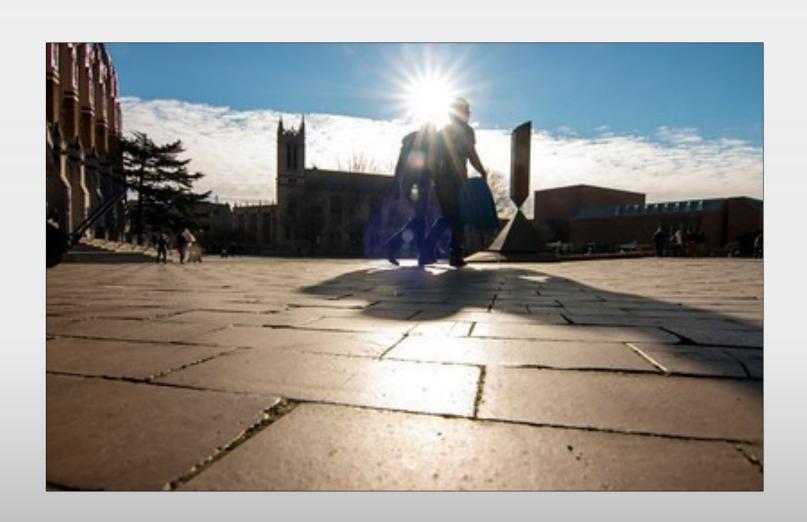


SCHOOL OF PUBLIC HEALTH

UNIVERSITY of WASHINGTON

Department of Epidemiology

PhD Student Handbook 2018-2019



University of Washington School of Public Health Department of Epidemiology



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University of Washington Map







This handbook describes the academic requirements and policies for the Department of Epidemiology PhD degree. The contents of this handbook are a supplement to the requirements and policies of the <u>University of Washington</u>, the <u>UW Graduate School</u>, and the <u>UW School of Public Health</u>. Epidemiology students are responsible for knowledge of, and adherence to, the policies and requirements of all four entities.

The Department of Epidemiology reserves the right to update the information published in the Handbook as necessary. All information is correct at the time of publication.



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The PhD program provides the most rigorous training in the conduct of epidemiologic studies. It differs from the MS degree program primarily in the requirements for coursework in advanced methods and grant writing, as well as the nature and scope of the dissertation project, which in turn determines the amount of time necessary to complete the program.

Four to five years is usually necessary to obtain the PhD degree, depending most substantially on the complexity of the dissertation project's data collection component. The Graduate School



requires that all work for the doctoral degree be completed within 10 calendar years of enrollment or of the beginning of the student's master's degree (if used to waive 30 of 90 required credits for the PhD).

A series of courses is required, which must be supplemented by sufficient elective courses and independent study/research for the student to earn at least 90-quarter credits (60 credits with relevant master's degree). In addition, the student must pass the Preliminary Examination, a written and oral General Examination, complete a research-based dissertation (to include study design, data collection, analysis, and writing), and defend the dissertation in a public seminar before their Doctoral Supervisory Committee .

The UW School of Public Health lists a set of Core Competencies for all SPH students on their Competencies for All Degrees website.

In addition to the Competencies for All Degrees, the Department of Epidemiology defines a set of competencies for Epi PhD students. They are listed in the Appendix of this handbook.

All Epi PhD students must fulfill the following credit and GPA requirements:

- At least 90 total credits are required (30 credits from a recent, health related master's degree from another U.S. university may be applied toward this total with approval from the department)
- 2. At least 18 credits must be numerically-graded, UW graduate courses.

- 3. Minimum passing course grade: 2.7
 - A student who receives a grade lower than 2.7 in a required course must retake the course and earn a 2.7 or better in order to graduate. A student who receives a grade below 2.7 in an elective course is not required to retake it; however, the course will not count toward a degree.
- 4. GPA required to graduate: 3.0

A graduate student must maintain a cumulative GPA of 3.0 to graduate. If a student falls below a 3.0 GPA for a quarter, the Graduate Program Director will review their academic record and decide whether to take "No Action", write a "Warn Letter" or place the student on probation until both the quarterly and cumulative GPA are restored to 3.0.

PhD Epidemiology Course Requirements

All courses with an * must be taken for a numerical grade.

