Epidemiology 2019-2020 PhD Student Handbook

James T. Laney School of Graduate Studies Emory University

Table of Contents

Part 1: Academic Affairs		3
1.1 Program Overview		3
1.2 Degree Competenc	ies	4
1.3 Program Requirem	ents	4
1.3.1 Epidemiolog	gy Program Curriculum Requirements	5
1.3.2 Teaching As	sistant Training and Teaching Opportunity Program (TATTO)	8
1.3.3 Research As	sistantships	10
1.3.4 Primary Dat	a Collection	12
1.3.5 Ethics Traini	ng	13
1.3.6 English as a	Second Language Program (International Students Only)	13
1.3.7 Qualifying E	xamination	13
1.3.8 Dissertation		14
1.3.9 Student Res	earch and Progress Day Symposium	26
1.3.10 Program Pro	ogress Summary & Individual Development Plan and LGS Annual	
Progress Re	port	26
1.3.11 Department	al/Program Citizenship	27
1.4 Admission to Candi	dacy	28
Part 2: Student Due Progre	2SS	29
2.1 Due Progress Expect	tations	29
2.2 Time to Degree		30
2.3 Terminal Master's I	Degree	31
Part 3: Academic Policies a	and Procedures	31
3.1 Registration		31
3.2 Add/Drop/Swap		31
3.3 Auditing Courses &	Courses Outside RSPH	31
3.4 Grades 32		
3.5 Transfer Credit		32
3.6 Course Waivers		32
3.7 Leaves of Absence.		32
3.8 Completion of Degr	ee	33
Part 4: Financial Informati	on	33
4.1 Tuition and Stipend	Information	33
4.2 External Funding		33
4.3 Student Fees		34
4.4 Supplemental Pay \	While Receiving a Stipend	34
4.5 Professional Develo	ppment Support Funds	34
Part 5: Grievance Policy		35
Appendix 1. Sample Cours	e Plans	36
Appendix 2. Candidacy Ch	ecklist	40

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Part 1: Academic Affairs

1.1 Program Overview

(A) Goal of Epidemiology PhD Program

The Doctoral Program in Epidemiology at Emory University trains students in the methods of epidemiology and the application of these methods to a broad scope of public health and medical problems. Areas of study include, but are not limited to cancer; cardiovascular disease; reproductive, pediatric, and perinatal health; diet/nutrition and physical activity; epidemiologic methods; infectious diseases (including HIV/AIDS): genetics and molecular epidemiology; social epidemiology; and health disparities. The goal of the program is to graduate epidemiologists with the knowledge, skills, and philosophy to be influential lead researchers (principal investigators), teachers of epidemiology, and public health officials. Our graduates are in positions in academia, government and the private sector.

The doctoral program in Epidemiology is one of 6 Public Health Sciences doctoral programs administered through the Laney Graduate School (LGS) and follows the rules and procedures set forth by the LGS. For a complete guide of the LGS policies and procedures please see the LGS Handbook.

(B) Admissions

In any given year, there are between 55 and 60 students at various stages in their training in the PhD Program. The Program receives over 150 applications a year for 8 to 12 spaces. Admitted students typically have an advanced degree in epidemiology or a related field, a clear statement of purpose conveying an understanding of the field of epidemiology and explaining their desire to pursue the degree, defined research interests, outstanding recommendations from faculty and supervisors, and some professional/research experience.

(C) Research Opportunities

The Department of Epidemiology has approximately 40 primarily appointed faculty, more than 60 secondarily appointed faculty, and more than 30 adjunct faculty. These faculty members are actively engaged in research in methodology; cancer epidemiology; cardio-metabolic epidemiology; epidemiology of diet/nutrition and physical activity; infectious disease epidemiology; reproductive, pediatric, and perinatal epidemiology; genetic and molecular epidemiology; and social epidemiology.

Research opportunities are available not only in the Epidemiology Program but also in affiliated agencies and institutions. The Program has faculty with secondary appointments to Epidemiology from administrative units throughout the University including other departments in the School of Public Health, the School of Medicine and the Winship Cancer Institute. Adjunct faculty include researchers from the Centers for Disease Control and Prevention and the American Cancer Society. Seminars presented by faculty, students, and external investigators offer exposure to ongoing research in the field and allow students to discuss research in progress.

