universities have varied guidelines on what circumstances and for which disciplines TAD is permissible. Further, within each discipline or department that allows a TAD format, there may be unique requirements related to authorship, timing of publications, and journal selection for publications. The PVAMU Graduate School (GS) has the following minimum requirements for dissertations completed using the TAD format:

a) The dissertation must include an introduction that convincingly details how the three (or more) articles speak to the identified gap in the literature. Also, the discussion must synthesize the articles, linking one to the other and concluding how the work reflects a cohesive body of work that speaks to addressing a gap in the scholarly discourse.
b) The student must be the first author on all articles. Note: There may be an exception to this in the hard sciences.
c) The student must publish one of the three articles as sole author.
d) The articles must be submitted to peer-reviewed journals that have been approved by the dissertation committee and aligned with the departmental list of acceptable high-quality journals.
e) Students cannot publish in journals for which their committee members serve on the editorial review board.
f) Articles developed for the TAD can include only one conceptual/theoretical (i.e., synthesis of the literature) article. The remaining two (or more) articles must be empirical articles based on data that the student analyzed (e.g. quantitative, qualitative, or mixed methods). Students must demonstrate proficiency in research design and implementation in these two empirical articles.
g) Each article must add a unique, non-redundant perspective to the discourse.
h) At the time of the final defense, all articles must be finalized and ready to submit for publication, following a final review and approval by the committee. In some cases, the articles may already be under review or published at the time of the final defense. Any articles under review or published must adhere to all the guidelines above and must be approved for submission by the student's chair.
i) Co-authors included on any dissertation articles must be approved by the committee chair. A department may have more rigorous guidelines for approval to use the TAD or similar non-traditional format. Students should consult with both their department and the Graduate School to determine if an alternative format dissertation is appropriate, given the topic and the analytical approach.

3.10.3 Multiple (More than 3) Article Dissertation

There are instances in which more than five chapters may be appropriate in the science, technology, engineering, and mathematics disciplines for a manuscript style dissertation. This is a variation of the journal article dissertation format and usually used when there are multiple scientific experiments. In such cases, the first and final chapter must follow the guidelines as outlined in 3.9.2 (a) above.

3.11 Alternative Thesis Format

In some fields of study, such as psychology, a thesis based on a single-article format is used. In such cases, the thesis is written in manuscript style in which sections resemble those of a peer-reviewed empirical journal article according to the most current publication manual style. Typically, the length would not exceed 50 pages. The Graduate School accepts this format for theses.

SECTION TWO – WRITING THE THESIS/DISSERTATION/DOCTORAL PROJECT

Part 4: Writing the Abstract

4.1 Overview

The purpose of the Abstract is to present the highlights of the research study in a highly condensed form. The Abstract is a summary of the entire thesis, dissertation, or doctoral project. It should be written as a complete and stand-alone document, in clear and concise language. The abstract is typically one of the last sections that the student writes; it is not written until the study is completed.

4.1.1 Preliminary Abstract (between 250 to 350 words)

The Preliminary Abstract is needed for **Form 2&3.** The student will write this Abstract (in consultation with the Committee Chair). It describes the thesis, dissertation, or doctoral project and addresses the points below:

- The proposed title of the thesis, dissertation, or doctoral project
- A summary of the previous research on the topic (indicate the problem statement, gaps in the literature, and how the specific research builds on the previous research and scholarly discourse)
- A summary of the planned methodology (preliminary research questions, proposed research design, and statistical analysis)

During the proposal stage, the Abstract serves as a working document which is required for Form 2&3.

4.1.2 Abstract for the Final Defense

The Abstract for the Final Defense is required for Form 7 and will be posted to the Graduate School website prior to the final defense. The final abstract summarizes the purpose of the study, the current approaches and gaps in the literature review, the research questions, rationale for the chosen methodology used, the main findings, and the conclusions and implications. The final abstract for **Form 7** is generally 250-350 words.

4.2 Final Abstract for the Completed Thesis, Dissertation, or Doctoral Project

Once the student has successfully defended the thesis/dissertation/doctoral project, the next step is to begin finalizing the thesis/dissertation/doctoral project document, including making any final corrections, editing, and proofreading the entire document. For this final document, a final concise abstract summarizing the research is needed.

This Abstract structure should mirror the format of the thesis, dissertation, or doctoral project and include a concise summary of the major elements of the study. The Abstract length should be limited to no more than 250-350 words and include Keywords at the bottom. It should be written coherently and logically structured. Some questions to answer in drafting this Final Abstract (one page) are:

a) What is the purpose of the study?
b) What are the current approaches and gaps in the literature?
c) What is the research question(s) and aim(s)?

d) Which methodology is used? Who was the population?
e) What are the main findings?
f) What are the main conclusions?

Part 5: Writing the Introduction

5.1 Overview

The purpose of Chapter 1 is to highlight the research topic and to provide a specific rationale for the problem, introduce the problem statement, and the aim of the research. Listed below are the sections that are generally in this chapter:

a) **Background**—Provides the reader with a conceptual overview and introduces the topic to be studied. It immediately answers the question: why is this topic important to the intended reader? Describes pertinent research and statistics regarding the topic and includes an abbreviated discussion of the theoretical and methodological frameworks that support the study.
b) **Problem Statement**—Presents the specific area of interest the research will focus on and what will be studied.
c) **Purpose, scope, and significance**—Provides the need for the study and the scope of the investigation, and why and how the topic contributes substantively to the body of literature.
d) **Research Questions**—Articulates the specific research questions that will be studied.
e) **Significance of the Study**—Explains why this investigation is needed and important to the specific field.
f) **Definition of Terms**—Provides definitions of key terms needed by the reader to fully comprehend the discussion.
g) **Organization of the Remainder of the Study**— Gives a short and concise summary of this chapter and the remaining chapters of the thesis, dissertation, or doctoral project.

5.2 Background of the Study

This section should clearly and specifically introduce the topic of research. The topic should be clearly defined in the first paragraph. Moreover, this section should explain why the topic is of interest to the reader and the scholar practitioner as well as the benefit of this research. This section provides the reader with an overview of the relevant information about the historical and present state of existing research about the topic. This section develops the significance of the study by briefly describing the previous research on the topic and ends with explicating how the study will offer a unique contribution to the literature. It should be made clear to the reader what is already known about the topic and the existing gaps in the literature (i.e., something that is not already known or has not been studied before, some way that the literature needs to be extended, or a new way of thinking or approaching the research topic). This gap forms the basis for the problem statement and the rationale for the study.