EPI METHODS

EPI 512*	Epi Methods I (4 cr)	Autumn, Year 1
EPI 513*	Epi Methods II (4 cr)	Winter, Year 1
EPI 510	Epi Data Analysis (3 cr)	Winter, Year 1
EPI 514*	Application of Epi Methods (5 cr)	Spring, Year 1
EPI 515*	Advanced Methods I (3 cr)	Autumn, Year 2
EPI 536*	Categorical Data Analysis in Epi (4 cr)	Autumn, Year 2
EPI 537*	Survival Data Analysis in Epi (4 cr)	Winter, Year 2
EPI 516*	Advanced Methods II (4 cr)	Spring, Year 2

<u>BIOSTATISTICS</u> (The 2 course sequence below is recommended for PhD students. Consult with your faculty advisor or the Graduate Program Director if you feel the BIOST 511/512/513 sequence is a better option for you.)

BIOST 517*	Applied Biostatistics I (4 cr)	Autumn, Year 1
BIOST 518*	Applied Biostatistics II (4 cr)	Winter, Year 1

DISSERTATION, JOURNAL CLUB, AND SEMINAR

EPI 583	Epi Seminar (minimum of 3 cr total, 1 cr per quarter)	Variable
EPI 584	Dissertation Research Seminar (2 cr total, 1 cr per quarter)	Autumn & Winter Year 2
Epi 588A	Prep & Writing Research Proposals (3 cr)	Spring 2
EPI 591	Current Lit in Epi (minimum of 3 cr total, 1 cr per quarter)	Variable
EPI 800	Dissertation (27 cr minimum—Your total effort on the dissertation over the course of the PhD will exceed 27 credits- worth. Epi recommends that you take as many EPI 800 credits as possible during each quarter in which you enroll for EPI 800. You aren't required to match quarterly effort with quarterly EPI 800 credits earned.)	Variable

EPI ELECTIVES

Three Epi Elective courses listed on the Epi Course Planning Sheet (as specified below)

- One EPI Infectious Disease course marked "I" on the Epi Course Planning Sheet
- One EPI Non-Infectious Disease course marked "NI" on the Epi Course Planning Sheet
- One additional EPI Elective course of at least 2 credits from the Epi Course Planning Sheet (marked "I", "NI", "D/E", "M", or a combination of those designations)

SPH ELECTIVES

Three additional School of Public Health courses of at least 2 credits each. Non-SPH courses containing significant public health content can be used to fulfill this requirement, with approval from Graduate Program Director.

NON-COURSE REQUIREMENTS

In addition to the course requirements detailed on the previous page, PhD students are required to fulfill three main, non-course requirements to complete the degree (**Preliminary Exam, General Exam, Dissertation/Final Exam)**, as well as submitting regular progress tracking information. Each of the three requirements involves a sequence of steps which can be found in more detail <u>later in this handbook</u>.

Preliminary Exam

After completion of the basic course sequence in Epidemiology (EPI 512-513), doctoral degree aspirants must take and pass the Departmental PhD Preliminary Examination. This examination is intended to test the student's ability to apply epidemiologic principles and methods that have been presented during the first year of didactic instruction. The examination is given once a year soon after Spring quarter. It must be taken in-person. No make-up examinations are allowed.



A committee of departmental faculty members composes and scores the examination and evaluates each student's performance. Every committee member grades each question and then the scores are averaged. The members do not know the identity of the exam takers during the grading process. If a student believes that the grading of a **Preliminary Examination question** should be modified (as a result of an alternate way to look at question, unclear wording, part of an answer not taken into account, etc.), they may appeal in a written memo to the Preliminary Examination Committee. The appeal should be

delivered to the Chair of the Committee no later than a month after the distribution of the results. The appeal will be reviewed by the entire Committee.

Should a student not pass the Preliminary Examination on the first attempt, it is strongly recommended that they meet with Graduate Program Director, engage a tutor, sit in on EPI 512-513 again, and attend the review sessions again in the spring.

The preliminary exam may be taken a maximum of two times. Students who fail to pass a second time are not eligible to continue in the doctoral program. Those who pass are then eligible to take the General Examination to qualify for formal candidacy to the PhD degree.

