PhD Computer Science and

Engineering

Dissertation Handbook

2024

1813 East Main Street
Salem, VA 24153

www.UFairfax.edu

Revised December 2024

University of Fairfax Dissertation Handbook © 2024. All rights reserved.

STATEMENT OF MISSION AND GOALS

Mission

The mission of the University of Fairfax is to offer flexible, in-demand distance education programs that meet the needs of employers and students in a changing global marketplace. The University designs quality programs that foster critical thinking, effective communication, and collaboration in career-focused disciplines. The programs offer students practitioner-focused curricula that advance applied knowledge and research in applicable contemporary career fields.

Vision

The University supports this mission by developing curricula which are continually improved through outcomes assessment and consultation with practitioner faculty. The University delivers its programs through an accessible, interactive, collaborative online educational environment which strengthens learning and facilitates critical thinking, problem-solving, and applied research competencies. Finally, it supports students with services that foster academic success.

Institutional Goals

Offer relevant distance education degree programs that graduate individuals with the knowledge, skills, and abilities to meet the needs of employers in cybersecurity, information technology, and business-related disciplines.

Support the changing global marketplace by preparing professionals to think critically and offer solutions to address industry challenges.

Develop professionals with strong interpersonal skills able to effectively contribute to the advancement of their chosen discipline.

Design programs that allow professionals to apply knowledge and research in an effort to enhance their chosen field.

Promote a learner-centered culture that encourages diversity of thought and continued development of contemporary career fields.

Foster a culture of continuous improvement that results in high quality distance education programs that meets students' academic goals and changing employer needs.

Motto

The rationale for the founding of the University is encapsulated in the University motto: ***Secure Your Future*** or ***Munite Futurum*** in Latin, as displayed on the University's seal. In essence, the motto expresses that earning a University of Fairfax degree enables students and alumni to contribute to "securing the future" of the nation, while also helping to secure their own, as they become leaders in a field for which there is a continuing and ever-increasing demand.

MESSAGE TO OUR PhD STUDENTS

Dear Doctoral Student,

The *University of Fairfax Dissertation Handbook* has been developed to ensure that you have a gratifying and successful dissertation experience. It serves as a tool to help you complete your dissertation and ultimately earn your doctorate in a timely manner.

There are several elements to the University's support of you finishing your dissertation:

- Initiating dissertation preparation early in the PhD program;
- Teaching students how to identify and select feasible problem-driven dissertation topics;
- Assigning advisors with the professional experience and academic skills to guide and motivate adult learners;
- Ensuring that students produce dissertation deliverables in manageable sections as they progress through their program.

This structured process is designed to help you acquire the academic credentials and expertise to help you serve as effective, ethical leaders addressing critical issues in the information technology arena and adding to the body of knowledge. We are personally committed to the success of every one of you as you embark on this challenging and rewarding journey to help secure your future and that of our nation.

Chief Academic Officer

University of Fairfax

TABLE OF CONTENTS

1. INTRODUCTION

The *University of Fairfax Dissertation Handbook* has been developed as a resource to help guide PhD students through the dissertation process, from identifying a feasible dissertation topic, within the field of computer science and engineering, to producing a defensible dissertation.

PhD in Computer Science and Engineering students must produce dissertations that:

- Address a significant and relevant knowledge gap in the field of computer science and engineering
- Identify hypotheses to the gap based on scholarly sources, public sources, previous empirical research, and relevant theory; and
- Test the hypotheses.

Furthermore, an approved dissertation from the University of Fairfax must:

- Describe original field research to be conducted independently by the student;
- Review prior empirical research to establish the criteria for selecting the proposed hypotheses;
- Collect empirical data for use in testing the hypotheses;
- Describe and interpret the results of the data analysis;
- Clearly describe the knowledge added as a result of the study; and
- Explain the implications of the results for future research, practice, and policy.

2. DISSERTATION PROJECT PLAN

To ensure that students make steady progress towards the completion of their dissertations, the University has developed the *Dissertation Project Plan* (DPP).

This plan consists of a series of deliverables students produce while they are enrolled in research methods courses, research preparation courses and dissertation development courses. The sequence of the activities you will undertake, the deliverables you will produce and the approvals you must obtain during the development of your dissertation are depicted in Figure 1.

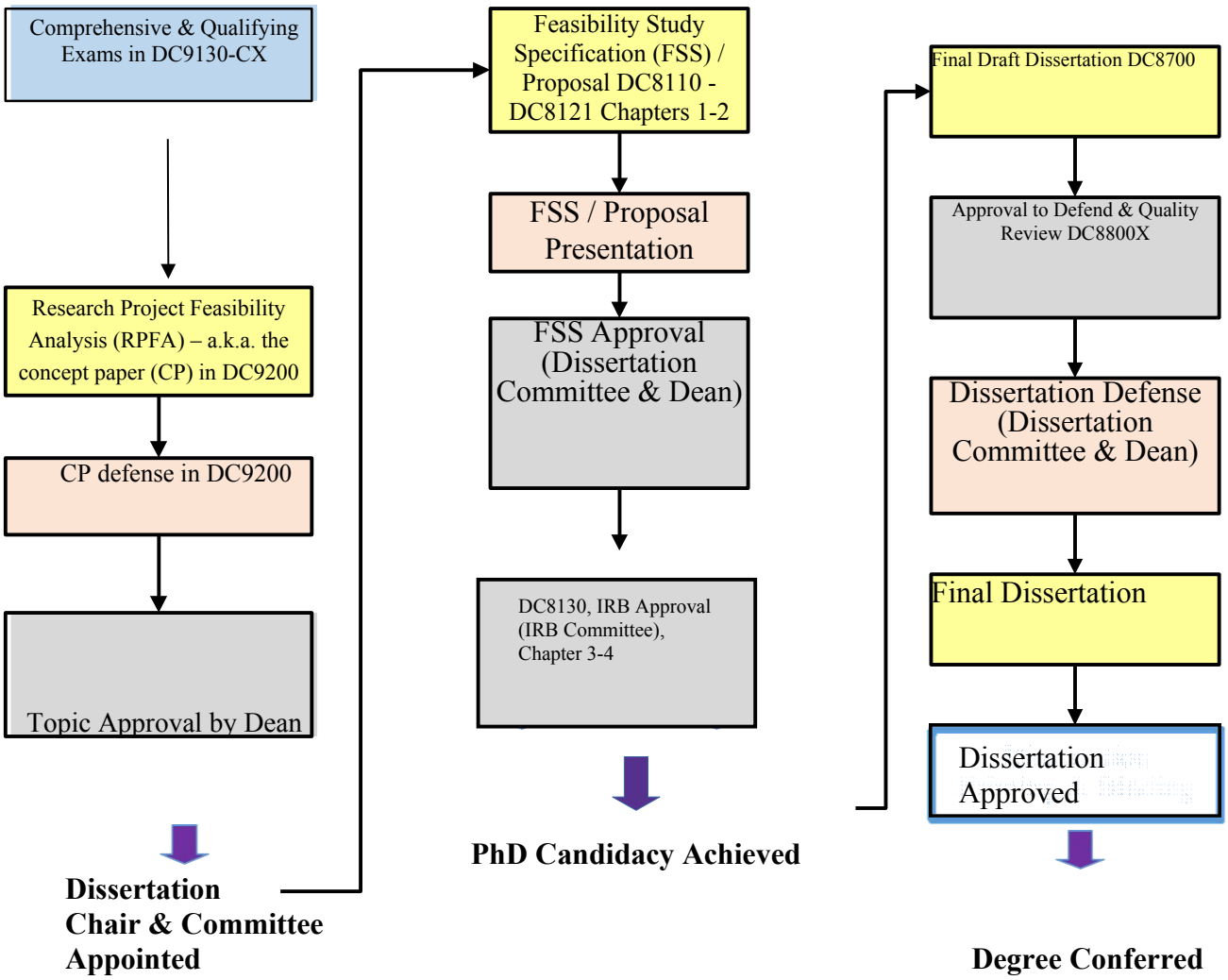

Figure 1. University of Fairfax CS_PhD Dissertation Development Process

FIVE PHASES OF THE DISSERTATION PROJECT PLAN (DPP)

As students proceed through the dissertation coursework and the iterative process of the DPP, they achieve five major milestones which culminate in an approved dissertation.

In initial Pre-Dissertation Research Methods courses (*RM8500, RM9100)* students are introduced to the requirements of research writing, and to the fundamentals of extracting practical knowledge and potentially researchable questions from the research and practitioner literatures. These tools are employed in the Comprehensive & Qualifying Examination (*DC9130*) which runs concurrently in the final four weeks of *RM9100* and in the Advanced Research Methodology courses (*DC7700, DC7800, RM9150, DC9200*) that occur during the Pre-Dissertation Phase and the Phase I of the DPP and are used throughout the program in preparing deliverables. The Comprehensive & Qualifying Examination also known as the "Comp Exam" is the culmination of your pre-dissertation research and writing coursework. Successful passing of the Comp Exam allows you to move into the next stage of the PhD degree process--the dissertation research and writing stage. You may not move forward until you have successfully passed the Comp Exam in *DC9130*. The purpose of the Comp Exam is to determine whether you have read, understood, and can critically assess and apply the various lessons of the coursework learned in the program to date. The Comp Exam is designed to assess your ability to grasp the chosen field of study as a whole and your ability to critically assess, analyze, describe, problem-solve, synthesize, and effectively communicate this breadth of in-depth knowledge to an academic audience.

In Phase I of the Dissertation Plan (*RM9150, DC9200*), the course emphasis is on research topic and field site selection, and research methods. Students select a research topic associated with computer science and engineering of interest to them and identify research sites that can provide useful data concerning potential solutions. They also familiarize themselves with the research methods needed to acquire the needed data. During the *RM9150 and DC9200* courses they prepare the Research Project Feasibility Analysis (RPFA) paper, the first major deliverable in the program. The RPFA is presented to the faculty and Dean in the *DC9200* course. If approved, the student advances to Phase II of the program under the guidance of a Dissertation Committee made up of the faculty who teach the remaining courses in the program, also known as your Dissertation Committee Chair.

Phase II consists of the Research Preparation courses (*DC8110, DC8120, DC8121, DC8130*) in which PhD students follow a structured approach to designing their dissertation study, refining their research question, and developing the operational details for their study. They focus on clearly specifying the assessment criteria and organizational requirements needed to justify a proposed improvement in the field of knowledge, and on designing and implementing such an assessment. Three important program deliverables are produced in this phase: 1. the Dissertation Proposal (Chapter 1 – Chapter 4.1); 2. the IRB Application (which certifies the willingness of the field site to participate in the study); and 3. The Collaborative Institutional Training Initiative (CITI) research training program.