5.3 Statement of the Problem

Here, the problem, opportunity, or "gap" in the literature to be researched is clearly articulated. This section provides the research setting by describing the problem and the need for the research.

5.4 Purpose, Scope and Significance of the Study

Now that the problem statement has been identified, this section provides clear reasoning as to the purpose, scope, and significance of the study. The discussion should provide information about why the problem, opportunity or "gap" is significant and requires research as well as its significance to the field and scholarly discourse. The assumptions and limitations of the study should be clearly stated.

The assumptions are concepts or ideas that are taken as a given for the current study and are usually organized in the following four areas:

a) general methodological assumptions,

b) theoretical assumptions,
c) topic-specific assumptions, and
d) assumptions about instruments or methods.

The limitations are areas the study does not address due to inherent design limitations or because it is outside the scope or the purpose of the study.

5.5 Research Questions

In this section, the research question(s) that the study will answer is clearly stated including any sub questions. These are the overarching research questions that will be answered through the research study. The research question must include the phenomena or variables being investigated as well as their relationship (if any is sought). In *quantitative* studies, hypotheses, which are predictive statements of the expected answers to the research sub-questions, are included. *Qualitative* projects do not use hypotheses.

The following statements guide the content of each research question that:

a) Must be written as a question
b) Must be able to be answered using the methods in the study
c) Should not be a question that has already been answered
d) Clearly identifies the variables and the relationships among variables to be investigated in a quantitative study
e) Clearly identifies the concepts to be investigated in a qualitative study

The question includes keywords that provide the reader with a good understanding of what is being studied and can be used to find the study among others when searching for published dissertations.

5.6 Significance

This section of the study focuses on the contribution the proposed research will make to the field. Given that this research proposal is grounded in the current scholarly research, this section will describe the proposed value this study will have to the field. In this section, the researcher explicitly states the value of this research study to scholars and practitioners in the field of specialization.

5.7 Definition of Terms

This section presents definitions of the common terms that are used within the field of the topic being studied as well as specifically how terms are related to this proposed research. Definitions must adhere to the most current version of the citation style (often APA).

5.8 Organization of the Remainder of the Study

This section provides a summary of what was presented in Chapter 1 as well as a short and concise summary of what is contained in the remaining chapters of the thesis, dissertation, or doctoral project..

Part 6: Writing the Literature Review

6.1 Overview

The Intent and Purpose of the Literature Review is to convey to the reader what knowledge and ideas have been established on a topic—its strengths and weaknesses. The literature review of pertinent scholarly and practitioner literature demonstrates the researcher's competency in the proposed research in a field of specialization. This section of the dissertation includes a thorough review of the literature published by accredited scholars and researchers relative to the research question(s) and relevant research findings which provides support for the proposed study (i.e. dissertation research questions, theoretical underpinnings, and selection of methodological design). This literature review demonstrates that the student has not only thoroughly research the topic but also carefully reviewed and critically evaluated the range of relevant sources such as books, journal articles, government documents, and other scholarly work.

It is an integrated and cohesive evaluation of existing research that presents a balanced picture of all scholarly viewpoints on the research topic. Rather than only reporting on what is in the research, the literature review is a synthesis of the literature that has been distilled into a logical set of reasons that support the need for the current dissertation study. Overall, a successful literature review will accomplish the following objectives:

a) Provide a thorough description of a line of research or investigation that is focused on the dissertation research topic.
b) Identify, describe, and evaluate the studies that provide justification for the rationale and need for the thesis, dissertation, or doctoral project study.
c) Provide support for the focus of the study, selection of variables and interpretation of the data by describing and evaluating prior studies conducted using the theoretical framework proposed for this dissertation study.
d) Provide support for the selection of the methodology for the dissertation through a synthesis and evaluation of prior studies that used the same methodology.
e) Support the appropriateness of the thesis, dissertation, or doctoral project's method including the instruments, data measures, and data collection procedures.

6.2 Aspects of Literature Reviews

There are three aspects of literature reviews regardless of writing a qualitative or quantitative thesis, dissertation, or doctoral project: substantive review, theoretical review, and methodological review.

6.2.1 Substantive

The substantive aspect presents the current state of knowledge about a research topic. It describes the overall topic being investigated and the importance to the field. It should include an extensive discussion of research published on this topic by scholars and researchers.

6.2.2 Theoretical

The theoretical aspect focuses on the accepted theories related to the research topic and how they have been previously applied. Theoretical or Conceptual Frameworks are best depicted through the use of a diagram or framework that shows a clear connection between theory, inputs, outputs, and outcomes. It should also define the relationships proposed by the research in a systematic manner by indicating all contributing and intervening variables.

6.2.3 Methodological

The methodological aspect focuses on the methods and methodologies accepted in the discipline as well as a survey of how well-developed literature is on this topic. The information presented through this methodological review should be considered as the methodology for the study is developed.

Part 7: Writing About Method

7.1 Overview

The Method section in Chapter III (Methodology is permissible for IEEE and ACS styles) of the thesis, dissertation, or doctoral project provides an explanation and justification of the choice of research design, data collection, and analysis. Moreover, it provides detailed steps related to how the research was conducted to ensure that the research is conducted ethically.

Chapter Three is written in the third person, future tense for the Proposal. Possible headings for the methods chapter include:

a) **Research Design**—Describes the methodology selected for the study.
b) **Population/Sample**—Presents information about the study population, sample, and sampling strategy.
c) **Setting (if necessary)**— Presents the research in a particular setting as defined by previous scholarly research.
d) **Instruments/Measures**—Includes information about the data collection instruments and the data that they will measure.
e) **Data Collection**— Explains precisely how, why, and when the data will be collected.
f) **Data Analysis**—
   - Provides details of the proposed descriptive and inferential (quantitative) techniques that will be conducted to address the research questions and/or hypotheses (*quantitative*)
   - Describes the proposed qualitative techniques to be used to address the research question (*qualitative*)
g) **Ethical Considerations**—Describes the elements that protect respondent's rights (as per IRB) - data security, privacy, and confidentiality.
h) **Summary**: Presents a summary statement of the methodology and a transition to Chapter 4.