The exam is designed to be taken after the first year. Those who feel they are not ready to take the exam after their first year may wait and take it after their second year. This option should only be used in extraordinary circumstances, and in consultation with the student's faculty advisor and the Graduate Program Director, because it can delay completion of the degree. For this reason, all PhD students must pass the Preliminary Examination before beginning their 4th year in the program. A student who has not met this requirement will not be allowed to register as a PhD student for the subsequent quarter.

General Exam

Part I: Written Exam Part II: Oral Exam

A <u>General Exam Guide</u> detailing eligibility, the timeline and process of scheduling/taking the exam can be found on the Epi website. The Graduate School website details their <u>General Exam policies</u>.

The General Examination is administered by the student's Doctoral Supervisory Committee and deals primarily with the general topic of the student's dissertation. It is designed to:

- Measure the student's ability to analyze and synthesize information,
- Determine whether the student has sufficient breadth of knowledge of the topic of their dissertation, including a clear understanding of the biology of the disease under investigation (if applicable); and
- Evaluate whether the student has adequate knowledge of recent advances and important epidemiologic problems, as well as other disciplines (e.g. biostatistics, genetics) relevant to the student's dissertation project.

The General Examination may be taken only after the short proposal has been presented to the faculty and

the NIH-style long proposal has been completed to the satisfaction of the student's committee. It is expected that the General Exam will be taken before work on any of the dissertation aims, and particularly the data collection component, has started. Under no circumstances may the General Examination be taken once the aims, and particularly those involving the data collection component(s), are complete.

Written General Examination:

The Written Examination is the first step of the General Examination. A student does not need to be registered to take the Written Exam, but must be on leave officially if not registered during the academic year. The Exam generally consists of 1 or 2 questions from each Doctoral Supervisory Committee member, tailored to the student's individual dissertation topic, with 2-3 weeks usually allowed to complete the written part. However, committees are free to depart from this model, if appropriate. The Committee members then review the written work in order to determine whether or not the student is sufficiently prepared to proceed to the Oral General Examination. A student who, in the judgement of their Committee, performs poorly on the written portion of the General Examination may be required to complete a second written portion in attempt to address the deficiencies identified in the first written portion before proceeding to the Oral Examination is approved. In addition, the Committee members may require additional course work, or other educational experiences (e.g. independent study), to remedy perceived deficiencies in any relevant area. If the performance on the written examination, whether after one or two attempts, is sufficiently poor, the Committee may decide not to allow the student to proceed with the Oral General Examination. A decision not to allow the student to proceed to the Oral General Examination effectively means that the Committee believes that the project is either infeasible, inappropriate, or that the student is not sufficiently prepared to proceed with the proposed work. Under such circumstances, the Committee is dissolved and the student must identify a new dissertation topic (and corresponding Doctoral Supervisory Committee) to continue in the PhD program.

Oral General Examination:

The Oral portion of the General Examination consists of a defense of both the NIH-style dissertation proposal and the Written Examination, and is scheduled after the Written Exam has been submitted and reviewed. If the student must be re-examined, they have one more chance to pass. In case of re-examination, the Doctoral Supervisory Committee may choose to make appropriate recommendations for further courses, reading or research to address the deficiencies. A student who does not pass after the second attempt may not earn a PhD in Epidemiology at the UW.

Dissertation

The topic of the dissertation is chosen by the student, with substantial input from their Doctoral Supervisory Committee. Flexibility is allowed in the choice of topics. Studies of disease etiology are usually conducted, but studies to evaluate preventive measures, prognostic factors, or health care programs may also be acceptable. The development of a satisfactory dissertation project often requires a significant time commitment. Thus students are strongly encouraged to begin searching for a research topic during the first year of the program.

Goals

- To assure that the student has experience in a broad range of skills needed by practicing epidemiologists
- To contribute to knowledge in the field of epidemiology



Scope

- Formulation of a hypothesis and specific aims
- Development of the research design and methods
- Planning the conduct of the project
- Obtaining human subjects approval
- Collection of data
- Analysis of data
- Interpretation of results
 - A written report of the investigation

Format Options

- A single study (for example, with chapter titles: Introduction and Background, Methods, Results, Discussion)
- Two or more chapters as potentially publishable research papers (i.e., within each chapter, sections should include: Background, Methods, etc.). However, the dissertation must have only one set of preliminary pages, such as table of contents, abstract, and list of references
- A combination of these formats with two or more publishable papers as chapters (e.g., with chapter titles, Introduction and Background, Methods, Paper Topic I (with results and discussion), Paper Topic II with Results and Discussion, and Conclusions)
- When chapters are written as publishable papers, appendices are used to report more detailed methods and analyses than would be presented in a paper
- There is no minimum or maximum number of pages for the dissertation

For more detailed discussion of the Dissertation see Appendix.