Once PhD candidates complete the Research Preparation courses, they are admitted to Candidacy and enroll in Dissertation Development courses (*DC8110, DC8130)* during which they conduct their approved research and complete the dissertation manuscript (Chapter 4.2 – Chapter 5 and all appendices, as needed) under the guidance of their Dissertation Committee Chairperson. Candidates then orally defend the doctoral dissertation before their Dissertation Committee and the Dean, as required for the PhD degree.

Thus, the completion of the course deliverables leads to the completion of the dissertation itself.

In *Phase II*, under the guidance of the Dissertation Committee, PhD students work towards the

goal of achieving candidacy status by producing an approved Dissertation Proposal (Chapter 1 – Chapter 4.1); obtaining IRB approval to conduct their proposed primary research; and successfully completing and passing The Collaborative Institutional Training Initiative (CITI) research training program. **If at any time, a student does not meet all of the deliverables in any course, the student will have to repeat that course until all deliverables are completed and chair-approved for quality.**

A student may not retake any course more than three (3) times.

PRE-DISSERTATION QUALIFICATIONS

In Research Methods courses, doctoral students are introduced to the field research process. Early in their program coursework, in *RM8500 and RM9100*, students develop secondary research skills and gain valuable experience in developing writing skills needed to meet academic standards of research.

Prior to taking the two Advanced Research Methodology courses (*DC7700 and DC7800*), students enrolled in the PhD program must complete and pass the Comprehensive & Qualifying Exams (housed under separate course shell (*DC9130*) which takes place in Week 4 (and are due in Week 6) of the *RM9100* course. Students are expected to independently take the Comprehensive & Qualifying Exams while simultaneously completing the requirements of *RM9100*. Students will be automatically enrolled in *DC9130* when they are enrolled in *RM9100*. The *DC9130* course is zero credits, and the student will not incur any additional course fees. The Comprehensive & Qualifying Exam consists of two, multi-part essay questions in which the student will prepare two thoughtful essay responses to each question consisting of a minimum of 15 pages each. The purpose of the Comprehensive & Qualifying Exam is to determine whether the student has read, understood, and can critically assess and apply the various lessons of the coursework learned in the program to date. The Comprehensive & Qualifying Exam is designed to assess the student's ability to grasp the chosen field of study as a whole and his/her ability to critically assess, analyze, describe, problem-solve, synthesize, and effectively communicate this breadth of in-depth knowledge to an academic audience.

Once the student has successfully passed *RM8500, RM9100, and DC9130 (Comp Exam)*, the student will then take the two-course Advanced Research Methodology sequence (*DC7700, DC7800*), which is designed to assess the student's ability to conduct independent research under the guidance of an instructor, as well as assess the student's methodology skill-sets. The *DC7800* course is designed to assess the student's quantitative research skills. The *DC7700* course is designed to assess the student's qualitative research skills. Students will work with the instructor to identify, develop, and write a 25-30 page advanced research paper in each of the two Advanced Research Methodology courses (*DC7700, DC7800*) that adheres to the topic and methodological parameters set forth in the class syllabus. Students present their exam paper at the final SyncSession of each course.

DC7700 and *DC7800* assess the student's ability to listen to the instructor and incorporate the instructor's feedback. These courses will also assess the student's ability to work productively with the instructor to accomplish the following goals including, but not limited to: choosing an appropriate a topic that aligns with the parameters set forth in the class syllabus; refining the topic; conducting the literature review; designing the study that that aligns with the parameters set forth in the class syllabus; collecting appropriate evidence; interpreting the findings; critically assessing/analyzing the evidence in relation to the problem under investigation and the research questions; critically assessing/analyzing the evidence in relation to the problem under investigation and the hypotheses (quantitative research); and writing scholarly doctoral-level research that adheres to APA guidelines. The assessment of the aforementioned personal attributes and skill-sets, in addition to the formal research knowledge and skill-sets under investigation in the *DC7700* and *DC7800* courses are paramount to improving the student's success later in the program when researching and writing his/her own, original dissertation project with his/her Chair during Phases I, II, III, and IV (*DC8110, DC8120, DC8121, DC8130, DC8110x, DC8130x*).

PHASE I: IDENTIFYING A DISSERTATION TOPIC

The first milestone of the *Dissertation Project Plan* (DPP) is identifying a researchable (feasible, non-trivial) topic. This forms the foundation for all future activities in the dissertation process. During this phase, the course instructor facilitates scheduled *SyncSessions* for cohorts of students as they are introduced to the dissertation process.

Step 1. Understanding the Dissertation Research Process

After completion of core program coursework and the pre-dissertation exams, PhD students participate in an orientation to become familiar with the *Dissertation Handbook* and the requirements of the dissertation deliverables. (See all *Appendices).*

Step 2. Understanding Research Principles and Techniques

In *RM8500*, after a general introduction to the field of Applied Social Research, students are introduced to research methods that are particularly useful in the study of 'problem-centered' research designed to assess the merits or usefulness of solutions to problems, particularly of Information Security problems. This sub-field is generally known as 'Evaluation Research', and students will become well acquainted with its various forms**.**

In *RM9100*, students are introduced to qualitative and quantitative tools for data analysis and interpretation. In this course, they evaluate the applicability of these tools to different study types including those used in evaluation research. Students enrolled in the PhD program must complete and pass the Comprehensive & Qualifying Exams (housed under separate course shell (*DC9130*) which take place in Week 4 (**and are due in Week 6**) of the *RM9100* course.

In *DC9130,* students are expected to independently take the Comprehensive & Qualifying Exams while simultaneously completing the requirements of *RM9100*. Students enrolled in the PhD program must complete and pass the Comprehensive & Qualifying Exams (housed under separate course shell (*DC9130*). The Comp Exam questions are released to the student in Week 4 and the Exam is due back before Week 6 ends. Students will be automatically enrolled in *DC9130* when they are enrolled in *RM9100*. The *DC9130* course is zero credits, and the student will not incur any additional course fees. The *DC9130* course contains everything that the student will need to complete the Comp Exam.

Step 3. Identifying a Feasible and Accessible Research Site

In *RM9150*, students identify feasible research sites and the components of a successful research site access plan. Once a feasible research site is selected, the student starts to produce the *Research Project Feasibility Analysis* (RPFA).

In *DC9200*, students utilize the elements of solution-based research. Faculty members guide the student in the identification of the problems and potential solutions that can be investigated in the

implementation of the feasibility study which will serve as the student's dissertation project. The student articulates a problem statement and acceptable research question and prepares the final draft of the RPFA for faculty and Dean review along with a PowerPoint Presentation of the RPFA, and submits both deliverables to the learning management system. Upon approval of the faculty member, the document is submitted to the Dean for approval to participate in the *RM9200* Presentation in the final two weeks of the *RM9200* course where the students will formally present their research via a professionally polished PowerPoint Presentation. The *RM9200* Bootcamp Presentation of the student's research should be approached in the same way a student approaches the final dissertation manuscript oral defense at the conclusion of *DC8130*. The *RM9200* Bootcamp Presentation requires practice and preparation in order for the student to demonstrate to the Dean that the research is viable and dissertation-worthy, which is to say it is academically rigorous, for the Dean to permit the student to move onto the next phase of the DDP (Phase II), where the student will refine and further develop the RPFA into the dissertation proposal, which will form the foundation for the dissertation manuscript in Phase III. Students should strive to develop a strong RPFA deliverable in *RM9200* since the RPFA serves as the beginning stages of the dissertation that the student will further refine and develop in Phases II, III, and IV. The more thought-out and developed the RPFA, the smoother the progression through Phases II, III, and IV. Students requiring additional time to produce the required class deliverables are reenrolled until the deliverable is approved

Step 4. Obtaining Approval of a Feasible Problem-Driven Research Topic

At the *RM9200* Presentation, doctoral students present their research sites and topic selections to the Dean and invited faculty who are potential Dissertation Chairpersons and/or Dissertation Committee members. After the presentations are reviewed and topics approved, students' progress to Phase II under the guidance of a Dissertation Committee of faculty members who will be their course instructors during that phase.

PHASE II: ACHIEVING CANDIDACY

Achieving PhD Candidacy status is a major milestone in the dissertation process. Working under the guidance and mentorship of an assigned Dissertation Chairperson, the PhD student completes this phase while enrolled in Research Preparation courses. From this point forward, the student works individually with the Dissertation Chairperson and submits all dissertation deliverables in the designated course shell in the learning management system. Building on work initiated during the RPFA analysis, the student interacts with the Dissertation Committee and develops the Dissertation Proposal (Chapter 1 – Chapter 4.1, submits the IRB Application, and completes The Collaborative Institutional Training Initiative (CITI) research training program with a passing score.

The Dissertation Proposal and the IRB Application are submitted to the Dissertation Committee for review and recommendation. Candidacy status is granted once the student completes all of the mandatory CITI training modules and achieves a passing score (of 80% or higher) and the student receives formal approval and ratification of the Dissertation Proposal and the IRB Application by the Dean (See *Section 3*.)

Step 5. Developing the Dissertation Proposal (Chapter 1 – Chapter 4.1)

In *DC8110*, students conduct a detailed review of research literature in order to develop a rationale for the approved topic and formulate the final problem, research question, and the potential solution that will be evaluated in the study. *DC8110* is designed to focus your initial

efforts on the development of a compelling rationale which explains why academic audiences will be interested in the results of your feasibility study of a proposed solution to an identified problem affecting stakeholders at your research site. In *DC8110*, students conduct a preliminary review of the research literature in order to develop a rationale for the approved topic and formulate the final problem, research question, and the potential solution that will be evaluated in the study. The preliminary literature review conducted in *DC8110* is used to frame the proposed problem and research study will be fully expanded upon in *DC8120 and DC8121*. The primary deliverable in *DC8110* is Chapter 1 of the dissertation proposal. Students requiring additional time to produce the required class deliverables are reenrolled until the deliverable is approved

In *DC8120*, the PhD student continues to work under the guidance of the Dissertation Committee while reviewing and synthesizing prior research with respect to previous problem resolution attempts. From this review, the student determines the criteria to be used in the evaluation of the proposed solution. *DC8120* focuses your attention on the review, synthesis, and analysis of the current literature which identifies potential solutions and narrows the criteria you will use to assess the feasibility of the hypotheses you choose to test. In *DC8120 and DC8121*, students fully expand upon the preliminary literature review conducted in *DC8110 (Chapter 1)*. The primary deliverable in *DC8120* is Chapter 2 of the Dissertation Proposal (the Literature Review). Since Chapter 2 is expected to be 40-60 pages in length, the Literature Review is broken into two courses (*DC8120 and DC8121*). Students are expected to complete the first half of Chapter 2 in *DC8120* and complete it in *DC8121*.