(D) Advising

Students are assigned a faculty advisor upon entrance to the program based on the interest areas of both the student and faculty and faculty advising load. The faculty advisor serves as a resource for progress through the program, including course selection and dissertation topic development. Often the faculty advisor becomes the Dissertation Committee chair. However, the student is free to change advisors and/or change areas of interest. To change advisors, students should obtain agreement from the new advisor and notify the prior advisor, the co-DGSes (Dr. Chamberlain & Suglia), and the PhD program administrator. When a student develops a Dissertation Committee, the Chair of the Committee becomes the student's advisor for the duration of the PhD program. In addition to the faculty advisor, both the co-DGSes and the program administrator assist students with general course and program advice, including communication of Program and LGS policies. In addition to individual advising, Drs. Chamberlain and Suglia advise students as the co-directors of the program. Dr. Chamberlain specifically advises doctoral students who have not yet taken the Qualifying Exam. Dr. Suglia advises all students who have passed the Qualifying Exam milestone.

Mentorship is an important component of doctoral training. As such, students are encouraged to review the LGS' Mentoring Guide for Students: Building Successful Mentoring Relationships (<u>http://www.gs.emory.edu/professional-development/mentoring.html</u>) and to participate in professional development activities developed by the Program. The Mentoring Guide highlights best practices to cultivate a successful mentoring relationship built on ongoing, clear communication of expectations for both the mentor and the student.

1.2 Degree Competencies

The basic competencies that the PhD students should master upon completing their doctoral program include the following:

- 1. Evaluate epidemiologic research
- 2. Formulate an epidemiologic research question that addresses a gap in the literature
- 3. Develop an epidemiologic research study addressing a gap in the literature
- 4. Conduct independent research using epidemiologic methods
- 5. Communicate the results of epidemiologic research to a scientific audience

1.3 Program Requirements

To successfully complete the doctoral program in epidemiology, students must complete the following:

- 1. Curriculum
- 2. Teaching Assistant Training and Teaching Opportunity Program (TATTO)
- 3. Research Assistantships
- 4. Primary Data Collection
- 5. Ethics Training
- 6. English as a Second Language (ESL) Program (International Students Only)
- 7. Qualifying Examination
- 8. Dissertation including successful completion of the following milestones:

- Dissertation Concept Letter (approved by PhD Program Committee)
- Dissertation Overview (approved by PhD Program Committee)
- Dissertation Proposal: Written Proposal and Oral Proposal Defense (approved by the Dissertation Committee)
- Dissertation: Dissertation Document and Oral Defense (approved by the Dissertation Committee) and LGS review of Dissertation Document (final approval by the LGS Dean)
- 9. Student Research and Progress Symposium
- 10. Individual Development Plan (IDP) and Annual Progress Report
- 11. Departmental/Program Citizenship

1.3.1 Epidemiology Program Curriculum Requirements

The Epidemiology doctoral curriculum consists of required classes that provide students with a foundation in epidemiologic methods and statistics. EPI 530: Epidemiologic Methods I, Biostatistics 500: Biostatistics Methods I, and EPI 534: Programming in SAS and R may be waived if students learned the concepts in coursework taken prior to entering the program. This is determined on a case-by-case basis upon consultation with a DGS and the program administrator prior to matriculation. Elective coursework is meant to introduce key epidemiologic issues related to a substantive area of research, to demonstrate how epidemiologic methods are applied to research questions in these substantive areas, and to teach students how to critically review epidemiologic literature. Students are required to enroll in a minimum of 6 credit hours of epidemiology electives. At least 4 of these credit hours must be completed through substantive epidemiology electives. The remaining 2 credit hours of elective coursework may be completed through an elective epidemiology methods course or additional substantive area coursework in epidemiology. Students are encouraged to take additional electives relevant to their training in epidemiology or other fields after meeting the Program requirements. Required epidemiology methods courses and courses fulfilling the elective requirement must be taken for a grade; other courses may be taken with the satisfactory/unsatisfactory grading option (with permission of the course instructor).

During the summer, students must register for 9 credit hours of Research Hours to maintain their full-time student status. Students are expected to make full-time progress (be in full time training) during the summer although not enrolled in coursework.

All students must complete a minimum of 18 credit hours of graded coursework selected from methods and elective courses offered by the Epidemiology Program to be eligible for Candidacy. Further, LGS requires students to complete 54 credit hours (including required coursework, Research Hours, TATT courses, and other optional coursework) to be eligible for Candidacy.