PhD Epidemiology Non-Course Requirements

All forms requiring submission to the <u>Epi Students</u> Canvas site can be linked to directly from the Epi Students Canvas site. Further instruction for completing and submitting deliverables associated with non-course requirements can be found there as well.

PRELIMINARY EXAM*

PROGRESS TRACKING

Requirement	Procedure	Timing	Requirement	Procedure	Timing
Confirm participation	Respond to email call to	Spring, Year 1	Signed Progress/ Plan Form	Epi Students Canvas site	Due every Autumn and Spring
Take Exam	To be an- nounced	Usually 1st Wed after Spring Quarter, Year 1	Funding Update	Epi Students Canvas site	Due in Spring quarter

GENERAL EXAM

DISSERTATION/FINAL EXAM

Requirement	Procedure	Timing	Requirement	Procedure	Timing
Run degree audit	Via <u>MyPlan</u>	1 quarter prior to Written Exam	Human Subjects Discussion form	Epi Students Canvas site	When chair identified
Report Chair and Committee mem-	Epi Students Canvas site	As soon as committee is formed,	Short Proposal	Epi Students Canvas site	Soon after forming dissertation committee
bers to Epi SAS		ideally by the end of Year 2	Long Proposal	Consult with committee	Before General Exam (ideally by end of Year 3)
Take Written Exam	Consult with dissertation committee	Ideally by end of Year 3 (after Long Proposal)	IRB approval or exemption	Epi Students Canvas site	Before beginning research
Submit Oral Ex- am Request	Via MyGrad	As soon as a date is scheduled	Report Reading Committee to Epi SAS	Epi Students Canvas site	Before scheduling Final Exam
Submit Approval to Proceed to General Oral Exam form	Epi Students Canvas site	Immediately follow- ing successful com- pletion of General Written Exam	Run degree audit	Via <u>MyPlan</u>	1 quarter prior to Final Exam
Take Oral Exam, submit signed Warrant	Epi Students Canvas site	Submit Warrant immediately follow- ing Oral Exam	Submit Request for Final Exam	<u>Via MyGrad</u>	As soon as a date is scheduled
			Take exam, submit signed warrant	Epi Students Canvas site	Immediately following successful completion of Final Exam
			Submit Dissertation, Cmte approval form, Survey of Earned Doctorates	<u>Via ETD</u>	Due by last day of quarter

Degree Overview

The following is a typical timeline for completing all Epidemiology PhD degree requirements. Though the years and terms for completing some requirements will vary from student to student, the sequence in which the non-course requirements are fulfilled should, with some flexibility regarding submission of IRB approval/exemption, follow the table below.

	Fall Quarter	Winter Quarter	Spring Quarter	Summer Quarter
Year 1	Coursework	Coursework	CourseworkConfirm Prelim Exam participation	Take Prelim Exam
Year 2	Coursework	Coursework	 Coursework Identify a dissertation Chair, and committee Identify a dissertation topic 	
Year 3	 Submit Human and Animal Subjects Form Submit Short Proposal Degree audit 	 Submit IRB approval/ exemption Submit Long Proposal Take General Written Exam Set General Oral Exam date Request General Oral Exam in MGP 	 Dissertation research/ writing Take General Oral Exam Submit signed Warrant 	Dissertation research/ writing
Year 4	Dissertation research/ writing	Dissertation research/writing	Dissertation research/writing	Dissertation research/ writing
Year 5	 Dissertation research/ writing Choose Reading Committee 	 Dissertation research/writing Set Final Exam date Degree audit Request Final Exam in MGP 	 Complete Final Exam Submit signed Warrant Submit dissertation and approval form Complete Survey of Earned Doctorates 	

GRADUATE CERTIFICATE PROGRAMS

<u>Graduate Certificate Programs</u>: Any student enrolled in a graduate degree program at the University of Washington who meets the prerequisites and qualifications may apply for a graduate certificate program. There is usually time to earn one graduate certificate during the standard time frame to earn an epidemiology degree.