In *DC8121*, the PhD student continues to work under the guidance of the Dissertation Committee while reviewing and synthesizing prior research with respect to previous problem resolution attempts. From this review, the student determines the criteria to be used in the evaluation of the proposed hypotheses. In *DC8120 and DC8121*, students fully expand upon the preliminary literature review conducted in *DC8110 (Chapter 1)*. The primary deliverable in *DC8121* is Chapter 2 of the Dissertation Proposal. Since Chapter 2 is expected to be 40-60 pages in length, the Literature Review is broken into two courses (*DC8120 and DC8121*). Students are expected to complete the first half of Chapter 2 in *DC8120* and complete it in *DC8121*. Students requiring additional time to produce the required class deliverables are reenrolled until the deliverable is approved

In *DC8130*, students develop a data collection plan that specifies the methods of measurement for the variables and the data collection procedures to be followed. Under the guidance of the Dissertation Committee, students identify the instruments and protocols to be used. Based upon the data specified, the student identifies the data analysis techniques that will be utilized in the study. *DC8130* requires you to describe the context of your study and the approach and methods you will use in conducting your dissertation research. In this course, students finalize the operational requirements of the dissertation proposal and specify their proposed improvement in professional practice. Students document research procedures utilized as the final deliverable in the course. In *DC8130*, students focus on the completion of Chapter 3 - Chapter 4.1 (Chapter 3 Methodology Chapter and the first section of the Chapter 4 Results Chapter (Section 4.1). In addition to completing Chapter 3 and Chapter 4.1, the student will also work on finalizing the complete Dissertation Proposal from the Title Page to the 4.1, including any tables, charts, and appendices, as needed plus the full References section to date. The student will also be required to complete the IRB Application with the help of his/her Chair before sending it to the IRB Committee and Dean for review and complete the CITI research training modules with a passing score of 80% or higher. *DC8130* requires that the student possess excellent time management

and self-motivation skills. The completed Dissertation Proposal is submitted to the course within the learning management system and, upon recommendation of the Dissertation Chair, is submitted to the Dean for review. In addition to the Dissertation Proposal, the student must submit the IRB Research Application to obtain IRB approval. If approved by the Dean, the Dissertation Proposal and the IRB Research Application are distributed to the Dissertation Committee and Institutional Review Board for review. Students requiring additional time to produce the required class deliverables are reenrolled until the deliverable is approved

The work of these four courses (*DC8110, DC8120, DC8121, DC8130*) culminates in the production of the Dissertation Proposal (Chapters 1-4.1), the IRB Application, and the CITI research training.

Step 6. Attaining PhD Candidacy Status and IRB Approval

The Institutional Review Board reviews the *IRB Research Application,* and the data collection instruments and procedures to determine if IRB approval can be granted. If granted, the Dean signs the *Certification of IRB Approval* which must be included as an appendix in the completed dissertation.

The Dissertation Proposal is reviewed by the Dissertation Committee to determine if the student has demonstrated readiness to conduct primary research. This committee recommends or defers the granting of candidacy based on approval of the Dissertation Proposal. The decision of the committee is ratified by the Dean. (See *Sections 3* and *4*.) At this time the Dissertation Committee is formally established by the Dean and the Dissertation Committee Chairperson (Chair) is appointed by the Dean.

PHASE III: CONDUCTING THE RESEARCH

In Phase III, the major milestone of the DPP is the completion of the Dissertation under the guidance of the Dissertation Committee and the Chair. In this phase, candidates implement the approved research plan and document their findings. During this phase, students utilize their designated course shell on the learning management system to share their preliminary findings and draft documents with the Committee to solicit feedback and advice.

Step 7. Implementing the Research Plan and Documenting Research Findings

In *DC8110*, candidates complete the approved field research and collect and analyze data according to the plan set forth in the approved Dissertation Proposal that was completed and approved in the research methodologies course sequence during Phase II. Upon completion of the data collection, analysis and interpretation, candidates produce the final draft of the dissertation. The primary deliverables in *DC8110* are the completion of Chapter 4 and Chapter 5 after all data has been collected and analyzed as per the methodology outlined in Chapter 3. Chapter 4 is the Results and Findings Chapter, and Chapter 5 is the Implication and Conclusions Chapter. Upon completion of the data collection, analysis and interpretation, candidates produce the final full draft of the dissertation (Title Page to the Appendices). Students requiring additional time to produce the required class deliverables are reenrolled until the deliverable is approved.

Step 8. Obtaining Approval to Defend

Candidates submit a final draft of the full Dissertation Manuscript to the Chair. At this stage, the dissertation document must adhere to the guidelines established by the University, including the compliance to APA format requirements for citation and references. (See *Appendices B* and *C*.) If deemed ready by the Chair and upon payment of the Dissertation Fee by the student, the MSWord format document undergoes *Quality Review* by the University. Once the document passes *Quality*

Review, the final draft of the dissertation is returned to the student and their Chair via the course in the learning management system for final review by the Dissertation Committee and Dean for determination of readiness to defend. If the Dissertation Committee grants Approval to Defend, the Defense is scheduled, and the student is enrolled in *DC8130*.

PHASE IV: OBTAINING DISSERTATION APPROVAL

The next required milestone of the DPP is the successful oral defense of the dissertation. At the conclusion of the Defense, the Dissertation Committee members vote on final approval of the dissertation.

Step 9. Presenting the Dissertation Findings

While enrolled in *DC8130,* the candidate presents the findings and interpretations of data analyses at the oral defense with a PowerPoint presentation with the entire committee, Dean, University Leadership, and outside observers. At the Defense, the candidate responds to questions posed by the Chief Academic Officer, the Dean, and Dissertation Committee members; these questions may pertain to any aspect of the dissertation. Faculty, colleagues, students, and members of the professional community are invited to attend the Defense; however, only the committee, Dean, and University Leadership may pose questions to the candidate as all others are just observers of the process.

Step 10. Obtaining Final Approval of Dissertation

After the presentation of the findings by the candidate, the Committee votes on final approval of the dissertation. The approval is ratified by the Dean upon signing of the *Certification of University Approval*.

PHASE V: PUBLISHING THE DISSERTATION

The final milestone of the DPP is the certification of the dissertation document.

Upon final approval of the dissertation, the student signs the *Certification of Authorship* and the *Limited Copyright Release* form for the University of Fairfax. (See *Appendices N* and *P*.) An electronic copy of the signed dissertation is retained online in the University's *Dissertation Center* in PDF format.

Although publication of derivative articles from the dissertation is not required, it is encouraged. Publication promotes the professional recognition of students and is beneficial to their careers. Doctoral candidates are encouraged to produce derivative articles based on their research and seek publication in scholarly or professional journals.

However, it is likely that these articles may include quotations, pictures, charts, or other materials created by other authors. Thus, graduates must determine which creative works have contributed to the expression of ideas that will eventually be incorporated into the published articles. The candidate may, therefore, need to seek copyright permission before borrowing the "expression" of other works, even though these items have been properly cited. The publishers of these articles may provide the graduate with support in obtaining these permissions. Further information on responsibilities of students in complying with ethical, legal or policy requirements of authors and publishers can be found in the most current APA manual.

3. APPROVAL PROCESS

Throughout the *Dissertation Project Plan* (DPP), students must obtain approvals to proceed from one phase to the next. This section describes the nature of each approval, and the criteria students must satisfy for each of the major deliverables.

In general, the review of deliverables by advisors or committee members requires at least seven to ten calendar days. Students should plan accordingly, checking each deliverable for adherence to requirements prior to submission, and submitting documents early enough to afford advisors ample time to provide thoughtful feedback. In all cases, documents must be posted to the appropriate course in the learning management system for distribution to the appropriate parties approving the deliverable.

TOPIC AREA APPROVAL

The approval of a research topic area is key to the successful completion of the DPP. The Dean reviews the *Research Project Feasibility Analysis* (RPFA) to evaluate the acceptability of the research topic area.

The RPFA is evaluated on the following:

- the availability and accessibility of the proposed research site,
- the feasibility of the study context, and
- the identification of a non-trivial researchable problem associated with computer science and engineering.

The *Topic Area Approval Checklist* is found in *Appendix F*. Based on this evaluation of the RPFA, the Dean approves the dissertation topic and appoints a Dissertation Committee who will mentor and support the student through the activities of the DPP. Students then proceed with coursework that enables the completion of the five major deliverables of the DPP: the *Dissertation Proposal*, the *IRB Application*, the *CITI Training*, the *Dissertation Manuscript*, and the *Defense.*

INSTITUTIONAL REVIEW BOARD (IRB) APPROVAL

When the Dissertation Proposal is submitted for review it must contain the instruments or protocols for data collection and a thorough description of the methods used in the data collection process. At the time the Dissertation Proposal is submitted for review, the student must also submit an *IRB Research Application* for approval of the proposed survey instrument or protocol used in collecting qualitative data. (See *Appendix G*.) The Dissertation Chair must sign the *IRB Research Application* and email the entire application packet to the Dean.

The Dean distributes the *IRB Research Application* to the IRB for review and a decision with the Dissertation Proposal. The proposed research project is classified by the IRB during the review as either: exempt, minimal risk, or potential risk. The approval of the IRB must be obtained prior to granting a student permission to conduct research. Upon approval of the IRB, the Dean (as Chair of the Candidacy Committee) completes the *Certification of IRB Approval* and returns it to the student. The *Certification of IRB Approval* must be included as an appendix in the final dissertation. (See *Appendix H*.)

FEASIBILITY STUDY SPECIFICATION (FSS) APPROVAL

The Dissertation Advisor determines when the *Feasibility Study Specification* (FSS) (otherwise known as the Dissertation Proposal, Chapter 1-3, and 4.1) is ready to be submitted to the Dean for review and submits the *FSS Recommendation Checklist* to the course in the learning management system with the final version of the FSS. Based on this recommendation, the Dean reviews the FSS to approve its readiness for distribution to the Candidacy Committee for approval.

The FSS is evaluated on the following:

- the significance of the research problem,
- the consistency of the proposed solution with the problem identified,
- the thoroughness of the review and synthesis of prior research,
- the accessibility of the proposed research site, and
- the suitability of the approach used in assessing the feasibility of the solution.