7.2 Research Design

In this section of Chapter Three, the rationale for the research design is described. When describing the research design, include a description of the methodological approach (i.e., quantitative, qualitative, or mixed methods) and the specific research design. Provide a specific rationale, grounded in scholarly research for the proposed method, and identify researchers from the literature that recommended the methodology.

7.3 Population/Sample

In this section of Chapter Three, the proposed number and reasons for selecting a particular population and sample are articulated. Consider the unique and applicable characteristics of the population and provide a rationale for selection.

7.4 Setting (if necessary)

This section of Chapter Three presents the reasoning for why a unique setting is needed for the proposed research. If the research is conducted at a particular company or organization, describe the benefits of conducting the research to both the organization and the research literature.

7.5 Instruments/Measures

This section of Chapter Three includes a discussion of the instruments used to collect and record data. An integral component of the methodology includes both information about the instrument and the academic (scholarly) support for using the instrument.

7.6 Data Collection

This section provides details regarding the data collection process for the study and should include a robust discussion of the process for collecting data for the research.

For quantitative research when collecting primary data, this section could include but is not limited to:

a) Description of the data type and identification of the dependent and independent variables
b) Discussion of the process for selecting participants including permission and informed consent.
c) Length of time for data collection
d) Delivery method of research instrument (e-mail, Internet, postal, etc.)

For qualitative research when collecting primary data, this section should include but is not limited to:

a) Type, rationale, and justification of methodology used
b) Participant selection process including informed consent and obtaining permission
c) Description of how the data will be gathered
d) Process for coding data and software used

7.7 Data Analysis

This section provides the rationale for the data analysis techniques and a justification for why they are applicable to the proposed research. For quantitative research, include a description of the statistical technique with the assigned significance level needed to confirm or deny all hypotheses. For qualitative research, identify data analysis techniques.

7.8 Ethical Considerations

A key aspect of any thesis, dissertation, or doctoral project study is how the research will be conducted in an ethical manner. In this section of Chapter Three, ethical considerations are considered. The following items should be addressed including privacy and confidentiality of participants, risk-benefit analysis, considerations for vulnerable population(s), and data security.

7.9 Summary

This section of Chapter Three presents a concise summary of the methodology presented in this chapter and provides a transition to Chapter Four, where the findings from the research project are discussed.

Part 8: Writing about Findings or Results

8.1 Overview

Chapter Four describes the findings from the research project and includes detailed information about the data collected, results of the data analysis, and the findings of the study. Written in the past tense, Chapter Four includes at least the following elements:

a) **Introduction: The Study**: a brief introduction to the chapter
b) **Description of the Sample**: a description of the sample of participants who provided data in this study, including significant demographic data describing the sample
c) **Brief Description of How the Methodological Approach (e.g., ethnography, grounded theory, etc.) Was Applied to the Process of Data Analysis**: a description of what procedures of data analysis were applied in the context of the chosen approach
d) **Presentation of Data and Results**: a presentation of the data collected and the results of the analysis
e) **Summary**: a summary statement of the findings or conclusions and a transition to Chapter 5

8.2. Introduction: The Study

In this section of Chapter Four, the researcher should provide the reader with a brief introduction including the purpose of the chapter, a description of how the chapter fits into the overall thesis, dissertation, or doctoral project and the organization or main sections of this chapter.

8.3. Description of the Sample

Chapter Four consists of a detailed description of the study participant sample. This description includes demographic information about all the participants (i.e. age, gender, ethnicity, educational status, and area of residence), the sampling procedures used in the study, and the size and power of the sample. Also, describe additional aspects and influences that might influence the sample participants or impact the findings. Sufficient details about the participant sample should be provided to support the findings of the research study and to provide enough information for future researchers to replicate the study. However, the sample description should be written in a way to protect participant's confidentiality. Take care to not include details of the setting or context that might inadvertently identify any of the participants. In quantitative research, describing the sample at the level required by the statistical analyses as generalization (external validity) is typically the objective.

8.4. Brief Description of How the Methodological Approach Was Applied to Data Analysis

This section of Chapter Four provides a description of how the analytic methods of the selected methodological approach (i.e., ethnography, phenomenology, etc.) were applied to the raw data. The focus of this section is specifically to discuss the steps used to conduct the research protocol. Include information about how the research was conducted, any differences, or departures made from the protocol included in Chapter Three, or unexpected challenges while conducting data analysis. In quantitative research, each hypothesis or research question is treated separately, with its corresponding result or finding. Statements here should simply summarize the results—not provide details or describe the analysis.

8.5. Presentation of Data and Results of the Analysis

Following the discussion of how the data were analyzed, the researcher presents to the reader the data collected and the results of the analysis. Supported by the analysis and interpretation of the data, this section of Chapter Four provides a clear and coherent answer to the research question or questions. This section is the heart of Chapter Four and is presented in a format consistent with the methodological approach chosen for the study. Data and findings should be presented clearly but with sufficient detail

to allow readers to follow the analysis and to refer to the raw data (words of the participants, field notes, etc.) to find support for the findings. In quantitative research, a statement as to the rejection or non-rejection of the null hypothesis (if one was used) or the answer to the research question is included. Refer to statistical texts for more information on the proper phrasing of results.

8.6. Summary

This section of Chapter Four presents a summary of the findings or conclusions of the research study. A concise summary of the research questions (and sub-questions) and the findings should be included. This section provides a transition to Chapter Five, where the discussion of the meaning of the answers in the context of previous research and results will be discussed and interpreted.

Part 9: Writing the Discussion

9.1 Overview

In this section, usually Chapter Five, the student must evaluate his or her own work and provide personal insight for the interpretation of the study's results. But within the constraints of scholarly writing, the student will determine what the study means to him or her and how he or she thinks it adds to the existing literature. Chapter Five must accomplish two primary objectives:

a) Determine whether the thesis, dissertation, or doctor project addressed the problems that prompted the need for the study and how well the study's results add to the body of existing literature in the field. In some cases where the analysis does not support the hypotheses or fully answer the research question, the student can discuss and develop the possible reasons for this outcome. After all, the overarching purpose of any thesis, dissertation, or doctoral project is to add to the body of existing knowledge.

b) Make recommendations for future study. In making recommendations for future research, the student should discuss design and methodological improvements that could strengthen the study (if it were replicated). Also, the student can suggest what kinds of data might be collected to strengthen the results, their meaning, and perhaps new research questions or problems the results did not address.

