

PhD in Epidemiology Dissertation Policies

I. Overview of the Dissertation Process

Doctoral candidates will be required to complete a **minimum** of 6 hours of dissertation research under the guidance of a Doctoral Dissertation Committee of faculty. PhD candidates must register for at least one credit hour of dissertation for each semester and one credit hour of dissertation for each summer session until the degree is awarded.

The Doctoral Dissertation Committee must include at least three faculty members including at least two primary faculty members in the Department of Epidemiology. With submission of an outside member form and C.V. to the PhD Advisory Committee, and approval of the Doctoral Dissertation Committee and the PhD Advisory Committee, one person who is not a UAMS College of Public Health Faculty member may serve as a fourth member of the Doctoral Dissertation Committee. The Committee must be chaired by a primary faculty member in the Department of Epidemiology who has previously been a member of a dissertation committee (at UAMS or another institution); other faculty members may chair or co-chair a dissertation committee with permission of the PhD Advisory Committee and the chairperson of the Department of Epidemiology. The Committee can be appointed at any time after the student has passed his/her doctoral qualifying examination. At the time of committee appointment, notification of the committee membership must be forwarded to the PhD Committee and the Department Academic Coordinator by filling out and obtaining signatures on the Doctoral Dissertation Committee Designation Form, and turns it into the Department Academic Coordinator. (This form is located on the College of Public Health website: https://publichealth.uams.edu/students/current_students/forms/doctoral-program_forms/. Any changes to the composition of the Doctoral Dissertation Committee must be made with the approval of the committee chair and the PhD Advisory Committee.

As part of the dissertation research process, candidates **must first successfully develop, defend and receive approval for the written proposal of his/her dissertation research, and then subsequently develop and defend his/her completed dissertation research.** Acceptance of the dissertation proposal will require approval by all members of the Doctoral Dissertation Committee after the candidate's oral defense of the proposal. Dissertation research proposals must also be reviewed and approved by the UAMS Institutional Review Board before the candidate begins the research. Acceptance of the dissertation and award of the PhD will require approval by all members of the Doctoral Dissertation Committee after the candidate's oral, public defense of the dissertation.

Approved Dissertations must be filed through ProQuest.

II.a. Dissertation format and content overview

The dissertation for the PhD in Epidemiology must be the product of an empirical research study conducted by the PhD candidate that uses epidemiology research methodology to address an important aspect related to public health. The dissertation should be:

1. Written in a scholarly style.
2. Include thorough literature reviews and development of relevant theoretical frameworks.
3. Include detailed descriptions of research designs, analytic methods, measurement strategies and data collection. The dissertation research may include analysis of existing, secondary data and/or analysis of primary data collected by the candidate.

The dissertation must be the product of epidemiologic research designed to produce new and **significant** knowledge about an important issue in epidemiology, clinical practice or public health. Students are expected to employ rigorous research designs and analytic methodologies that are generally accepted to be state-of-the-art scientific approaches in epidemiologic research.

Regarding the significance of the dissertation research, in most cases the research is expected to produce evidence that supports causal inferences about a phenomenon of interest or that makes significant contributions to the progression of evidence in support of such inferences.

Research that is purely formative or descriptive in nature may not be judged as significant unless the phenomenon of interest and/or the methods being tested are extraordinary in their novelty and innovation.

Moreover, the dissertation research typically will produce evidence that generalizes to settings and populations beyond those directly observed in the investigation, recognizing that there are necessary trade-offs among internal and external validity imposed by logistical and ethical constraints in all empirical research projects.

The dissertation also must be innovative, in the sense that an existing methodology is being applied in a new way or to a new question or problem area, or in the sense that a methodology is extended or modified in a significant way. By virtue of being innovative, the dissertation should produce new knowledge in that it resolves gaps, uncertainties, or controversies in the existing empirical and/or theoretical body of knowledge.

The dissertation committee will be the ultimate judge of the significance, innovation and validity of the dissertation research.

All dissertations must conform to the policies established by the UAMS College of Public Health. The dissertation can take either of two formats, a three-paper format or a monograph format.

II.b. Three Paper Format

The first format consists of three publishable, empirical research papers relating to an epidemiologic, clinical or public health issue. The papers should be related, either by their substantive content or by their methodology.

While publish-ability is a necessary condition for the acceptability of the dissertation, the fact that a paper has been published in a peer-reviewed publication does not necessarily make it acceptable for the dissertation.

Each paper must be an empirical research paper that includes an epidemiologic research design, data collection, and appropriate analytic methods of sufficient rigor as deemed by the student's dissertation committee. Review articles (other than meta-analyses), research design articles, and purely theoretical or conceptual articles generally will not count as one of the three required dissertation papers.

On occasion, one or more of the papers may have been published prior to submission of the dissertation, and the published version may be included in the dissertation in lieu of a typescript. However, none of the papers may have been published prior to the student's matriculation into the program, and the majority of the work on the dissertation must be completed after matriculation. The inclusion of any work on the dissertation done prior to passing the comprehensive examination must be approved by both the dissertation committee and the PhD advisory committee.