The *FSS Recommendation Checklist* follows the same criteria of evaluation as the *FSS Approval Checklist* which is found in *Appendix I*. Based on the evaluation of the FSS (using this form), the Committee recommends or defers the granting of candidacy. PhD candidacy is granted once approval of the FSS is ratified by the Dean. If approval of the FSS is recommended by the Committee and ratified by the Dean, the student is granted approval to conduct research. At this time, the Dean appoints the members of the Dissertation Committee and the Dissertation Chairperson.

DISSERTATION APPROVAL

There are two major components of dissertation approval as described below:

APPROVAL TO DEFEND

The candidate completes a final draft of the dissertation for submission to the Chair. When the Chair believes that the dissertation is ready to be reviewed by the University and submits the document for Quality Review and the Dissertation Checklist (See *Appendix K & J.*) Once the document meets Quality Review requirements, it is distributed to the entire committee and the Dean for evaluation and determination of readiness to defend. All feedback from Committee Members for the candidate is channeled through the Chair. If the Dissertation Committee grants *Approval to Defend*, the Defense is scheduled.

The criteria for approval to defend are found in the *Defense Approval Checklist*. (See *Appendix L*.) The Dissertation Committee (including the Chair) evaluates the dissertation on the following:

- analysis of the data collected;
- interpretation of findings;
- articulation of the contribution to knowledge;
- analysis of the implications for future research, practice, and policy; and
- evaluation of the degree to which research objectives were achieved.

APPROVAL OF THE DISSERTATION

At the Defense, the doctoral candidate responds to questions posed by the Chief Academic Officer, the Dean of Doctoral Research, and Dissertation Committee members; these questions may pertain to any aspect of the dissertation. Colleagues, students, and members of the professional community are invited to attend the Defense. Faculty, colleagues, students, and members of the professional community are invited to attend the Defense; however, only the committee, Dean, and University Leadership may pose questions to the candidate as all others are just observers of the process.

The candidate should be prepared to answer at least the following questions:

- What problem has your research addressed?
- What criteria were used in identifying the proposed solution?
- What criteria were used in evaluating the feasibility of your proposed solution?
- How did you perform your research? (i.e., methods)
- What did you learn? (i.e., results, findings)
- What do your findings mean?
- What were the limitations of your research? (i.e., validity, generalizability)
- What did you add to the body of knowledge?
- What are the implications of your research for future researchers, policy makers and practitioners?
- To what extent did you achieve your research objectives?

The Dissertation Committee votes on final approval of the dissertation document immediately following the Defense. A majority vote in favor of approval is required prior to the signatures of the Dissertation Chair and the Dean on the *Certification of University Approval*. (See *Appendix M*.)

4. ROLES AND RESPONSIBILITIES

DOCTORAL STUDENTS/CANDIDATES

To ensure that defensible dissertations are produced, PhD students must:

- Understand the field research process;
- Seek guidance from faculty and advisors throughout the dissertation process;
- Hire and consult with professional editors and/or statisticians as needed;
- Properly design and implement original research; and
- Present the research results in accordance with University of Fairfax standards.

Although faculty and advisors play key roles in guiding students through the development of the dissertation, ultimately the PhD student is solely responsible for independently conducting original research, producing a defensible dissertation, and successfully defending it. The dissertation must be produced in accordance with University policy on academic integrity (as outlined in the *Student Handbook*).

It is also the responsibility of the doctoral student to ensure that all deliverables are grammatically and stylistically correct and conform to the University's requirements and the APA format for citations and references. (See *Appendices B* and *C*.) Advisors are not responsible for editing deliverables, although they may provide feedback to help improve clarity of writing. The candidate is expected to thoroughly edit each dissertation deliverable to ensure that it is of publication quality before submission to the appropriate course in the learning management system.

Doctoral students may choose to utilize the services of a professional editor or may be required by the University to do so. An editor may evaluate and revise dissertation deliverables to ensure that the dissertation communicates the results of the student's research clearly and succinctly. An editor may NOT summarize, paraphrase, or create content for inclusion in dissertation documents.

Doctoral students may hire a research assistant to augment their search for articles and materials relevant to their review of literature. Research assistants may help to locate materials; however, they may NOT summarize, paraphrase, or create content for inclusion in any of the dissertation documents.

DEAN

The Dean is the final authority with respect to the dissertation approval process. The Dean has oversight responsibility for the operational aspects of the dissertation process, ensuring that the dissertation deliverables meet the quality standards of the University. In this capacity the Dean oversees the dissertation orientation for students, monitors PhD student progress, coordinates dissertation project plan activities such as Presentations, coordinates Dissertation Committee and IRB Reviews, appoints Committee Chairs, assigns Dissertation Committee Members and serves as a liaison among dissertation advisors, PhD students and administration. The Dean serves as the subject matter expert for research-related courses.

DISSERTATION COMMITTEE/ INSTITUTIONAL REVIEW BOARD (IRB)

The Dissertation Committee (Committee) is comprised of the Chair and two additional faculty members appointed by the Dean. This committee reviews and approves the *Feasibility Study Specification* (FSS) based upon the standards identified in *Section 3*. First, the committee evaluates the IRB Research Application, the data collection instrument(s), and the proposed methods to be used in conducting the research study. Once Dissertation Committee approves the IRB Research application, the materials are sent to the IRB for review. The purpose of the *IRB* is to protect human subjects involved in research and to ensure that both students and faculty of the University of Fairfax employ appropriate research practices. The IRB will assign risk, as mentioned previously in the Approvals section, and will make a determination on the application. They will approve the application, approve it with revisions, or deny it. Students may not conduct research without formal IRB approval.

At the same time, the Committee reviews the FSS and if the proposal is approved, recommends the student for Candidacy.

DISSERTATION ADVISING ROLES

FACULTY ADVISORS

Faculty members are the content experts for their courses and share their practical experience and knowledge with students through frequent interaction via online threaded discussions, email, conference calls and chat rooms. Faculty advisors, who teach Research Methods courses *RM8250*, *RM8500, RM9100, RM9150* and *DC9200*, introduce students to field research concepts and secondary research skills, including research proposal writing, the requirements of APA format, and the use of qualitative and quantitative tools for data analysis. Faculty advisors who teach *RM9150 and RM9200* mentor and support students as they identify feasible research topic areas and prepare for the Presentation.

DISSERTATION COMMITTEE MEMBERS

Dissertation Committee Members serve as the primary mentors for PhD students as they progress through the Dissertation Project Plan. They play a critical role, providing guidance and support to the candidate throughout the dissertation development process, and mentoring each doctoral student individually as the student develops the *Feasibility Study Specification* (FSS) in *DC8110 – DC8130*.

DISSERTATION COMMITTEE CHAIRPERSON

The Dissertation Committee Chairperson (Chair) is a University of Fairfax faculty member who holds a PhD degree. During the later phases of the DPP while the student is enrolled in *DC8110 – DC8130*, the Chair serves as a conduit of information to and from the Committee and the candidate. The Chair determines when the dissertation is ready to be submitted for Quality Review and coaches the student when preparing for the oral defense. The Dissertation Advisor who mentored the student through the DPP is typically appointed as the student's Chair.

DISSERTATION COMMITTEE

The Dissertation Committee is comprised of the following members:

- Chairperson
- A minimum of two and a maximum of four additional Committee members

While enrolled in *DC8110 – DC8130*, doctoral candidates continue to work under the guidance of the Chair, with support from the Committee members appointed at the end of Phase I, to execute the research plan, and to complete and defend the dissertation.

5. DISSERTATION PROJECT PLAN DELIVERABLES

This section describes the *Dissertation Project Plan* (DPP) deliverables in greater detail. The DPP is an iterative process that includes two preliminary deliverables and two major deliverables. These deliverables are continually revised during the research process and culminate in the final dissertation document.

An MS-Word compatible template for each of these deliverables is provided to students in their individual course shell. Students are required to utilize these templates in producing the deliverables to ensure that they conform to content and format requirements.

PRELIMINARY DISSERTATION DELIVERABLES

THE RESEARCH PROJECT FEASIBILITY ANALYSIS

The *Research Project Feasibility Analysis* (RPFA) or concept paper describes the context of the study, the problems affecting or being affected by the research site community, potential solutions that can be used to address the problems, and a selection of the most researchable (non-trivial, feasible) problem. This document is developed while the doctoral student is enrolled in *RM9150* and *DC9200* and presented to the instructor and the Dean in Week 8 of *DC9200*.

DOCUMENTATION OF RESEARCH SITE APPROVAL

Students are required to obtain written approval from an authorized representative of the participating research site. This documentation consists of both the written request from the student to the research site and the written approval from the research site. This documentation must be included as an appendix in both the FSS (proposal) and the final dissertation.

MAJOR DISSERTATION DELIVERABLES

FEASIBILITY STUDY SPECIFICATION (FSS)—Dissertation Proposal

The *Feasibility Study Specification* (FSS) consists of the first draft of Chapter 1 through Chapter 4.1 of the dissertation, along with a References section. (See *Appendix E*.) The FSS describes the proposed research project by answering the following questions:

- What is to be investigated? (problem)
- Why the research is important? (rationale)
- What is already known about the topic? (a preliminary review of research literature)
- What is the intent of the study? (research objective)
- Where will the research be conducted? (context of study)
- What will be tested? (proposed hypotheses and criteria)
- How is the research to be conducted? (research design)
- How will data be collected? (data collection plan and instruments)
- How will data be analyzed? (methods of data analysis)

The chapter headings for required components of this deliverable are:

- Chapter 1: Rationale
- Chapter 2: Research Review and Synthesis
- Chapter 3: Methodology (through 3.4 only)
- Chapter 4: Results and Findings (4.1 only)
- Appendix A: Definition of Terms
- Appendix B: Documentation of Research Site Approval
- Appendix C: Instrument(s) Utilized
- References

DISSERTATION

The *Dissertation* is the culmination of the work and analyses that have been completed by the student. It is comprised of the final versions of all chapters and the cited references. Written in the past tense, the dissertation answers the following additional questions:

- What did the data show? (results of analysis)
- What did the data mean? (interpretations)
- What were the most significant discoveries? (findings)
- What was learned from the research? (contribution to knowledge)
- How can this knowledge be furthered? (implications for future research)
- How can this knowledge be applied? (implications for practitioners and policy-

makers) The chapter headings for required components of this deliverable are:

- Abstract
- Chapter 1: Rationale
- Chapter 2: Research Review and Synthesis
- Chapter 3: Methodology
- Chapter 4: Results and Findings
- Chapter 5: Implications and Conclusions
- Appendix A: Definition of Terms
- Appendix B: Documentation of Research Site Approval
- Appendix C: Instrument(s) Utilized
- Appendix D: IRB Certification of Approval
- Reference List
- Biography

6. MAJOR DELIVERABLE CHAPTER DESCRIPTIONS

This section describes the chapter structure and content requirements of the dissertation deliverables. The organization of each chapter (Headings, subheadings, and sub-subheadings) for each of the major deliverables is summarized in Table 1. ***See Appendices J and K for a detailed discussion/checklist of what is required in each chapter.***

Abstract:

The abstract is a summary of the research conducted and should contain a:

- statement of the business problem and why it is significant;
- a brief description of the solution assessed and its applicability to the problem;
- succinct description of methods and procedures used; and
- brief summary of results, data analysis interpretations, findings, and conclusions.