	Class Number Offered Class Name			
	EPI 530	Fall	Epidemiologic Methods I	Hours 4
	EPI 534	Fall	Programming in SAS & R	2
Ś	EPI 545	Spring Advanced Epidemiologic Methods II		4
ent	EPI 550	Fall	Epidemiologic Methods III	4
em	EPI 560	Spring	Epidemiologic Methods IV	
quir	EPI 739	Spring	Epidemiologic Methods V	2
Epidemiology Program Curriculum Requirements	EPI 790R*	Fall, Spring	Doctoral Seminar in Epidemiologic Practice	1
ricul	BIOS 500	Fall	Biostatistical Methods I	4
Cur	BIOS 591P	Spring	Biostatistical Methods II	3
E	BIOS 510	Fall	Probability Theory	4
Progra	EPI XXX	Fall, Spring	Electives (to include no less than 4 credit hours of substantive classes)	6
PUBH 700**† Fall Introduction to I		Introduction to Public Health	0	
emiolo	PUBH 701**	Fall	Public Health Research: Discovery to Practice	1
Epide	EPI 731	Spring	Analytical Foundations of Epidemiology	3
	EPI 798R/EPI799R	Fall, Spring	Research hours	<u>></u> 18
s	TATT 600	Fall	Teaching Assistant Training Course	1
LGS TATTO Requirements	TATT 605	Fall	Teaching Assistantship	2
LGS T. tequire	CI TATT 605FallTeaching Assistantsh SG TATT 610Fall, SpringTeaching Associatesh		Teaching Associateship	2
Ľ.	EPI 791**	Fall	Teaching Epidemiology	1
IPE ments	JPE 600	Spring	Jones Program in Ethics Core Course	0
LGS JPE Requirements		Fall, Spring	Program Based Instruction (6 hours)***	0
Ř	JPE 610	Fall, Spring	Jones Program in Ethics Workshops	0

Epidemiology PhD Coursework Requirements

*Enrollment in Doctoral Seminar is required every term through the end of the term in which the student successfully defends his or her dissertation unless the student is excused by a DGS.

**PUBHI 700, PUBH 701, and EPI 791 do not count towards 6 hours of EPI electives requirement.

†PUBH 700 is only required for matriculating students who do not have a master's degree in public health

***This requirement is fulfilled by participation in the Doctoral Seminar in the first two years of the program.

<u>PUBH 700 (0) Introduction to Public Health (0 credit hours)</u>: The Public Health Sciences cluster is comprised of six doctoral programs, all housed within the Rollins School of Public Health: Behavioral Sciences & Health Education, Biostatistics & Bioinformatics, Environmental Health Sciences, Epidemiology, Health Services Research & Policy, and Nutrition Health Sciences. Public Health, by its very nature, is interdisciplinary so that even within one doctoral program, students could have different types of Masters training, or none at all (for the few doctoral programs that do not require Master's training for matriculation). This interdisciplinarity contributes to the rich intellectual environment of the school.

At the same time, the school must ensure that all doctoral students acquire foundational public health knowledge, which offers a broad overview of the field. This is thought to complement the great depth at which students will study their specific research topics. Exposure to this broad overview of the field is required for those without an MPH/MSPH degree from an accredited school or program of public health upon matriculation. This course is optional for those who already have an MPH/MSPH from an accredited school or program of public health.

<u>PUBH 701 (1) Public Health Research: Discovery to Practice (1 credit hour)</u>: Doctoral education in the public health sciences trains students to drive innovation and discovery in public health. Apart from the usual doctoral milestones met through coursework, the qualifying exam, and the dissertation, much of the doctoral process is self-directed. Identifying goals for the doctoral experience and how to achieve them can be daunting. This conversation-based course is designed to provide students with the tools to develop a personal strategy for successfully navigating the doctoral experience.

Through this course, doctoral students will identify their personal and professional goals and develop a personal plan for reaching these objectives and goals. Students will engage with faculty and other doctoral students to learn how they have successfully navigated through common training and scientific challenges. By interfacing with colleagues, they will gain appreciation of the breadth of the public health field and the multiple sub-disciplines and approaches that are used to translate science into practice.