9.2 Introduction to the Chapter

The introduction here relates to Chapter Five. The student should provide the reader with a brief introduction stating the purpose of the chapter, the main sections of the chapter, and how the chapter fits into the overall thesis, dissertation, or doctoral project. This section sets the stage for the remainder of the chapter as well as provide an understanding of the logical flow of the chapter's main points and how it relates to the preceding chapters.

9.3 Summary of the Results

The summary of the overall results should restate the research problems, show the study's significance, very briefly indicate the literature reviewed (particularly any new findings published while working on the thesis, dissertation or doctoral project), the methodology used, and a concise review of the study's findings.

9.4 Discussion of the Results

This section interprets the results of the study to the initial hypotheses and research questions, illuminates the practical and theoretical implications, and the meaning of the study. The student should answer the research questions and how they support the hypotheses. This section should also identify the limitations of the study–its design flaws, problems, or other elements that the student found had some impact on the results.

9.5 Discussion of the Conclusions Relative to the Literature

This section discusses how the outcome of this study relates to the previous research and theory. Include any agreement or disagreement, support, or disconfirmation relative to the wider field of practice or for the community of interest. Lastly, the student should provide the reader with a clear discussion of what the outcomes of the study mean and what might account for the outcomes.

9.6 Limitations

A common reason for a study not supporting the hypotheses or research questions as strongly as expected are design limitations. In this section, the student can more fully discuss design problems or limitations even if the thesis, dissertation, or doctoral project outcome was exactly as expected. The student should identify and discuss any design element that, with improvement, could significantly enhance the quality of the results without being unrealistic. Here, the emphasis should be on suggesting reasonable improvements that will result in better research in the future and stronger results from similar studies.

9.7 Conclusions

In this section, the student summarizes the thesis, dissertation, or doctoral project and offers a final, concise description of the answers to the research question(s), and provides closure to the thesis, dissertation, or doctoral project as a whole.

9.8 Future Work

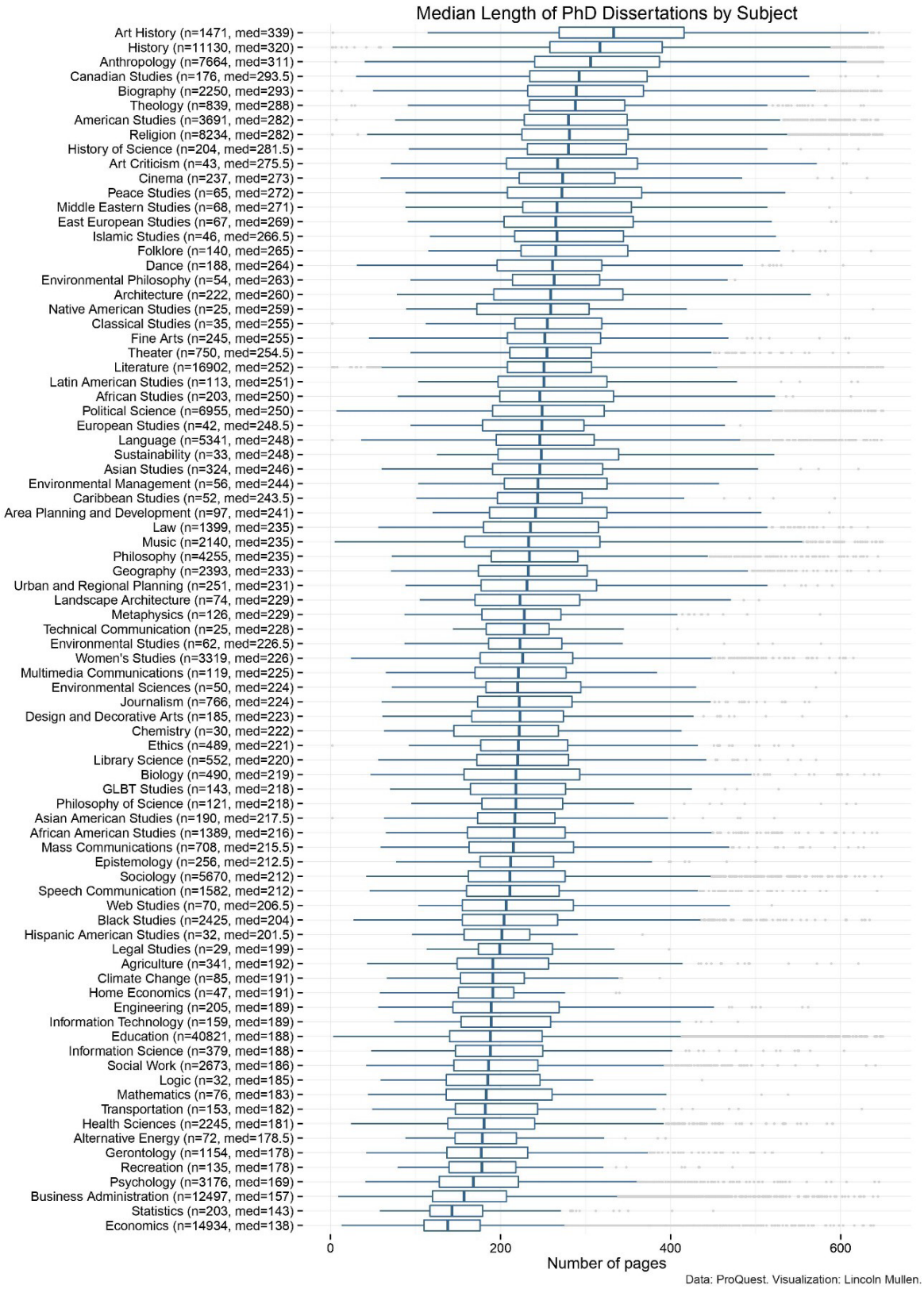
In this section, **recommendations for future studies should be discussed.** Some recommendations for future work are:

a) developed directly from the data
b) derived from methodological, research design, or other limitations of the study
c) based on the limitations and/or delimitations
d) needed to investigate issues not supported by the data but relevant to the research problem
e) made for treatments or interventions supported by the data as well
f) derived from methodological, research design, or other limitations of the study