The abstract is intended for publication in Dissertation Abstracts International and is therefore limited to 350 words or less (approximately 2400 characters excluding title and names).

Chapter 1: Rationale

This chapter introduces the topic and provides the rationale for the research. It includes:

- background information and substantiation of the significance of the research problem;
- a clear and compelling problem that needs to be addressed;
- a description of the hypotheses assessed and their applicability to the problem;
- the need to gain additional knowledge from further research;
- a description of the research objective(s); and
- a statement of the research question(s) guiding the study.

Chapter 2: Research Review and Synthesis

This chapter provides a review and synthesis of the existing research literature, clearly describing the current state of knowledge about the problem and the research question, by including the following:

- a review of previous problem resolution attempts that serve as a foundation for the study;
- an analysis of prior solutions and the results of those studies;
- an examination of criteria used in selecting a solution; and
- an articulation of the justification for the selected solution derived from the literature cited.

Chapter 3: Methodology

This chapter provides a description of the research design and methodology. It includes the following for all of the deliverables (FSS and Dissertation):

- a summary description of the proposed solution derived from the synthesis of the research literature review;
- the feasibility assessment criteria;
- a description of the context of the study including setting, study population, sample frame and selection; and
- a description of the data collection instrument(s) or protocols to be utilized.

In the *Dissertation*, this chapter is written in the past tense and is revised to describe the processes utilized in the execution of the research. It will also include:

- a discussion of the methodological limitations of the study.

Chapter 4: Results and Findings

In the *Feasibility Design Specification* this chapter includes a description of the methods of data analysis that are planned.

Then, in the *Dissertation*, this chapter is revised to summarize the analysis performed, and includes:

- a report of the results and interpretation of data analysis; and
- a summary of the primary findings of the analysis.

Chapter 5: Implications and Conclusions

This concluding chapter of the *Dissertation* answers the "So what?" questions about the research and contains descriptions of the:

- contribution to knowledge made by the research;
- implications for practitioners and policy-makers in the field;
- implications for future research;
- conclusions that are derived from the results of the study; and
- an assessment of the extent to which the research objective(s) was/were achieved.

Appendices

An appendix is used to present material that supplements the text or may be of interest to readers but is too detailed or distracting for inclusion in the main body of the text. Surveys, evaluation instruments, original data, mathematical tables, computer printouts, and data collection forms are examples of materials that are most appropriately included in appendices. Material in the appendices should help the reader replicate, assess, or understand the research that was conducted.

The *Feasibility Study Specification* must have the following appendices:

A. Definitions of Terms

B. Documentation of Research Site Approval

C. Instrument(s) Utilized

The *Dissertation* must include the following appendices:

A. Definitions of Terms

B. Documentation of Research Site Approval

C. Instrument(s) Utilized

D. Certification of IRB Approval

References

The *Feasibility Study Specification* (FSS) contains an evolving *References* section which includes the references that support:

- background research;
- research question;
- selected solution;
- definitions of the criteria used in assessment; and
- research design.

Referenced sources are listed using the APA citation format and can include, but are not limited to journal articles, books, white papers, government documents, and other dissertations. (See *Appendices C and E.)*

Each reference in the Reference section The References section should demonstrate that an exhaustive review of the relevant research literature was conducted. However, all of these sources may not be cited within the body of the FSS. The References section must include a minimum of 25 sources for the FSS.

Reference List

In the *Dissertation*, the *Reference List* replaces the References section and contains only the citations of the sources referenced in the narrative, without the annotations. The reference citations must conform to APA requirements. Examples of APA format requirements for the *Reference List* are provided in *Appendix C*.

Other Dissertation Components:

Other Dissertation components are contained in the front matter and include:

- Certification of Authorship (See *Appendix N*.)
- Copyright Statement (See *Appendix O*.)
- Certification of University Approval (See *Appendix M*.)
- Dedication (optional)
- Acknowledgements (optional)

The final page of the *Dissertation* is the *Biography*. This narrative of the academic and professional background of the researcher should be no longer than one page.

Table 1. Deliverable Chapter Contents

Chapters	Titles	FSS	Dissertation
	Certification of Authorship		**Yes**
	Title Page	**Yes**	**Yes**
	Copyright Statement		**Yes**
	Certification of University Approval		**Yes**
	Abstract		**Yes**
	Dedication		**Optional**
	Acknowledgements		**Optional**
	Table of Contents	**Yes**	**Yes**
	List of Tables	**As Needed**	**As Needed**
	List of Figures	**As Needed**	**As Needed**
1	RATIONALE		
	1.1 Introduction	**Yes**	**Yes**
	1.2 Problem Statement	**Yes**	**Yes**
	1.3 Proposed Solution	**Yes**	**Yes**
	1.4 Need for Research	**Yes**	**Yes**
	1.5 Feasibility Study Objective	**Yes**	**Yes**
	1.6 Feasibility Study Research Question(s)	**Yes**	**Yes**
2	RESEARCH REVIEW AND SYNTHESIS		
	2.1 Background	**Yes**	**Yes**
	2.2 Review of Previous Problem Resolution Attempts	**Yes**	**Yes**
	2.3 Analysis of Prior Solutions	**Yes**	**Yes**
	2.4 Criteria for Solution Selection	**Yes**	**Yes**
	2.5 Solution Options to Consider	**Yes**	**Yes**
	2.6 Justification for Selected Solution	**Yes**	**Yes**
3	METHODOLOGY		
	3.1 Summary of Proposed Solution	**Yes**	**Yes**
	3.2 Feasibility Assessment Criteria	**Yes**	**Yes**
	3.3 Context of Study	**Yes**	**Yes**
	3.3.1 Setting	**Yes**	**Yes**
	3.3.2 Stakeholder Population	**Yes**	**Yes**
	3.3.3 Stakeholder Sample	**Yes**	**Yes**
	3.3.4 Sample Design and Selection	**Yes**	**Yes**
	3.3.5 Constraints and Limitations	**Yes**	**Yes**
	3.4 Data Collection Plan / Procedures	**Yes**	**Yes**
	3.4.1 Data Collection Methods	**Yes**	**Yes**
	3.4.2 Instrumentation	**Yes**	**Yes**

Chapters	Titles	FSS	Dissertation
	3.5 Methodological Limitations		**Yes**
4	RESULTS AND FINDINGS		
	4.1 Methods of Data Analysis	**Yes**	**Yes**
	4.2 Results		**Yes**
	4.3 Findings		**Yes**
5	IMPLICATIONS AND CONCLUSIONS		
	5.1 Contribution to Knowledge		**Yes**
	5.2 Implications for Practitioners and Policy Makers		**Yes**
	5.3 Implications for Future Research		**Yes**
	5.4 Conclusions		**Yes**
	APPENDICES		
	A. Definition of Terms	**Yes**	**Yes**
	B. Documentation of Research Site Approval	**Yes**	**Yes**
	C. Instrument(s) Utilized	**Yes**	**Yes**
	D. Certification of IRB Approval		**Yes**
	References	**Yes (minimum 25 annotated sources)**	
	Reference List		**Yes**
	Biography		**Yes**

APPENDICES

APPENDIX B. FORMAT REQUIREMENTS FOR DISSERTATION DELIVERABLES

MS-Word templates are provided in the appropriate classrooms in the learning management system for all dissertation deliverables. Students are encouraged to use these templates when creating dissertation deliverables. All in text and reference list citations must conform to APA requirements. (See *Appendix C*.)

Format Requirements

The dissertation deliverables must meet the following style and format requirements:

- **Margins:** On every page, minimum clear margins of 1 inch for right, top, and bottom margins and 1.5 inches for left margin.
- **Page Numbers:** Page numbers should be centered below the text within the footer, except where not possible, and must be printed so that the margins remain clear on every page.
- **Font Size and Style:** Font style for all text in the dissertation body must be 12-point Times New Roman. Figures and tables may be 10-point font and/or single-spaced. The appendices do not have a font size or spacing requirement, although readability should be considered.
- **Headings:** It is preferred that dissertations use no more than three levels of headings in the body text. All headings should have only the first letter of each word capitalized (title case) with the exception of non-major words shorter than four letters. Headings adhere to the following:
    - **Chapter Headings:** This heading starts 2 inches from the top of the page, is centered on the page, and is set in 14-point Times New Roman font. The first line contains the chapter number (e.g., Chapter 4). The second line is blank and the third displays the chapter title.
    - **Level 1 Subheadings:** The subheading is aligned with the left margin, four lines below the chapter title or two lines below preceding text. This heading is set in bold 12-point Times New Roman font. Double-space between the subheading and the body text that follows it. These subheadings are numbered as identified in Table 1 (i.e., 1.1, 1.2).
    - **Level 2 Sub-Subheadings:** This level of heading is aligned with the left margin, double-spaced from text or subheadings preceding and following it, and set in italic, 12-point Times New Roman font. These subheadings are numbered as identified in Table 1 (i.e., 1.1.1, 1.1.2).
    - **Subheading Beyond Level 2:** This level of heading is aligned with the left margin, double-spaced from text or subheadings preceding and following it, and set in italic, 12-point Times New Roman font. These subheadings are not numbered, nor do they appear in the Table of Contents.
- **Paragraphs:** All paragraph text in the dissertation body must be double spaced, using .5-inch indents for the first line.
- **Numbered or Bulleted Lists:** All items in lists must be indented .5 inch from the left margin and must be single-spaced.