Rules governing all certificate programs:

- The Graduate Certificate will appear on the student's transcript
- At least 9 credits applied toward the certificate must be taken for a numeric grade
- Up to 6 credits may overlap with the student's degree program if they are elective credits for both programs
- Core degree requirements may not be used in fulfillment of a certificate program
- A cumulative GPA of 3.0 is required for all courses counting toward the certificate, and a grade of 2.7 or above is required for any individual course.
- Students earning both a degree and a certificate must submit a manual degree audit to the Graduate School by the end of the quarter in which they graduate. Find concurrent program instructions for a manual audit in the Epi Students Canvas site.
- Individual programs may have additional requirements.

The additional, specific requirements for any Graduate Certificate program may be found on the program's website (application requirements, course and credit requirements). See the Graduate Certificate Programs link above for the website containing a listing of all programs and links to program websites.

Helpful Resources and Information



How do I waive a course? Epi policies and instructions are <u>here</u>.

Can I transfer previously earned graduate credits? You may transfer up to 6 graduate, quarter credits (4 semester credits) with approval of the Epi Department and the Graduate School. First complete the waiver form linked above and submit to Epi Student Aca-

demic Services. If approved by Epi, then petition the Graduate School through MyGradProgram. Up to 12 credits earned as a Graduate Non-Matriculated student may be applied to a UW degree program.

How can I find a tutor? Email Kevin Schuda in the Epi SAS Office at epcourse@uw.edu. Free writing tutoring can be scheduled through the Health Sciences Library.





I'm looking for funding. Where can I search? Start with the <u>Epi Student Opportunities</u> website. The <u>SPH website</u> posts funding opportunities that are advertised to the Dean's Office. A few other resources can be found on the <u>Student Funding</u> Graduate School webpage and the <u>Graduate Funding Information Service</u> (GFIS) webpage.

Can I request a leave of absence? Yes, if you are eligible and fulfill all requirements for going on leave. You can find more Graduate School policy detail here. A guide for the process of requesting leave is here.





Does the Epi Department fund travel to conferences? Any Epi student presenting a paper, whether in oral or poster format, at a major conference in the field may <u>apply for limited travel funds</u>. There are also travel funds available through GFIS linked above.

Where can I find information about:

<u>Tuition costs</u>? Contact info for Student Fiscal Services can be found <u>here</u>.

<u>Course Registration</u>? Contact info for the Registration Office can be found <u>here</u>.

<u>Washington State Residency</u>? Contact info for the Residency Office can be found <u>here</u>.





Are there resources for helping enhance the mentoring relationship between me and my advisor? A meeting with the Epi Graduate Program Director is often helpful. The Graduate School Mentoring website also provides information and resources.

Are there mental health professionals I can speak with on campus? The <u>Counseling Center</u> offers mostly free services including brief counseling sessions, assessments, referrals, and crisis intervention. The <u>Health and Wellness</u> department also provides mental health support for students.



Get Involved!

STUDENT REPRESENTATION

<u>Graduate & Professional Student Senate</u>: The Graduate and Professional Student Senate (GPSS) is the official student government representing the 15,000 graduate and professional students at the University of Washington.

<u>Epidemiology Department Student Representatives:</u> These positions provide you the opportunity to represent your fellow Epidemiology students in areas such as our curriculum, admissions, diversity, and social opportunities. Contact any representative

at the link above to present ideas for improvement in the department or to inquire about becoming a representative yourself.

DIVERSITY

Samuel E. Kelly Ethnic Cultural Center: Home of the Office of Minority Affairs and Diversity, works to enrich the collegiate experience through resources and opportunities focused on increasing and promoting diversity on campus. The Graduate Opportunities and Minority Achievement Program GO-MAP specifically focuses on the graduate student experience.

The <u>Intellectual House</u> provides a multi-service learning and gathering space for Native American students, faculty and staff, as well as others from various cultures and communities to come together in a welcoming environment to share knowledge.

RECREATION

The <u>Intramural Activities/Waterfront Activities Center</u> offer opportunities for students to take classes, participate in intramural sports, take advantage of the recreation center (pool, basketball, racquetball, weight training, indoor track, tennis, climbing wall, and more). The WAC rents canoes and rowboats.