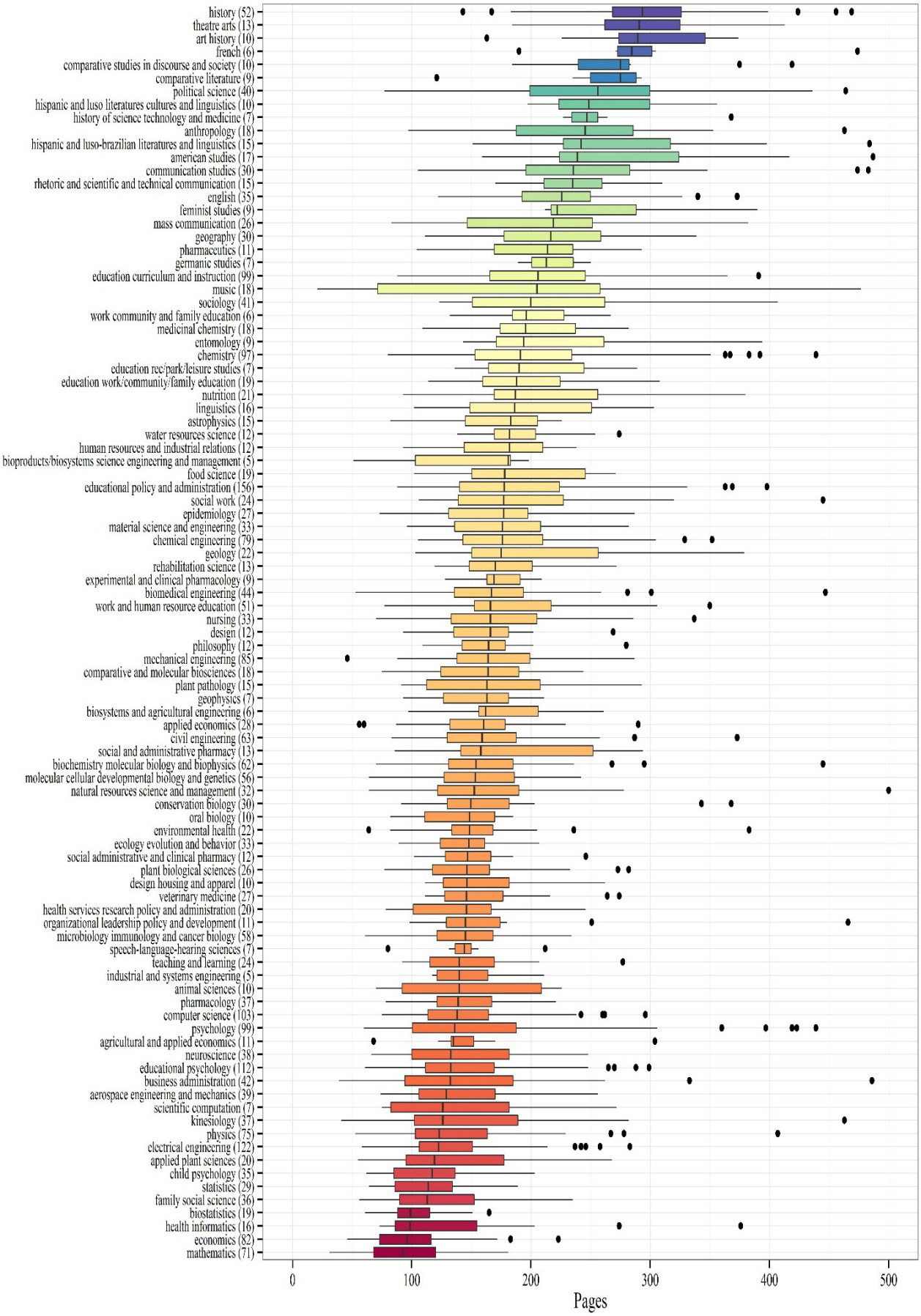
The focus should be on those recommendations offering the greatest chance of broadening or deepening the knowledge of the phenomenon.