<u>Research Hours (1-9 credit hours)</u>: Students enroll in 9 credits of research hours during the Summer term and after completing course work (pre-Candidacy: EPI 798R & post-Candidacy: EPI 799R). Before completing course work, students may also enroll in research hours to maintain full-time progress in the Program.

If a student is registered for 5 or more research hours, a Research Hours Agreement Form, found on Canvas, must be submitted for approval prior to the first day of the term. Students registered for 1 - 4 research hours are encouraged but not required to submit a form. The Research Hours Agreement Form must include at least three measurable objectives that will be the focus of the student's training in a particular term. These objectives should be activities that can realistically be completed during the given term. The objectives are the basis for the

student's grade (S/U) at the end of the semester and must be approved by the mentor and one of the co-DGSes.

The type of research training completed during research hours can vary widely. Most research activities that a student and the student's mentor agree contribute to the student's training and forward progress in the program would likely qualify. However, training activities for which the student is receiving supplemental pay (see section 4.4) should not be included in the Research Hours Agreement Form. Some examples of research activities (not broken down to the task level) that may be included on the Research Hours Agreement Form are:

- Writing a manuscript
- Performing a literature review
- Performing data analysis
- Writing the Concept Letter
- Studying for the Qualifying Exam
- Writing the Dissertation Proposal
- Working on an RA or part of an RA (see section 1.3.3)
- Writing a dissertation paper
- Preparing a training grant (e.g., F30/F31)
- Performing primary data collection
- Participating in other research training activities

Generally, holding a committee meeting is not considered adequate to count as a Research Hours objective although preparing materials to present at a committee meeting could be.

The Research Hours Agreement Form provides a formal opportunity for a student and his or her advisor to communicate about goals and expectations for the term. <u>Further, the form is the basis on which the faculty mentor will assign the student a grade of S or U at the end of the term</u>. Therefore, it is important that the student and his or her advisor are clear about the research hours expectations for the term and that they communicate regularly during the term to make sure both are in agreement that appropriate progress is being made. Modifications of the objectives due to unforeseen circumstances (e.g., data needed for an analysis are not available in time) are permitted if the student, the faculty mentor, and a DGS all agree with the change. Students should submit a revised Research Hours Agreement Form in this circumstances.

1.3.2 Teaching Assistant Training and Teaching Opportunity Program (TATTO)

All students in LGS must participate in the Teaching Assistant Training and Teaching Opportunity (TATTO) program. The program consists of four requirements described below.

1. Teaching Assistant Training Course (TATT 600); 1 credit hour

This is a 2-day course offered by LGS and taught in August. This course must be taken before students can receive credit for TATT 605 or 610. The course covers syllabus writing,

grading, lecturing, facilitating discussion, using writing as a pedagogical tool, conducting lab sessions, and using new technologies. Though this course occurs in late summer, it appears on the student transcript as a fall course.

2. Teaching Epidemiology (EPI 791); 1 credit hour

This Epidemiology Program course on teaching is taken concurrently with TATT 605. This course builds on TATT 600 by providing students the opportunity to learn and apply principles and skills involved in the organization and teaching of an introductory level course in epidemiologic methods.

3. Teaching Assistantship (TATT 605); 2 credit hours

Students enrolled in TATT 605 assist faculty in teaching one of the basic epidemiology courses (typically EPI 530: Epidemiologic Methods I) as a lab section leader. Responsibilities include: reviewing lecture material each week, grading homework, holding review sessions for exams, providing individual help to students through office hours, and other duties deemed necessary by the instructor. Students enrolled in TATT 605 must be present from the first course meeting through grading of the final exam or equivalent.

4. Teaching Associateship (TATT 610); 2 credit hours

Students must successfully complete TATT 605 before enrolling in TATT 610. TATT 610 teaching associates lead a lab section for an advanced epidemiologic methods course (typically EPI 540: Epidemiologic Methods II or EPI 545: Advanced Epidemiologic Methods II or EPI 550: Epidemiologic Methods III). Teaching Associates (TAs) take more responsibility for the lab section than is required for TATT 605. This often includes presenting new information and reviewing challenging methodological concepts. The faculty member who is the instructor for the lecture portion of the course typically provides opportunities for TAs to provide feedback and suggestions on course components such as the syllabus, homework, exams, the general format, lectures, etc. Students enrolled in TATT 610 must be present from the first course meeting through grading of the final exam or equivalent.