SCHOOL OF PUBLIC HEALTH SEMINARS AND EVENTS



View the <u>School of Public Health Events Calendar</u> to find an extremely wide variety of public health related events and seminars both on and off campus, as well as links to individual SPH department calendars.

REGISTERED STUDENT ORGANIZATIONS

The <u>EPIDEMIOLOGY STUDENTS GROUP</u> is an official UW Registered Student Organization. On the <u>Student Activities Office</u> website you can search the complete listing of UW RSO's and learn more about registering a new student organization.

Appendix: Dissertation/Final Exam

Dissertation Committee (membership = 4 members minimum)

Chair: Usually the Chair will be the faculty member who is providing the majority of the scientific mentoring in the development and conduct of the student's dissertation project. A faculty member must fulfill 3 basic criteria in order to serve as Chair of an Epi Department Doctoral Supervisory Committee.

- The Chair must be a core Epidemiology faculty member.*
- The Chair must have an earned doctoral degree (or foreign equivalent).
- 3. The Chair must be a member of the <u>Graduate Faculty</u> who is endorsed to chair doctoral supervisory committees. Don't assume this is the case for a potential Chair. Search at the linked page above to be 100% sure. Faculty who need to obtain Graduate Faculty status and/or endorsement to chair a committee should contact Angie Buck, the Department's Academic Human Resources coordinator (ambuck@uw.edu) for advice on the application process.

*A faculty member with an adjunct, affiliate, clinical, senior lecturer or emeritus appointment in Epi may chair a Doctoral Supervisory Committee only with prior approval of the Graduate Program Director. In such cases, the Committee must include at least two other members who hold Core faculty appointments in Epidemiology. To request permission for this exception first check to be sure the proposed Chair is a member of the Graduate Faculty and endorsed to Chair dissertation committees (few are). If not, see #3 above. Once the faculty member is eligible to Chair dissertation committees send a petition to the Graduate Program Director, providing the following information:

- 1. A brief description of the proposed project
- 2. A brief explanation of why the faculty member is especially appropriate to chair the committee based on the topic and their expertise
- 3. The names of the core Epidemiology faculty members who will also serve on the committee

<u>The Graduate School Representative (GSR)</u> is a voting member of the committee whose <u>responsibilities are listed here</u>. Please note the following when selecting a GSR:

- The GSR should be selected by the student in consultation with the Committee Chair.
- <u>Eligibility requirements</u> are detailed on the Graduate School website.

The Doctoral Supervisory Committee profile must conform to the following criteria:

- At least two members of the Committee must hold appointments in the Epidemiology Department.
- At least one committee member must be an expert in the field most relevant to the dissertation topic. Such a committee member may be from any department (subject to other requirements regarding who may serve on doctoral supervisory committees).
- The majority of the members must be on the Graduate Faculty with at least three endorsed to Chair doctoral committees, including the Chair and GSR. Check the <u>Graduate Faculty Locator</u>.
- At least three committee members must hold the rank of Assistant Professor or higher (whether Core, Research, Adjunct, Affiliate, Clinical, or equivalent rank at another institution).
- Appointing a non-UW affiliated committee member requires approval. To request permission for a non-UW affiliated committee member email the following information to the Graduate Program Director.
 - 1. A brief description of the proposed project
 - 2. A brief explanation of why the person is especially appropriate to serve on the committee based on the topic and their expertise
 - 3. The proposed committee member's CV
- An individual currently matriculated in an Epidemiology degree program may not serve on an Epidemiology supervisory committee.

Committee Formation

- A student may only officially form a Dissertation Supervisory Committee while registered. A master's student admitted to the PhD program may set up their committee informally, but not officially until after master's graduation.
- Once committee members have been selected, being sure to follow the <u>eligibility requirements</u>, submit the Chair/ Committee Update Form via the <u>Epi Students</u> Canvas site.
- After the form is submitted Epi SAS will officially set-up the committee in MyGrad Program.
- Once the committee has been set up in MyGrad Program the Graduate School will send an official letter via email
 to confirm the formation of the Committee. This is the only official notification the student and committee will receive.
- To request a change to the Committee members, submit a revised Chair/Committee Update Form, along with an explanation for the request, via the Epi PhD Dropbox. The Graduate Program Director must approve the removal of any committee member or change to the Chair not requested by the member him or herself.
- The Doctoral Supervisory Committee should be officially established at least four months prior to the General Examination.
- The Committee will become inactive if the student fails to complete and pay for an official leave request for any non-registered quarter, except summer.
- Before scheduling the Final Exam students must appoint a Reading Committee. This is typically a 3 person subset of
 the full Dissertation Supervisory Committee consisting of the Chair and two other members. The GSR is usually not
 appointed to the Reading Committee. Visit the Graduate School website for a full discussion of the roles and responsibilities of the Reading Committee.