SECTION THREE - APPENDICES

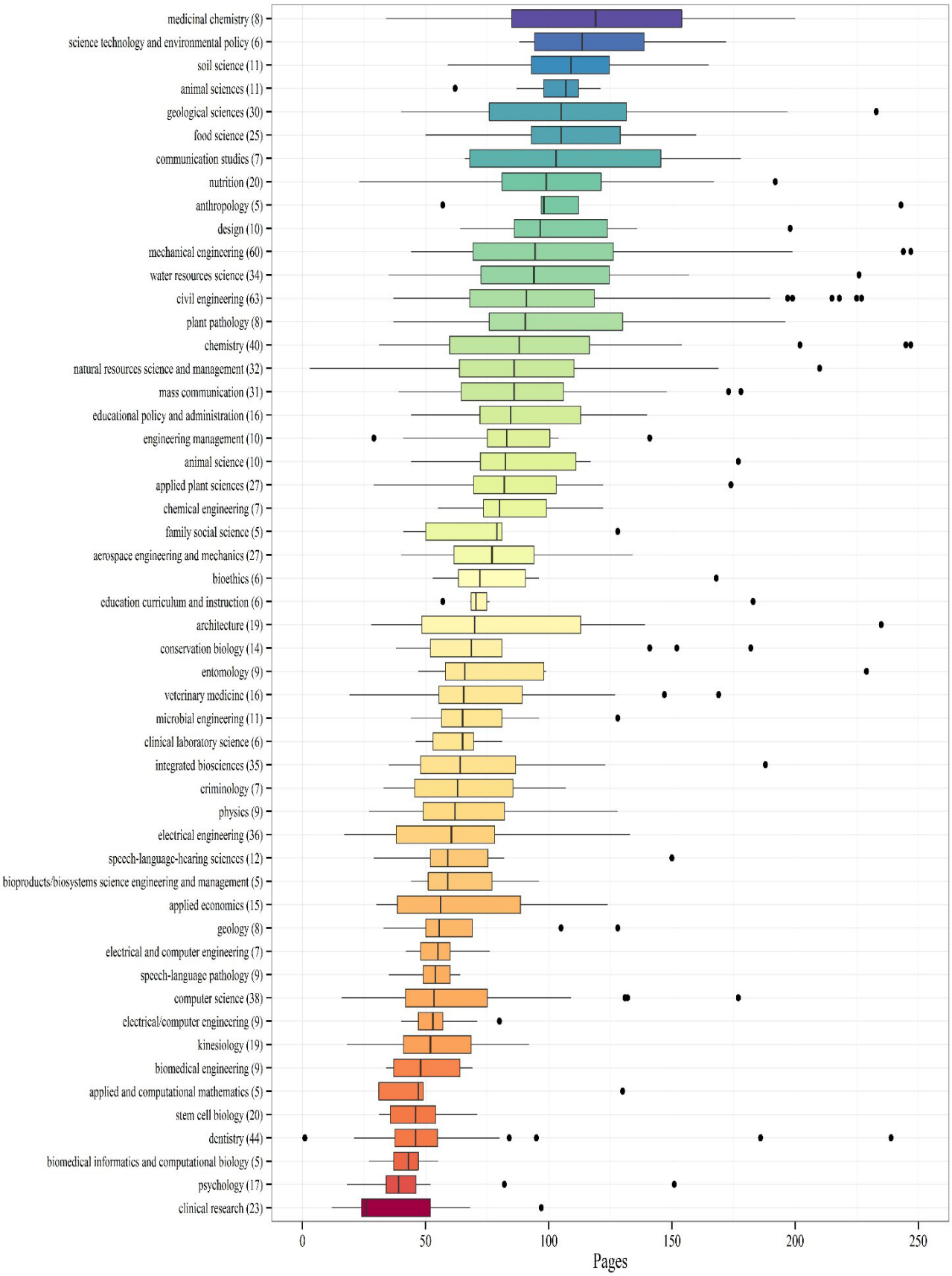
Appendix A: Median Length of Thesis/Dissertations and Doctoral Projects by Subject



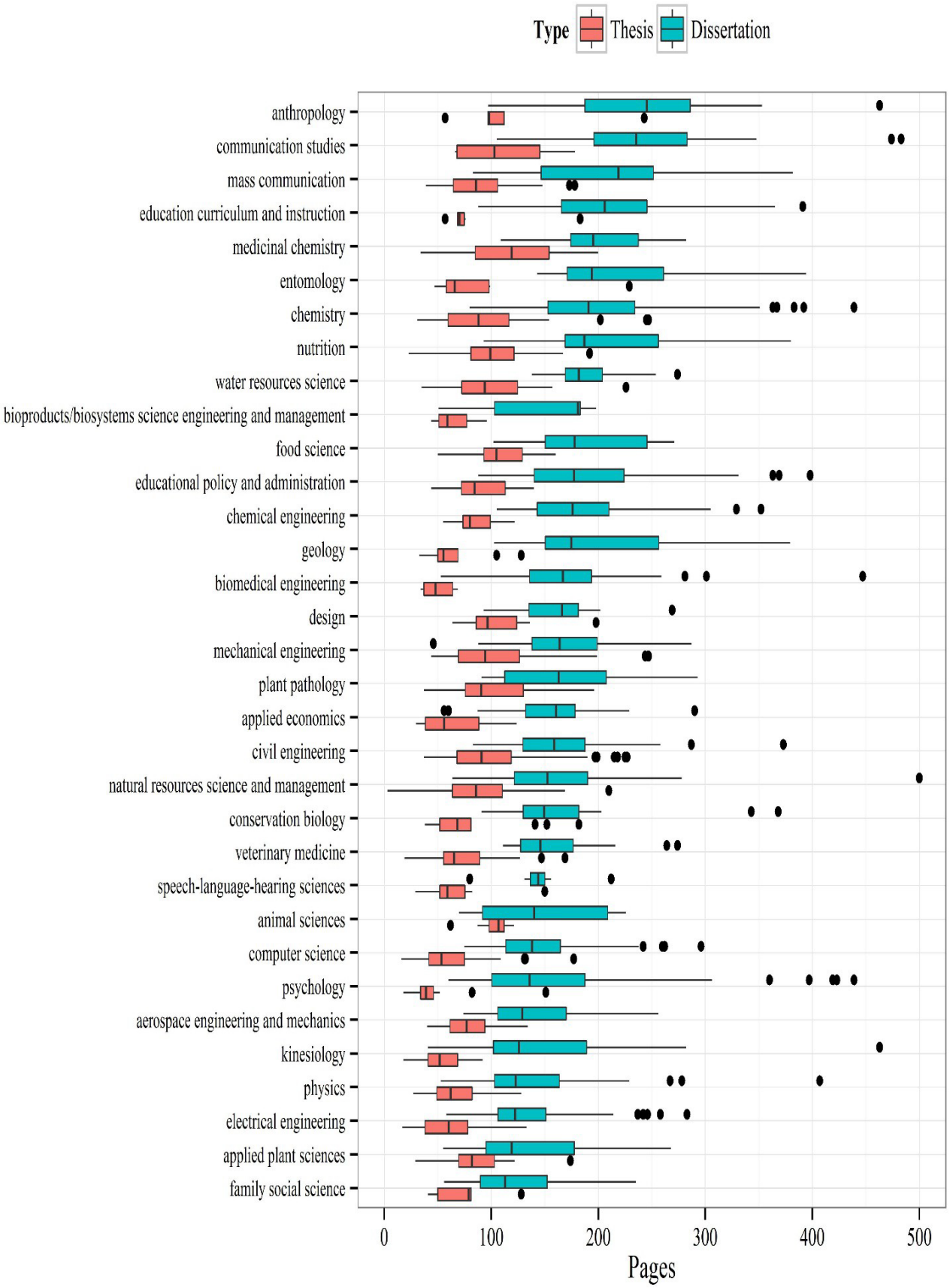
Source: https://lincolnmullen.com/blog/how-long-are-dissertations-in-different-disciplines/



Source: https://beckmw.wordpress.com/2014/07/15/average-dissertation-and-thesis-length-take-two/



Source: https://beckmw.wordpress.com/2014/07/15/average-dissertation-and-thesis-length-take-two/



Source: https://beckmw.wordpress.com/2014/07/15/average-dissertation-and-thesis-length-take-two/

Appendix B: Required Page Formatting Samples with Accompanying Instructions

Thesis, Dissertation, Doctoral Project formatting guidelines:

Use **1.5 Left margin** throughout the document with 1.25 top margin and 1 inch right and bottom margins.