- **Block Quotes:** Quotes of 40 words or more are considered block quotes and must be indented .5 inch from the left margin and must be single-spaced. Quotation marks are not used for these quotes. Citations must follow the APA citation requirements.
- **Figures:** Figures which are discussed in the dissertation may appear within the text page or on a separate page following the beginning or ending of the discussion. If the figure is placed within the text page, there must be four lines separating it from preceding and following text. Titles of figures appear below the figure. Figures are numbered in sequential order. Titles of figures are formatted in sentence case and conclude with a period.
- **Tables:** Tables that are discussed in the dissertation may appear within the text page or on a separate page following the beginning or ending of the discussion. If the table is placed within the text page, there must be four lines separating it from preceding and following text. Titles of the tables appear above the table. Tables are numbered in sequential order. Titles of tables are in italics and formatted in title case (major words are capitalized).
- **Reference List:** The citations in the Reference List use .5 inch hanging indents. References are single-spaced within the citation and double-spaced between citations. Citation format must follow requirements set by the most recent edition of the APA Publication Manual.

Structure and Sequence Requirements

The dissertation is written in past tense. The dissertation document must conform to the following structure and sequence:

- **Cover page:** *Required.* This is the Certification of Authorship signed by the student. It has no page number. A sample is provided in *Appendix N*.
- **Title page:** *Required.* This is page i, but the page number is not printed. A sample of this page is provided in templates found in the student's individual course shell in the learning management system.
- **Copyright Statement:** *Required.* This statement is provided in *Appendix O*. This is page ii, but the page number is not printed.
- **Approval page:** *Required.* This is the Certification of University Approval. It is page iii, but the page number is not printed. A sample is provided in *Appendix M*.
- **Abstract:** *Required.* This is one or two pages, page iv or pages iv and v, but the page number(s) is (are) not printed. The abstract is no more than 350 words and formatted without paragraph indentation. Paragraphs are double spaced and separated by a single blank line.
- **Dedication:** *Optional.* This is page v or vi, but the page number is not printed. This page is single spaced and formatted without paragraph indentation. Paragraphs are separated by a single blank line.. If included, should not be listed in the Table of Contents and should be no more than one page in length.

- **Acknowledgements:** *Optional.* This is page vi or vii, but the page number is not printed. This page is single spaced and formatted without paragraph indentation. Paragraphs are separated by a single blank line.
- **Table of Contents:** *Required.* Continue to number this page with lower case Roman numerals, in sequence, and print the page number, centered at the bottom of the page(s).
- **List of Tables:** *As needed.* Continue to number this page with lower case Roman numerals, in sequence, and print the page number, centered at the bottom of the page(s). This page is required if the dissertation contains any tables; it must be listed in the Table of Contents.
- **List of Figures:** *As needed.* Continue to number this page with lower case Roman numerals, in sequence, and print the page number, centered at the bottom of the page(s). This page is required if the dissertation contains any figures; it must be listed in the Table of Contents.
- **Chapters:** *Required.* Beginning with Chapter 1, all pages are numbered consecutively in Arabic numerals (1, 2, 3, etc.); although every page is counted, the page numbers are not required to appear on the first page of each chapter, on the first page of the reference list, or on the first page of each appendix. The numbers, in sequence, are centered at the bottom of the page(s). Each chapter or major section must begin on a new page and are numbered consecutively from the previous chapter.
- **Separator Page prior to Appendix A:** *Required.* This page is labeled "APPENDICES". Continue to number, in sequence, but the page number is not printed.
- **Appendices:** *Required.* Appendices must be labeled A, B, C, etc. Each Appendix must begin on a new page. Continue to number this page with Arabic numerals, in sequence, and print the page number, centered at the bottom of the page(s).
- **Reference List:** *Required.* Continue to number this page with Arabic numerals, in sequence, and print the page number, centered at the bottom of the page(s).
- **Biography:** *Required.* Continue to number this page with Arabic numerals, in sequence, and print the page number, centered at the bottom of the page(s).This page is single spaced and formatted without paragraph indentation. Paragraphs are separated by a single blank line. The biography is no more than one page in length.

Content Agreement Requirements

- **Author Name:** The candidate's name and degree must be consistent on all pages where it is displayed.
- **Dissertation Title:** The title on the title page, approval page and on the first page of the abstract must match exactly, including punctuation; however, the title on the title page and approval page is printed using the font-style "Small Caps", while the title on the first page of the abstract is printed in upper and lower-case (title case).
- **Chapter Titles:** Chapter titles in the text and in the Table of Contents must match and must conform to the following:

  Chapter 1: Rationale

Chapter 2: Research Review and Synthesis

Chapter 3: Methodology

Chapter 4: Results and Findings

Chapter 5: Implications and

Conclusions

- **Appendices:** The titles of appendices must be consistent with titles in the text and in the Table of Contents.

APPENDIX C. SAMPLE APA CITATION FORMATS

The following provides descriptions and examples of APA citation formats for commonly used reference sources. The student should consult the Publication Manual of the American Psychological Association, most recent edition, for instructions on other source materials and alternate forms of these examples.

For more APA information and help, please visit the Writing Center in the University of Fairfax Library: https://ufairfax.edu/university/writing-center/

APPENDIX D. DISSERTATION WRITING TIPS

- Remember that quality, not quantity, is the key factor in writing.
- Use topic outlines to help identify a flow of ideas that are clear and build upon each other. (See Table 2.)
- Create a logical flowchart for your dissertation.
- Approach writing the dissertation as an iterative process.
- Proofread all work! Spell-check it. Run it through a grammar tool, but do not rely solely on spelling and grammar tools.
- Avoid overly general statements unless followed by clarifying statements or supporting evidence.
- Support statements with citations from appropriate research literature. Always properly cite the works of others using the APA format.
- Use only the third person. For example, use "The Researcher" rather than "I"
- Contractions do not belong in formal writing.
- Use appropriate scholarly grammar. For example, use "received" rather than "got", "difficulty" or "challenge" rather than "problem", etc.
- Avoid needless intensifiers. For example, "very unique"– either it is unique or it is not.
- Watch for split infinitives. For example, avoid phrases such as: "to merely serve", "to formally advocate", or "to fully answer", instead, use: "merely to serve", "to advocate formally", and "to answer fully".
- Being precise in your choice of words is critical for clarity.
- Colloquialisms are inappropriate in formal writing.
- Opinions are irrelevant. However, the facts established by prior research are relevant.
- All proposals are written in the future tense; dissertations -- which document prior work -- are written in the past tense.
- Utilize a qualified editor to read your work critically.

Checklist for Revising Paragraphs:

- Is the paragraph unified?
- Does it adhere to one general idea that is either stated in a topic sentence or otherwise apparent?
- Is the paragraph coherent?
- Do the sentences follow a clear sequence?
- Are the sentences linked as needed by parallelism, repetition or restatement, pronouns, consistency, and transitional expressions?
- Is the paragraph developed?
- Is the general idea of the paragraph well supported with specific evidence such as details, facts, examples, and reasons?

Checklist for Editing:

Clarity: How well do words and sentences convey their intended meanings? Which words and sentences are confusing?

- Exact language
- Parallelism
- Clear modifiers
- Clear reference of pronouns
- Complete sentences

Effectiveness: How well do words and sentences engage and direct readers' attention? Where does writing seem wordy, choppy, or dull?

- Smooth and informative transitions
- Variety in sentence length and structure
- Concise sentences

Correctness: How little or how much do surface errors interfere with clarity and effectiveness?

- Spelling
- Verb forms and tenses
- Subject verb agreement
- Sentence fragments, comma splices

APPENDIX E. BIBLIOGRAPHIC REFERENCES

What is a References section?

A references section is a compilation of bibliographic references that provide advisors and committee members with a summary of articles on which the research is based, so that they may understand the content and context of the work. The References section is developed in the FSS and contains a list of every pertinent work that has been personally reviewed by the student. It is not necessary that each item is actually referenced in the final References section, if it is not used in the creation of the dissertation. For a dissertation, it is not unreasonable to have a References section that contains over 100 sources. All references should be related to the dissertation topic or subtopic.

What is an Annotated Bibliographic Reference?

An annotated bibliographic reference is necessary for organizing notes when reading and reviewing sources of information for the dissertation. An example of such an annotated reference is as follows:

Klimoski, R., & Palmer, S. (1993). The ADA and the hiring process in organizations. *Consulting Psychology Journal: Practice and Research, 45*(2), 10 – 36.

In this article the researchers explored the impact of the ADA requirements on the hiring process in organizations. Klimoski and Palmer (1993) conducted a study of six organizations and compared the effects of the ADA requirements on the length of time it took to hire a new employee.

The format of the annotated bibliography should contain the following:

Source Citation

The annotated bibliography begins with a citation based on the APA format for references as indicated in the APA Manual, most current edition. Note that citations vary based on the source (e.g., journal article or book).

Annotation

The annotation is placed below the citation with no indent and should be cross-referenced with one or more specific chapters of the dissertation. Annotations are single spaced with double spacing between paragraphs. Annotations are summaries of the references written in the students' own words and not computer-generated abstracts.

In writing the annotation, the student analyzes the source material, summarizes the main points of the reference. Paraphrasing of the author's words may be done without quotes, and when included within the body of your deliverable, must be appropriately cited using the APA parenthetical format of (Author, Date). Direct quotes taken from the source within the

annotation should be enclosed in quotes and must be properly cited using the APA format in parentheses (Author, Date, Page).

Each of the references contributes to one or more of the following dissertation elements and its relevance should be considered and noted within the annotation:

- Background data/research
- The research questions
- The measurement methods for each variable: independent, dependent, parameters
- The analysis designs
- The results

University of Fairfax
2070 Chain Bridge Road
Suite G-100
Vienna, VA 22182

Topic Approval Checklist

Student Name: _____

Criteria	Part(s)	Exceptional	Acceptable	Unacceptable	Suggestions for Improvements
How well does the student clearly and concisely describe the research site: name; location; environment; gatekeeper?	1.1				
How well does the student describe the target population and the characteristics of the population?	1.2				
How well does the student describe the sample frame that is represented by the research site?	1.3				
How well does the student describe the sample, estimate the size of the sample, and express the rationale for the sample selection?	1.4				
How well does the student describe constraints and limitations of the setting?	1.5				
How well does the student describe the research site access plan: approvals required; factors affecting access; identification of mentors/advocates; actions needed to maximize response rate?	1.6				
How well does the student identify potential problems that can be researched at the proposed research site?	2.1				
How well has the student presented of the importance of these problems to the cybersecurity community?	2.2				
How well does the student link potential solutions to the problems experienced at the research site?	2.3				
How well does the student identify research questions that will guide the feasibility study?	2.4				
How well does the student articulate the problem statement to be addressed by the study?	3.1				
How well does the student present the proposed study: solution to be tested; objective of research; potential benefits, and potential contribution to knowledge?	3.2				
Overall Recommendation					

I hereby attest that I have reviewed the submitted Research Project Feasibility Analysis (RPFA) Report and have assessed the level of acceptability of the topic based on the standards for academic quality established by the University of Fairfax.
The student (_____ has/ _____ has not) identified a researchable dissertation topic.
The student (_____ is / _____ is not) ready for assignment of a Dissertation Advisor.