Once the Doctoral Supervisory Committee is formed, the role of the student's previous advisor is dissolved. The Chair becomes the new advisor. It is the responsibility of the Committee to ensure that the student's course work is appropriate and adequate for the area of Epidemiology that the student is pursuing and that the student has involvement to a satisfactory degree in each of the elements of the dissertation project. The Committee may require additional courses beyond departmental requirements (including ESL classes) to provide an appropriate knowledge base or correct deficiencies.

The Committee is also responsible for ensuring that the student has met departmental and Graduate School requirements at each stage of the dissertation process. However, ultimately each student bears the responsibility of knowing, understanding, and completing these requirements.

If a student does not make satisfactory progress towards their degree, the Committee, in consultation with the Graduate Program Director, may choose to place the student on "warn" or probation status. The student then has another chance to meet the requirements of the Committee. If a student has been warned or placed on probation and still fails to make satisfactory progress, the Committee may choose to disband. In that case, the student will have to find other willing faculty members, which may include selecting a new dissertation topic, in order to earn a PhD from the Department. The Committee may also choose to place the student on final probation, which gives the student one quarter to meet the benchmarks required by the Committee or Department or be removed from the Epidemiology doctoral program.

Data Collection Requirement

The goal of associating the data collection requirement with the dissertation is to ensure that training and experience in data collection are: 1) designed and organized, though not necessarily carried out, by the student as the "Principal Investigator" of their own research project; and 2) mentored by their Committee. The data collection requirement has considerable flexibility within this goal, but in all cases the student must be responsible for the collection of new data components as part of the dissertation research. "Collection of new data" may include one or more of the following: subject interviews, medical record abstraction, laboratory measures on newly collected or stored specimens, or linkage of data sets; the specifics are subject to the approval of the student's Committee. A student should check with the Graduate Program Director regarding any questions they have as to whether or not their dissertation project meets the data collection requirement. Meta-analyses and other quantitative reviews do not satisfy the data collection requirement. Similarly, a dissertation project may not consist solely of non-quantitative research (e.g., review papers and qualitative studies); such work could, however, be a component of a larger dissertation project in which quantitative testing of hypotheses using individual-level data is conducted. For PhD students without experience in design and implementation of primary data collection through questionnaires or abstraction of records, the Supervisory Committee should ensure that the student gains experience in these types of data collection through the dissertation, from other research, or through an ancillary study to the dissertation project.

Committee Meetings and Dissertation Proposals

First Meeting with Supervisory Committee: It is recommended that each student arrange a preliminary meeting with their Committee, during which time they will discuss a draft dissertation proposal that has been circulated previously to Committee members. The Committee has the opportunity to make suggestions and require changes. The Committee, therefore, makes decisions about what constitutes an acceptable proposal. Prior to this meeting the student should run a degree audit in MyPlan and then share it with the Committee at the meeting. The Committee discusses any additional coursework it will require of the student.

Short Dissertation Proposal for Faculty Review: Prior to taking the Oral General Examination, the student must prepare a Short Proposal. Consult the PhD Dissertation Proposal Requirements for instructions on the content, format and submission of the Short Proposal, which are strictly enforced.

NIH-Style Long Dissertation Proposal: In addition to the short proposal, the student must develop and present to their supervisory committee an NIH-Style Long Dissertation Proposal. The material in this proposal will form the basis for the Committee's plans for the Written and Oral General Examination. The strict requirements can be found on the <u>Epi website</u>.

Human Subjects Approval

Human and Animal Subjects Form

The Graduate School requires a graduate degree student to discuss Human Subjects requirements with their Supervisory Committee Chair. In order to register for EPI 800 Dissertation credits PhD students must first complete the "Use of Human and Animal Subjects for UW Graduate Student Theses and Dissertations" form. A blank copy can be found in the Epi Students Canvas site. Once completed it should be uploaded back to the Epi Students site.