Double space the entire document of text with the exception for the title page and signature page; single space the Curriculum Vitae.

Indent paragraphs (use the tab key).

Use left justification.

Use small roman numerals centered at the bottom of the page beginning with iii (ABSTRACT, etc.).

Use Arabic numbers 1, 2, etc. starting with page 1 at the top right hand margin.

Center and bold all main headings (ABSTRACT, DEDICATION, etc.).

Use 12 pt. font and Times New Roman font style.

Chapter titles begin on a new page, **INTRODUCTION, LITERATURE REVIEW**, etc.

Type the word Page above each column of numbers for each page of the **TABLE OF CONTENTS, LIST OF FIGURES, and LIST OF TABLES**

Follow guidelines for the journal style for in-text citations, the placement and formatting of Tables and Figures, and the format of references (see p. 6 in this Manual). Permitted styles **only** are APA – American Psychological Association, IEEE – The Institute of Electrical and Electronics Engineers, and ACS – American Chemical Society.

TITLE PAGE SAMPLE

1. At least two (2) double spaces below header margin
2. First page of thesis -unnumbered

SURFACE CHEMISTRY OF THE OXIDATION MECHANISMS ON PYRITE AND MINERAL INOCULATED WITH CHEMOLITHOTROPHIC BACTERIA: AN X-RAY PHOTOELECTRON SPECTROSCOPY (XPS) STUDY

1. Double space title
2. Title in all caps.
3. Double space among thesis and author statements
4. Three (3) double spaces between title and thesis statement

A Thesis

by

MANKATA INKUMSAH

1. All cap author's name
2. Three (3) double spaces between author's name and submittal statement

1. Statement single spaced and centered

Submitted to the Office of Graduate Studies of
Prairie View A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY (MASTER OF SCIENCE)

1. Degree in all caps and one (1) double space below submittal statement
2. Three (3) double spaces separates graduation date

December 20XX

1. Grad. Date (month and year) separated from major subject by three

Major Subject: Chemistry

SIGNATURE PAGE SAMPLE

1. At least one (1) double space below header margin
2. Second page-unnumbered

SURFACE CHEMISTRY OF THE OXIDATION MECHANISMS ON PYRITE AND MINERAL INOCULATED WITH CHEMOLITHOTROPHIC BACTERIA: AN X-RAY PHOTOELECTRON SPECTROSCOPY (XPS) STUDY

1. Double space title in all caps
2. Double space among thesis and author statements
3. Two (2) double spaces between title and thesis statement

A Thesis

by

MANKATA INKUMSAH

1. All cap author's name
2. Two (2) double spaces between author's name and submittal statement

Submitted to the Office of Graduate Studies of
Prairie View A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY (MASTER OF SCIENCE)

1. Statement single spaced and centered on page
2. Degree is one (1) double space below statement and in all caps

1. Do not include titles with names

Approved as to style and content by:

Name Chair of Committee	Name Member
Name Member	Name Head of Department
Name Dean of College	Name Dean of Graduate Studies

December 20XX

1. Grad. date is month and year
2. Two double spaces separate signatures, date and major

Major Subject: Chemistry

EXAMPLE ABSTRACT PAGE

1. This is the first numbered page (iii)
2. Abstract in all caps

ABSTRACT

Surface Chemistry of the Oxidation Mechanisms on Pyrite and Mineral Inoculated with Chemolithotrophic Bacteria: An X-ray Photoelectron Spectroscopy (XPS) Study

(December 20XX)

1. Title in upper and lower case ending with graduation date in parenthesis
2. Place commas after authors name and deg. Abbreviation
3. Separate degrees by semicolon

Mankata Inkumsah, B.S., Prairie View A&M University; M.S., Somewhere University *(If holding a previous degree)* Chair of Advisory Committee: Dr. Hylton G. McWhinney

1. The chair's name should have the title (Dr. or Prof.)
2. Two double spaces between chair statement and abstract text

The mining of coal and base metal deposits exposes large quantities of sulfide bearing rocks and produces mine waste rocks and tailings rich in sulfide minerals. The seepage of oxygenated water through the waste rocks generates acidic fluids rich in leached metals from the minerals in the rocks. The acidic nature and the metals in this liquid can cause severe ecological damage when entering streams and ground water. Acid mine drainage is a result of the weathering and oxidation of mineral sulfide-bearing rocks such as sphalerite and the pyrite, the most common of which is pyrite. Certain chemolithotrophic bacteria inhabit ore-bearing rocks exposed to the atmosphere and obtain all of their energy for growth from the dissolution and oxidation of the minerals within the ore body. This bacterial activity is harmful to the environment since sulfuric acid is a major end product when sulfide bearing minerals are oxidized by the lithotrophic bacteria.