_____

Signature of Dean of Doctoral Research Date

APPENDIX G. IRB RESEARCH APPLICATION

IRB RESEARCH APPLICATION

Name: _____
Date: _____
Title of Study:
_____
_____

1. Is this dissertation research? _____ yes _____no
2. Estimated date of data collection: From _____ To _____
3. Has a previous Institutional Review Board reviewed this study? ___yes ____no
4. The following will be utilized as part of the research project (check all that apply:

   - Questionnaires / Surveys
   - Interviews
   - Production Audio and / visual recordings
   - Online data collection
   - Other _____

5. Who will have access to the data? _____
_____
6. Will individual subjects be identified in the final report? ____ yes ____ no
7. Will data be reported only in aggregate form? ___ yes _____ no
   If no, explain how the data will be reported
_____
_____

Please provide a detailed summary of the methodology that will be used (a fully completed, reviewed, and chair-approved chapter 3) and <u>all</u> research questions, hypotheses, datasets information, full interview protocols, full survey instruments, etc. Your Chair will review this application before it is submitted to the DDR to ensure that is fully completed and contains all necessary supporting materials in the proper level of detail. Incomplete applications will not be accepted. Students may NOT collect any data until after they have secured formal IRB approval.

I hereby attest that I have reviewed the submitted documentation and have assessed the level of acceptability of the protocols based upon the standards for academic quality established by the University of Fairfax.

_____

Signature of Chair ***Date***

APPENDIX H. CERTIFICATION OF IRB APPROVAL

CERTIFICATION OF IRB APPROVAL

Candidate's Name: _____

Date Submitted: _____

Title of Study:

_____

_____

_____

Date of Review: _____

Classification of Research: ____Exempt ____Minimal Risk ____Potential Risk

Approval Status:

- Approved as Submitted
- Approved, subject to the following conditions:

_____

_____

_____

- Denied, for the following reasons:

_____

_____

_____

This certifies that the research study submitted has been reviewed by the Institutional Review Board.

_____

Chair, Institutional Review Board Committee (Signature) **Date**

APPENDIX I. FSS/IRB APPROVAL CHECKLIST

APPENDIX J. DISSERTATION MANUSCRIPT CONTENT CHECKLIST

All sections and components must be present *in the exact order listed* for the candidate to move forward in the process. Manuscripts not adhering to this checklist will not be eligible for defense until the missing components are addressed.

CHAPTER 1: INTRODUCTION Chapter 1 averages 20 - 30 total pages	**YES OR NO**
INTRODUCTORY PARAGRAPH(S) Average of ½ - ¾ page No subtitles are given to this section. **2 required parts**	
1. Dissertation topic is introduced.	
2. Discussion reflects an overview of what is contained in the chapter.	
BACKGROUND Average of 2 ½ pages	
Discussion reflects why the research problem is of important social concern or theoretical interest.	
PROBLEM STATEMENT Average of ½ - ¾ page **5 required parts**	
1. General problem/observation identifying the need for the study.	
2. Specific problem proposed for research; problem statement is clear, concise, and reflective of the purpose statement.	
3. Introductory words describing method and research design are given and are appropriate to the problem.	
4. **General** population group of proposed study is identified.	
5. **Needs to identify a gap or gaps in the literature**	
PURPOSE Average of ¾ page **7 required parts**	
1. Research method is identified as qualitative, quantitative, or mixed.	
2. Research method is appropriate to the proposed study.	
3. Research design is clearly stated.	
4. Research design is appropriate to the research method.	
5. Research variables are briefly identified: independent, dependent, relationships, comparisons.	
6. **Specific** population group of proposed study is identified.	
7. Geographic location of study is identified.	

SIGNIFICANCE OF THE STUDY Average of 1 page **2 Required Parts** The significance sections explain why the study is a unique approach to the problem to be investigated, potential benefit/benefactors from the proposed study, and the ways in which the study results might make an original contribution to the field.	
1. Significance of Study: Why is this study important? What is the contribution this research may make to current and future studies and thought? ½ page	
2. Significance of Study to the field of leadership: In what way could the results of this research add to leadership knowledge and literature? ½ page	
NATURE OF THE STUDY Average of 1 to 5 pages **2 required parts** Synopsis of the research design. Discussion of what distinguishes the learner's proposal research design from other possible research designs.	
1. Overview discussion of research method (quantitative, qualitative, or mixed) appropriateness. Discussion reflects how the proposed research method will accomplish the researcher's goals in comparison to the other methods.	
2. Overview discussion of proposed research design appropriateness. Discussion of how the proposed design will accomplish the researcher's goals for the study.	
HYPOTHESES/RESEARCH QUESTIONS Average of 1 to 5 pages **3 required parts**	
1. Description of the relationship or comparison questions posed about the research focus.	
2. Qualitative methods: Proposed research questions must be included in the discussion. Quantitative methods: Research questions must be included in discussion, and depending on the kind of research design, these questions may include proposed hypothesis(es) and the rationale for the hypothesis(es).	
3. Information is presented in a discussion context, rather than simply stated, or listed.	
CONCEPTUAL OR THEORETICAL FRAMEWORK Average of 2-4 pages **4 required parts** Places the study in perspective among other relevant studies and describes the important issues, perspectives, and controversies in the field under investigation.	
1. Discussion reflects overview of the broad theoretical area under which the research falls.	
2. Discussion reflects overview of how proposed research fits within other research in the field.	
3. Discussion specifically includes important issues, perspectives, and controversies in the field.	
4. Discussion reflects knowledge and familiarity with the historical, germinal, and current literature in the field.	
DEFINITIONS Average of 0 to 1 page **Required if any operational terms or words are used in a unique way in this study.** **2 required parts if included**	

1. Definitions given represent operational terms or words used in a unique way; discussion clarifies uniqueness.	
2. Definitions are supported with citations.	
ASSUMPTIONS Average of ¼ to 2 pages **2 required parts**	
1. Assumptions are identified.	
2. Rationale for each assumption is given, incorporating multiple perspectives, when appropriate.	
SCOPE, LIMITATIONS, AND DELIMITATIONS Average of 1 to 2 pages **3 required parts**	
1. Scope, limitations, and delimitations of data used in the study are discussed.	
2. Generalizability of the study findings is discussed.	
3. Information is presented in a discussion context, rather than simply stated, or listed.	
CHAPTER SUMMARY Average of ½ to 1 page **4 required parts**	
1. Discussion *summarizes key points* presented in chapter 1.	
2. Supporting citations are given for key points.	
3. Chapter summary ends with transition discussion/sentence to next chapter.	
4. Information is presented in a discussion context, rather than simply stated, or listed.	
CHAPTER 2: LITERATURE REVIEW Chapter 2 averages 40-60 pages ***Must be a critical analysis and interwoven discussion NOT an annotated bibliography strung together.***	**YES OR NO**
INTRODUCTORY PARAGRAPH(S) Average of ½ - ¾ page No subtitles are given to this section. **2 required parts**	
1. Discussion begins with dissertation topic transition to introduction of a review of the literature for the dissertation research.	
2. Discussion reflects brief overview of what is contained in the chapter.	

SECTION TOPICS INCLUDE: **TITLE SEARCHES, ARTICLES, RESEARCH DOCUMENTS, JOURNALS RESEARCHED; HISTORICAL OVERVIEW; AND CURRENT FINDINGS** **7 required parts**	
1. Organization is presented in an orderly, logical, and flowing manner.	
2. Historical overview with appropriate citations is presented. If appropriate, a discussion of any gaps in the research literature is included. Discussion of germinal research is included.	
3. Current findings and studies with appropriate citations are presented. If appropriate, a discussion of any gaps in the research literature is included.	
4. Current findings, discussed in order from general to specific, are related to the research question.	
5. Each research variable is discussed.	
6. Discussion has depth and presents an analysis of the literature rather than a listing of quotations and citations. Discussion relates a logical understanding of why a reference is included.	
7. Balanced discussion of alternative viewpoints is given. Literature compares and contrasts different points of view regarding research in the field.	
CHAPTER CONCLUSION Average of ½ to 1 page **3 required parts**	
1. Discussion reflects a conclusion *derived from the analysis* of the literature review.	
2. Supporting citations are given for key points	
3. Information is presented in a discussion context, rather than simply stated, or listed	
CHAPTER SUMMARY Average of ½ to 1 page **4 required parts**	

1. Discussion *summarizes key points* presented in chapter 2.	
2. Supporting citations are given for key points.	
3. Chapter summary ends with transition discussion/sentence to next chapter.	
4. Information is presented in a discussion context, rather than simply stated, or listed.	
CHAPTER 3: RESEARCH METHODS Chapter 3 averages 20-40 pages	**YES OR NO**
Introductory paragraph(s) Average of ½ - ¾ page **No subtitles are given to this section.** **2 required parts**	
1. Discussion begins with restatement of purpose statement to introduce reader to need for study.	
2. Discussion reflects brief overview of the chapter.	
Research Method and Design Appropriateness **3 required parts**	
1. Elaboration (from the discussion in chapter 1) of rationale for research method (quantitative, qualitative, or mixed) appropriateness, including a discussion of why the selected method was chosen instead of another. Ex: Why quantitative method selected instead of qualitative.	
2. Elaboration (from the discussion in chapter 1) of rationale for proposed research design appropriateness to learner's study. Discussion is not simply a listing and description of research designs.	
3. Elaboration of why the proposed design will accomplish the study goals and why design is the optimum choice for this specific research.	