IRB Approval or Exemption

Those aspects of a student's dissertation project that potentially involve human subjects (e.g., subject identification and recruitment, data and/or specimen collection or analysis) must be reviewed and approved in accordance with UW Human Subjects Division policies and federal regulations before they may be initiated. Detailed information regarding IRB policies, processes, and FAQ's can be found on the Human Subjects Division website linked above. IRB questions should be directed to the Human Subjects Division (contact info can be found on their website). Unless the project qualifies as "Exempt" under IRB regulations, the review and approval process can take several months, so the student should begin the process as early as possible. Most dissertations will require human subject review and approval, rather than exemption, even if the project funding the research already has received approval. The Certificate of Exemption and approval application forms can be found on HSD website above. A student must upload to the Epi Students Canvas site, prior to beginning their dissertation research, the IRB cover page(s) which should include the approval or exemption number, start and end dates of approval (including any extensions), name of the principal investigator and title of the approved project. The start and end dates of approval must include the time during which dissertation research was being done. The student must write their name on the copy of the cover page(s) if not included.

Final Examination (a.k.a. Dissertation Defense)

To be awarded the PhD, a student must successfully present and defend their dissertation topic at the Final Examination. The Epi website includes a Step-by-step guide for scheduling and completing your Final Exam (links to Graduate School webpages that contain relevant policies and procedures are included in the guide).

Final Examination Agenda: The following agenda is typical of a doctoral defense in this department, but the committee is free to depart from this model as deemed appropriate:

- The student presents a seminar-style version of their dissertation research (40-50 minutes).
- Questions are taken from the audience (and/or Committee, at the Committee's preference).
- The audience is dismissed.
- The Committee asks questions in closed session with the student.
- The student is dismissed, but asked to wait outside.
- The Committee discusses the student's work and decides whether or not to grant the PhD.
- The Committee notifies the student of its decision.
- The committee members mark the warrant appropriately and sign it. Only those members present in person should sign the form.

A member present by audio/video conferencing, must send the Committee Chair and epi@uw.edu confirmation of their attendance during the entire examination including the time and date of the examination, and their vote (pass, reexamine, fail).

The student is responsible for making sure the signed warrant is uploaded to the Epi Students Canvas site by 5:00 pm on the last day of the quarter (earlier is recommended). If the student does not perform satisfactorily, the Committee may, but it is not required to, permit a second examination and recommend further study. Although the Graduate School allows a student to take the Final Examination 3 times, the Department of Epidemiology only allows it to be taken twice. If the student fails the second time, they will not be able to earn a PhD in this Department.

Appendix: Epi PhD Competencies

- Define and calculate measures of disease frequency and measures of association between risk factors and disease;
- Describe the major epidemiologic research study designs and their advantages and limitations;
- Describe the major sources of bias in epidemiologic research (confounding, selection bias and measurement error) and the ways to evaluate and reduce the bias;
- Evaluate effect modification;
- Apply guidelines to support whether an association is causal;
- List and define the basic terms and methods used in outbreak investigation, infectious disease epidemiology, chronic disease epidemiology, disease prevention trials and evaluation of screening tests;
- Design an epidemiologic study to address a question of interest;
- Interpret results of an epidemiologic study, including the relation to findings from other epidemiologic studies, the potential biological and/or social mechanisms, the limitations of the study, and the public health implications; and
- Meet the learning objectives for the MS in Epidemiology, General Track detailed in the Master of Science Epidemiology Competencies section of this appendix;
- Formulate study questions that will advance scientific knowledge about a topic of public health importance;
- Develop a research proposal that presents the study aims, scientific background, public health significance, and the detailed methods for carrying out the epidemiologic study;
- Develop study procedures for the protection of rights of human subjects;
- Apply regression, classical methods of analysis of categorical data, logistic regression, survival analysis and other appropriate statistical approaches to analyze epidemiologic data;
- Make a clear oral presentation on the design and results of an epidemiologic study;
- Write a clear description of the rationale, methods, results, and interpretation of an epidemiologic investigation that would be acceptable for publication in a scientific journal;
- Demonstrate expertise in a substantive area of disease etiology, disease prevention, or clinical epidemiology; and
- Design and implement data collection, quality control and data management procedures for an epidemiological study.