Keywords/Index terms

SAMPLES OF OPTIONAL PRELIMINARY PAGES

DEDICATION

(Optional)

1. All caps heading
2. Limit to 1 page only
3. Numbered (iv)

SAMPLES OF OPTIONAL PRELIMINARY PAGES

ACKNOWLEDGMENTS

(Optional)

1. All caps heading
2. Limit to 1 page only
3. Numbered (v)

CHAPTER MODEL OF TABLE OF CONTENTS

1. There are instances where more than five chapters are appropriate
2. The first chapter must be INTRODUCTION
3. The final chapter must be CONCLUSION or SUMMARY

1. Major headings must be in all caps
2. TABLE OF CONTENTS must be in **bold**
3. Double-space between headings

TABLE OF CONTENTS

1. Connect headings to page numbers with leader dots

1. Page" should be centered above the page numbers and the numbers should be aligned

This model can only be used by students who are following IEEE style guidelines

SECTION MODEL OF TABLE OF CONTENTS

1. There are instances where more than five chapters are appropriate
2. The first section must be INTRODUCTION
3. Last section must be CONCLUSION or SUMMARY

1. Major headings are in all caps
2. Double spacing between headings

TABLE OF CONTENTS

1. "Page" should be centered above the page numbers and numbers should all be aligned

1. Connect headings to page number with leader dots

LIST OF FIGURES SAMPLE PAGE

LIST OF FIGURES

1. Connect FIGURE titles and page numbers with leader dots
2. Align page numbers under 'page"

FIGURE Page

1. Double space between figure titles
2. Single space within a figure title entry
3. Both page and Figure columns are wordless

LIST OF TABLES SAMPLE PAGE

LIST OF TABLES

3. Connect Table titles and page numbers with leader dots
4. Align page numbers under 'page"

TABLE Page

1. Double space between figure titles
2. Single space within a figure title entry
3. Both page and Figure columns are wordless

PAGE 1 SAMPLE OF CHAPTER METHOD

1. This is the first page of the document
2. The page number should be in the upper right header and numbered as page'1'

CHAPTER I

INTRODUCTION

Acid mine drainage, also referred to as acid rock drainage, is produced when sulfide minerals are exposed to the atmosphere by mining of base metals and coal. Although the production of acid mine drainage does occur naturally, mining and other human activities promote the generation by increasing the quantity of sulfide exposed (Akcil et. al., 2006). As water from rain or other sources pass through or over the exposed sulfide bearing rocks, acidic fluids, rich in metals, are leached from the minerals in the rocks into the surrounding environment thus contaminating the environment. Deposits of mine tailings also expose sulfide minerals which also produce acid mine drainage. Sources of acid mine drainage include underground and open pit mining works, overburden and waste rocks dumps, flotation tailings dams and concentrated stockpiles (Fortin et al., 1997). Pyrite (FeS_2), marcasite (FeS_2), chalcopyrite ($CuFeS_2$), chalcocites (Cu_2S), sphalerite (ZnS), galena (PbS), millerite (NiS), pyrrhotite, arsenopyrite (FeAsS) and cinnabar (HgS) are all examples of sulfide minerals with the most common being pyrite.

Acid mine drainage or acid rock drainage is produced as a result of weathering and oxidation of sulfide-bearing rocks. The production or accumulations of acid rich fluids have a significant adverse effect on the environment if not checked.

This thesis (dissertation) follows the style of the *American Psychological Association, 7th Ed.*

Selected Journal Model Sentence or Style (e.g. APA)

PAGE 1 SAMPLE OF CHAPTER METHOD

1. INTRODUCTION

1. This is the first page of the document
2. The page number should be in the upper right header and numbered as page'1'

Acid mine drainage, also referred to as acid rock drainage, is produced when sulfide minerals are exposed to the atmosphere by mining of base metals and coal. Although the production of acid mine drainage does occur naturally, mining and other human activities promote the generation by increasing the quantity of sulfide exposed (Akcil et al., 2006). As water from rain or other sources pass through or over the exposed sulfide bearing rocks, acidic fluids, rich in metals, are leached from the minerals in the rocks into the surrounding environment thus contaminating the environment. Deposits of mine tailings also expose sulfide minerals which also produce acid mine drainage. Sources of acid mine drainage include underground and open pit mining works, overburden and waste rocks dumps, flotation tailings dams and concentrated stockpiles (Fortin et al., 1997). Pyrite (FeS_2), marcasite (FeS_2), chalcopyrite ($CuFeS_2$), chalcocites (Cu_2S), sphalerite (ZnS), galena (PbS), millerite (NiS), pyrrhotite, arsenopyrite (FeAsS) and cinnabar (HgS) are all examples of sulfide minerals with the most common being pyrite.

Acid mine drainage or acid rock drainage is produced as a result of weathering and oxidation of sulfide-bearing rocks. The production or accumulations of acid rich fluids have a significant adverse effect on the environment if not checked.

This thesis (dissertation) follows the style of the *Journal of Surface Science*.

Selected Journal Model Sentence

CURRICULUM VITAE

Limit to one page only
Do not include personal information

Douglas Smith
dsmith@aol.com

EDUCATION

- M.S. Mechanical Engineering, Prairie View A&M University, Prairie View, Texas, 1998
- B.A. Mechanical Engineering, Prairie View A&M University, Prairie View, Texas, 1996

WORK EXPERIENCE

- Company: All- Strength Alloys Inc.
  Position: Cold Process Supervisor, 1999 – Present
  Job: Production of Thin Sheet High Strength Super Alloys

- Company: County-Wide Sanitation Enterprise
  Position: Sanitation Technician, 1990 - 1992
  Job: Garbage Incineration

PROFESSIONAL, TECHNICAL AND WORK-RELATED EXPERIENCE AND SKILLS

- Skilled in pyrotechnic application to waste disposal
- Speak Spanish and English Fluently
- Expert in C++ Programming
- Knowledgeable About Process Flow Controllers
- Trained in Analyzer House NIR Process Analysis

PUBLICATIONS AND PRESENTATIONS

Appendix C: Graduate School Required Forms

All forms must be initiated by the TDDP committee chair

Forms for Creating a Committee and TDDP Approval

Form 1: Chair Agreement Form

Form #2&3: Committee...

Forms for Requesting Proposal

Form 4: Request to Schedule a Proposal...

Form 5A*: Proposal Defense Evaluation by Committee...

Form 5B*: Proposal Defense Outcome

*Please note, **Forms 4, 5A, and 5B** are **mandatory** for Dissertations/Doctoral Projects and **optional** for Theses. ***Form 5A** is to be filled out by a committee member (**initiated by** the committee chair)

Forms for Defending Final TDDP

Form 6: IRB Approval Form

Form 7: Request to Schedule Final Defense...

Form 8A*: Final Defense Evaluation by Committee...

Form 8B: Final Defense Outcome

***Form 8A** is to be filled out by a committee member (**initiated by** the committee chair)

Forms for Publishing TDDP

Form 9A: Dissertation

Form 9B: Thesis

Form 10: Student submits (ETD)