POPULATION, SAMPLING, AND DATA COLLECTION PROCEDURES AND RATIONALE **7 required parts**	
1. Population: Elaboration of population information given in chapter 1. Description matches the overview discussion given in chapter 1.	
2. Sampling: Elaboration of information given in chapter 1. Discussion reflects sampling number (i.e., participants), how the sampling number was determined, and characteristics of the sample.	
3. Discussion reflects study participants' informed consent, confidentiality, and geographic location information.	
4. Data Collection: Elaboration of information given in chapter 1 Discussion reflects the following: (1) Technique(s) used and rationale for the technique(s) selected, including a comparison to other technique(s) that could be used (2) Kind of data to be collected and rationale for the kind of data	
5. Data Collection: Discussion reflects the kind of data which will be collected, as well as appropriateness to research design and dissertation problem.	
6. Instrument(s): Selection Appropriateness Discussion includes: Why were these instruments chosen over others? What is their appropriateness to this study?	
7. Instrument(s): Reliability Is the instrument validated? If not, applicable pilot study is discussed.	
VALIDITY – INTERNAL AND EXTERNAL **2 required parts**	
1. Validity: Internal	
2. Validity: External	

DATA ANALYSIS **2 required parts**	
1. Identification of the data analyses that will be performed.	
2. Data analyses technique selection appropriateness to learner's research design.	
ORGANIZATION AND CLARITY **2 required parts**	
1. Well-organized: Discussion relates a logical understanding of the overall research design selected for the learner's study.	
2. Discussion presents an in-depth analysis of the research design rather than a listing of what will be used.	
CHAPTER SUMMARY Average of ½ to 1 page **3 required parts**	
1. Discussion *summarizes key points* presented in chapter 3.	

2. Supporting citations are given for key points.	
3. Chapter summary ends with transition discussion to next chapter.	
CHAPTER 4: RESULTS & FINDINGS Chapter 4 averages 20-40 pages	**YES OR NO**
In the Feasibility Design Specification, this chapter includes a description of the *methods of data analysis* that are planned. Then, in the Dissertation, this chapter is revised to summarize the analysis performed, and includes: • *a report of the results and interpretation of data analysis*; and • *a summary of the primary findings of the analysis*.	
CHAPTER 5: IMPLICATIONS & CONCLUSIONS Chapter 5 averages 20-40 pages	**YES OR NO**
This concluding chapter of the Dissertation answers the "So what?" questions about the research and contains descriptions of the: • contribution to knowledge made by the research; • implications for practitioners and policy-makers in the field; • implications for future research; • conclusions that are derived from the results of the study; and • an assessment of the extent to which the research objective(s) was/were achieved	

ANCILLARY PAGES ***The front matter, back matter, and chapters 1, 2, 3 must be in as complete a dissertation form as possible.***	**YES OR NO**
FRONT MATTER	
Front matter is paginated with lowercase Roman numerals; the page number is not printed on the following pages: title, copyright, signature, or abstract.	
Title page in correct format Note: The "running heading" is not used on a proposal or dissertation, it is used when submitting items for publishing ref: APA 6th ed manual p. 296.	
Title Page: Title of study is 15 words or less and reflects the study topic and variables.	
Approval Page: Formatted page is required at the proposal stage. Signatures are not required until the learner submits the dissertation. At time of final dissertation submission: The mentor and committee members have signed the approval page. The date on which all committee members have signed as approving the dissertation. The mentor and committee member signatures need to be dated within a few days of each other. Note per the Dean's office: If this page is presented with mistakes, it will not be signed.	

Approval Page (i.e. Signature Page): The signature approval line by the school needs to have a signature line with following 3 lines: Name of Dissertation Approval Authority *(Check with the Dean's office for this name)* Title of Dissertation Approval Authority *(Check with the Dean's office this person's title)* University of Phoenix	
Abstract: The abstract is not written until after the dissertation study is complete. It is recommended that a blank page with a heading be placed in the proposal to facilitate page numbering.	
Table of Contents: General Format (Dot leaders are used to link the entry and the page number in the Table of Contents.)	
Front Matter - Titles of items appearing before the tables of contents (e.g., "ABSTRACT", "DEDICATION," "ACKNOWLEDGMENTS," "TABLE OF CONTENTS") do not appear in the table of contents.	
The title "LIST OF TABLES" given in the Table of Contents before the chapter 1 title if a list of tables is used.	
The title "LIST OF FIGURES" given in the Table of Contents before the chapter 1 title if a list of figures is used.	
References title given in the table of contents after chapter titles and before appendix title(s)	
Appendix title(s): If any, are/is placed after the references title in the table of contents and are/is the last entry in the table of contents. Table and/or figure names (if any) are placed after the listing of appendix titles.	
If applicable: Table name or a "list of tables" (used if more than 1 table is included in study) is given after the table of contents.	
If applicable: Figure name or "list of figures" (used if more than 1 figure is included in the study) given after the table of contents.	
BACK MATTER	
Appendix items (listed in the table of contents) are placed at the back of the proposal, after the references list.	
References List **6 required parts**	
1. Minimum number of references given is generally 30-40 references. **Write the total number of references in learner's proposal here**: _____	
2. **Recent references given with approximately 85% within the last 5 years, or a discussion of the literature gap given in chapter 2.** **- Write the number of recent (i.e. within 5 years) references here**: _____ **- Write the # of recent references/total number of references here**: _____ **- Place a X (X) if a literature Gap exists and is discussed in Chapter 2**: Research gap exists in literature review that the relationship between individualism-collectivism culture and turnover intention among the nurses is not explored in literature.	

3. Quality and range of references: Founding theorists, empirical research, peer-reviewed articles, books, and journals (approximately 90%). *Comments:* The proposal is exclusively discussed from the viewpoint of the founding theorists for each variable, current findings with empirical research support, peer-reviewed, journal articles, and books (> 92%).	
4. Reference list is placed after the main text and before the appendixes.	
5. Reference list is formatted with a hanging indent within an entry.	
6. Follows APA 6th edition guidelines	
7. Follows the content checklist listed in the DIA Handbook under Appendices K & L in full.	
FINAL DISSERTATION MANUSCRIPT IS WRITTEN IN THE PAST TENSE	

APPENDIX K. QUALITY REVIEW CHECKLIST

All sections and components must be present for the candidate to move forward in the process. Manuscripts not adhering to this checklist will not be eligible for defense until the missing components are addressed.

OVERALL DOCUMENT QUALITY REVIEW CHECKLIST	YES OR NO
ORGANIZATION AND CLARITY	
Total critical inquiry is well organized, correctly constructed, and communicates clear intended research.	
Every component in the Appendix I Checklist has been addressed and is presented in the exact order listed in the Checklist.	
WRITING STYLE AND COMPOSITION	
Document uses proper APA formatting for both in-text citations, as well as, the reference page.	
Proposal: Entire document is written in future tense.	
Manuscript: Entire document is re-written in past tense. **	
Grammar, punctuation, sentence structure, and spelling are correct.	
Writing is clear, precise, and avoids redundancy. There is a focused discussion of section topics.	
Statements are specific. Sentences are clear, succinct, and not redundant.	
Topical sentences are used to introduce sections and paragraphs.	
Content of sections is related to and supports the topical sentences.	
Flow of words is smooth and comprehensible. There is a logical flow of ideas between sections with smooth transition between paragraphs, topics, sections, and chapters.	
Transitions are established between ideas.	
Written in scholarly language: accurate, balanced, objective, tentative, without conclusive/definitive statements, reflection of researcher's opinion, clichés, or hyperbole, etc. (i.e., proposal reflects doctoral-level scholarly tone and presentation).	
Balanced presentation includes discussion of proponents in the literature review with differing viewpoints on theories and variables used in the dissertation.	
Research presents cited references in developing research problem rather than relying learner's personal opinion (i.e. all statements are supported with references or analytical development).	
The writer's voice is clear and consistent throughout the document.	
ORGANIZATION AND FORM	

Study is logically and comprehensively organized.	
Chapters are integrated and form a cohesive whole.	
Subheadings are used to identify the logic and movement of the study.	
Transitions between chapters are smooth and coherent.	
Study follows a standard form and follows SAS standardization formatting requirements. Including the following: 1. Running heading is not used (ref: APA 5th ed manual, p. 296) 2. Pagination 3. Citation format 4. Reference format. 5. Listing of items within the text 6. Margins 7. Chapter titles 8. Section title format 9. Page format	
Study has a professional and scholarly appearance throughout, including the following: 1. No formatting or sentence structure errors. 2. Short paragraph structure (e.g. 3-5 sentences per paragraph). 3. Short, clear, and succinct sentence structure (e.g. sentences generally range between 1 - 3 lines).	
Citations are used for direct quotations, paraphrasing, facts and studies, and any personal communications.	
There is a citation used in the text for each reference page entry.	
Reference entry exists for each citation (Exception: personal communication)	
No plagiarized material Note: Questions involving the possibility of plagiarism must be resolved before the proposal / manuscript can go forward.	
FINAL DISSERTATION MANUSCRIPT IS WRITTEN IN THE PAST TENSE	

APPENDIX L. APPROVAL TO DEFEND CHECKLIST

APPENDIX M. CERTIFICATION OF UNIVERSITY APPROVAL

DISSERTATION TITLE

by

Student Name

has been approved

20xx

We hereby certify that this dissertation, conforms to acceptable standards and is fully adequate in scope and quality to fulfill the dissertation requirements for the degree of Doctorate in Information Assurance.

APPROVED:

_____ Dissertation Committee Chairperson
Printed Faculty Name, PhD

_____ Dissertation Committee Member
Printed Faculty Name, PhD

_____ Dissertation Committee Member
Printed Faculty Name, PhD

ACCEPTED AND SIGNED:

_____
Dissertation Committee Chairperson (Signature) **Date**

_____
Dean, PhD (Printed Name)

_____
Dean (Signature) **Date**

APPENDIX N. CERTIFICATION OF AUTHORSHIP

CERTIFICATION OF AUTHORSHIP OF DISSERTATION WORK

Submitted to:

_____

Dissertation Committee Chairperson

By:

_____

Candidate's Name (Printed)

Date of Submission: _____

Title of Dissertation:

_____

_____

Certificate of Authorship: I hereby certify that I am the sole owner of this document and that any assistance I received in its preparation is fully acknowledge and disclosed in this document. I have also cited all sources from which I obtained data, ideas, or words that are copied directly or paraphrased in this document. Sources are properly credited according to accepted standards for professional publications.

_____

Candidate Signature

_____

Date

APPENDIX O. COPYRIGHT STATEMENT

COPYRIGHT STATEMENT
Copyright © 20xx [Candidate Name].

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or media, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the author.

APPENDIX P. COPYRIGHT STATEMENT

LIMITED-RIGHTS COPYRIGHT RELEASE FORM

Please submit this form with your by fax to (703)790-3287.

I, _____ Print Full Name _____ ("Assignor"), located at

_____Full Home Address_____, hereby

release to the University of Fairfax ("Assignee"), located at 1813 East Main Street, Salem, VA, its successors, and assigns, in perpetuity, limited rights to copy the following dissertation:

_____Full Dissertation Title_____
_____

Submitted in partial fulfillment of the requirements for the doctoral degree at the University of Fairfax.

By: _____
Signed Name of Assignor

Date:_____