Material such as literature reviews, theoretical frameworks, detailed description of analytic methods and data—which may be excluded from published versions of papers due to page constraints—must be included in the dissertation, possibly as appendices or as separate background papers.

The dissertation must include an overview summarizing the papers. It must also contain material that describes, in non-technical terms, the implications of the papers' findings for the real world of public health as well as directions for future research that are suggested by the papers' findings and/or limitations. This material may be incorporated into the individual papers (e.g., in discussion sections), or in a separate concluding section of the dissertation.

II.c. Monograph Format

The second format alternative is a traditional monograph-style dissertation. Such a dissertation must either:

(a) contain at least three units of empirical research which are independently publishable (which may be organized as chapters) or

(b) be suitable for subsequent publication in book form.

The rules and recommendations described above for the three-paper format regarding prior publication, dissertation summary, and concluding sections apply to a traditional dissertation as well.

II.d. Key Content

Regardless of which of the two formats is chosen, the dissertation must include several key elements of content:

- (1) A clear description of the problem under investigation, the empirical research questions of interest, and why these questions are relevant and important from a public health perspective.
- (2) A thorough and comprehensive review of the existing theoretical and empirical literature related to the problem and research questions of interest. The review must make clear what is known about the problem already, what is not yet known, and what are remaining areas of uncertainty or controversy. In doing so, the review must make clear how the dissertation research will contribute new knowledge to the existing body of literature.
- (3) Development of a theoretical framework based on relevant theories that guides the investigation and justifies the research design and analytic methodologies used.
- (4) Description of the research design, the measures of effect to be estimated and analytic methods used in the investigation.
- (5) Description of the key results from all analyses.
- (6) Interpretation of the findings and discussion of the implications of the research for the field of epidemiology, clinical practice or public health, and future research. This discussion should also include an assessment of the limitations of the research in conjunction with the body of knowledge on the topic and their implications for how results should be interpreted and used in the research, policy, and practice communities. The dissertation should translate and apply research findings as clearly and concretely as possible in the form of considerations, recommendations, scenarios and options for the full range of stakeholders likely to share in the benefits and/or costs of the phenomena.

III.a The Dissertation Proposal

All doctoral students are required to present their dissertation research idea in a formal oral presentation to the Department as a Departmental Seminar prior to writing the first draft of their dissertation proposal.* The student should present their ideas for a dissertation topic so that they can incorporate any input they receive from Department faculty and other doctoral students during the seminar. When the student's advisor and all members of the Doctoral Dissertation Committee agree that the student is ready to present their dissertation idea to the Department, and have selected potential dates for the presentation, a Department Seminar will be schedule. Students should contact the Department Academic Coordinator to schedule the seminar. The seminar will be announced via flyers and email at least two weeks prior to the date selected. Therefore, the student should contact the Department Academic Coordinator at least 3 weeks prior to the desired seminar date.

For the dissertation concept presentation, the student should prepare a 35-45 minute presentation with slides (e.g. PowerPoint) which includes the following: the rationale for the proposed study, the research question and proposed hypotheses, study design, research methods and proposed statistical analyses. At the conclusion of the presentation, there will be a 15-20 minute Q&A session, which will be moderated by the student.

The doctoral dissertation proposal should be written using the National Institute of Health's RO1 format, but without page limitations, letters of support, and budget. When all members of the student's Doctoral Dissertation Committee and the advisor agrees that the student is ready to defend his/her dissertation proposal, the student will orally defend the proposal in a public defense. The proposal shall be presented in a formal presentation to the student's Doctoral Dissertation Committee, and will be open to other faculty, staff and students. At the discretion of the student and the student's Doctoral Dissertation Committee, guests of the student and the general public may be invited.

The Dissertation Proposal Defense date will be scheduled by agreement between the student and all members of the student's Doctoral Dissertation Committee, and approved by the Department Chairperson. Students should contact the Department Academic Coordinator to schedule the Dissertation Proposal Defense after the signed Request for Dissertation Proposal Defense Form is signed by the student and all committee members and turned into the Department Academic Coordinator. A Doctoral Dissertation Committee member signature on this form indicates that they have read the proposal and approved it for the oral presentation. The Dissertation Proposal Defense will be announced via flyers and email at least two weeks prior to the date selected.

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*Students who defend their Doctoral Dissertation Proposal prior to February, 2020 will not be required to present their dissertation research idea as a separate step.

The following is a checklist of steps the student needs to take **prior to their Dissertation Proposal Defense**:

- _____ The student meets with their advisor to choose their Doctoral Dissertation Committee.

- _____ The student fills out and obtains the required signatures on the Doctoral Dissertation Committee Designation Form, and turns it into the Department Academic Coordinator. This form is located on the College of Public Health website: <https://publichealth.uams.edu/students/current-students/forms/doctoral-program-forms/>.

- _____ The student should meet with their Doctoral Dissertation Committee and share drafts of a concept paper with their Committee. The concept paper for the Doctoral Dissertation Proposal should be 3-6 pages in length and include the rationale for the proposed study, the research question and proposed hypotheses, study design, research methods and proposed statistical analyses.

- _____ The student's advisor and all members of the Doctoral Dissertation Committee agree that the student is ready to present their dissertation idea to the Department.

- _____ The student's advisor and all members of the Doctoral Dissertation Committee have selected potential dates for the student's presentation of their dissertation idea.

- _____ The student should contact the Department Academic Coordinator at least 3 weeks prior to the desired date to present their dissertation idea to the faculty.

- _____ The student presents their dissertation idea to the faculty and other doctoral students.

- _____ With guidance from the student's committee, the student incorporates the input they receive from the Department faculty and other doctoral students into their proposal.

- _____ The student should work with each member of the committee to fill out the following form: <https://publichealth.uams.edu/wp-content/uploads/sites/3/2019/02/Doctoral-Student-Faculty-Collaborative-Project-Agreement.pdf>

- _____ The student works with their Doctoral Dissertation Committee on their proposal.
- _____ The student may schedule a final meeting with his(her) Doctoral Dissertation Committee prior to distributing the version of the Dissertation Proposal that will be presented at their oral defense. At this meeting, the student and Committee should finalize any additional changes needed to be made prior to the Dissertation Proposal Defense.
- _____ After this meeting, the student will make the recommended changes.
- _____ The draft of the Dissertation proposal that will be defended must be received by the committee **at least four weeks prior** to the anticipated defense date.
- _____ Committee members should review the proposal and discuss changes prior to signing the Department Request for Dissertation Proposal Defense Form.
- _____ All members of the Doctoral Dissertation Committee agree that the student is ready to present an oral defense of their Doctoral Dissertation Proposal.
- _____ The student fills out and obtains the required signatures on the Dissertation Proposal Defense Form, and turns it into the Department Chairperson **at least 21 days prior** to the oral defense of the proposal. (*Note: we will have to create this form*).
- _____ Once approved by the Department Chairperson, the student will submit the Dissertation Proposal Defense Form to the Department Academic Coordinator and the dean's administrative assistant. The Department Academic Coordinator will post and distribute an announcement for the student's Proposal Defense to the department. Flyers will be posted throughout the College and the dean's administrative assistant will send out email notification to the college.
- _____ A final copy of the Dissertation Proposal must be given to the Dissertation Committee members and the Department Chairperson **at least 7 days prior to the oral defense**. No further changes may be made to the proposal until after the oral defense.

III.b The Dissertation Proposal Presentation:

The purpose of the oral defense of the student's Dissertation Proposal is to provide students with the opportunity to present their plans for their dissertation research, and to refine the methods based on recommendations and suggestions from the audience at-large. At the end of the proposal presentation, the student's Dissertation Committee will convene in a private meeting to determine the appropriateness of the proposed dissertation research and to discuss recommendations for additional changes that need

to be made to the proposal.

The Dissertation Proposal Defense will be conducted using the following format:

1. Introduction by the Dissertation Committee Chair
2. Oral presentation with slides (e.g. PowerPoint) of the dissertation proposal by the student not to exceed 60 minutes. The presentation should include: the rationale for the proposed study, the research questions or aims, the study design, research methods, proposed statistical analyses, and limitations.
3. Questions by the Dissertation Committee members until all questions have been asked.
4. One round of questions by attending non-committee faculty members.
5. Questions from non-faculty members in attendance beginning with doctoral students, other studies, and other attendees.
6. Closed meeting of the Doctoral Dissertation Committee.

III.c. Approval of the Dissertation Proposal:

The Dissertation Committee will sign the Dissertation Proposal Defense Form only after the student makes corrections, additions or changes requested by the committee have been made in writing and the corrected final copy has been distributed to the committee and the Department Chairperson. At their discretion, committee members may sign this form prior to the changes being made with the understanding that the Chairperson of the student's Dissertation Committee will supervise the requested revisions. This form is available on the college web page https://publichealth.uams.edu/students/current_students/forms/doctoral-program-forms/ and must be submitted to the Department Academic Coordinator prior to the student initiates their dissertation research. Students should not collect data or conduct any component of their proposed research for their dissertation until final approval of the proposal is completed the Dissertation Proposal Defense Form is filed and approval is obtained for the Institutional Review Board (IRB). When the Dissertation Committee approves the proposal as an appropriate dissertation study, the student's Dissertation Chairperson will send notification to the Department Chair that the proposal has been presented and approved. The form will be kept by the Department's Academic Coordinator in the student's advising file.

Approval of the Dissertation Proposal Defense is not an endorsement of the proposal as a completed research plan, nor does it preclude the committee from requiring modifications of the data analysis or review of the literature at a later date. The committee must approve changes in the proposal or the conduct of the study after the Dissertation Proposal Defense Form is submitted. The committee may require that a proposal be presented for a second time before being approved, if actions after the initial proposal meeting indicate that substantial modifications in the proposal are necessary.

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