<u>Timing:</u> Decisions about when to complete the TATTO requirements are made in consultation with the student, a DGS, and the program administrator in June prior to the student entering the Program. Typically, students entering with an MPH in Epidemiology will complete TATT 600 in August before the start of their first year. They will then enroll in EPI 791 and TATT 605 in their first term. International students must fulfill any LGS ESL requirements prior to TATTO training. Students who do not TA in their first Fall enroll in EPI 791 and TATT 605 in the Fall of their second year after completing TATT 600 training.

Students are required to successfully complete TATT 610 prior to taking the Qualifying Exam because the experience helps them to prepare for the exam. Thus, students typically complete the requirement the Spring before they take the Qualifying Exam. Although discussions about when to complete the TATT 610 requirement are held in May or June before the student enrolls, decisions about which course the student will TA for TATT 610 are typically made during the October immediately prior to the term in which the student will be fulfilling the TATT 610

requirement. These decisions are made in consultation with the instructors of the eligible courses as well as the student, a DGS, and the program administrator.

<u>Evaluation</u>: TATTO requirements are graded on an S/U basis. Students receiving a "U" for a TATTO requirement will repeat TATT 600 and the TATTO rotation in which they received a "U" (TATT 605 or TATT 610). Receiving a grade of "S" indicates successful completion of the requirement. For TATT 605 and 610, instructor evaluations of the TA are supplemented with lab-section-specific evaluations by the enrolled students. These evaluations are distributed to the TA and the course instructor, and a copy is included in the TA's file.

<u>TAing for Pay</u>: Student's earning TATTO credit do not receive payment for being a TA. However, students interested in receiving additional training in teaching may participate in paid TA opportunities beyond the TATTO requirements. <u>Before agreeing to TA for pay</u>, the student must receive approval from his or her advisor and a DGS. If invited to TA outside of TATTO, the student should let the instructor know that s/he needs permission from the Program before s/he can commit to TAing. Further, the student should clarify that the responsibilities for TAing the course cannot exceed 10 hours per week in accordance with LGS policy (see Section 4.4). TAing for pay while fulfilling a TATTO requirement is generally discouraged. A student who wants to TA for pay or as a non-paid training opportunity during a term in which he or she is fulfilling a TATTO requirement, must receive approval from the instructor of the course for which the student is receiving TATTO credit and a DGS. LGS policy also restricts the number of terms a student can serve as a TA to 5 or fewer (including TATTO and other TA opportunities) in the first 5 years of the Program without permission from the Dean of the Graduate School.

1.3.3 Research Assistantships

All students are required to complete 2 RAs *prior to advancing to candidacy. Ideally RAs should be completed by the beginning of year 3*. Typically, at least one if not both RAs should be started after completing the first Fall term in the Program. The goal of the RA is for the student to gain experience in a real research setting, expand his/her skillset, and perform tasks that he/she would do as a practicing epidemiologist. It could include performing an analysis, developing a questionnaire, interviewing study participants, writing a manuscript, assisting in writing a grant proposal, and/or performing a validation sub-study. It is also an opportunity to develop a relationship with a faculty member and to explore and develop dissertation research ideas.

Students are encouraged to consider the following when proposing an RA:

- Will it provide the opportunity to work with someone who might be a long-term mentor (including beyond Emory)?
- Will it help to identify a research area for his or her dissertation?
- Will it result in a first author paper? (Publications increase competitiveness for jobs, promotions, and funding. First author papers are weighted heavier than middle author papers)
- Will it provide a valuable experience that cannot easily be obtained another way?

Specific details about the RAs include the following:

- 1. Two RA rotations <u>must be completed prior to entering candidacy</u>.
- Proposed RA activities must be approved by a DGS and the mentor <u>before commencing</u> <u>activities</u>. To receive approval, students must submit an RA Agreement Form (located on Canvas).*
- 3. The purpose of the RAs is to provide the student with training that expands the student's skillset and experience in a real research setting. The skills and experiences gained through each of the RAs should be <u>different</u>. Some overlap is permitted as long as each RA also includes a unique contribution to the student's training. The student is encouraged to seek opportunities to gain experience across the spectrum of activities that contribute to research. Thus, while writing a manuscript is always encouraged, writing a manuscript for each RA where the only difference in the RA experiences is writing about different topics or using different analytic approaches (e.g., one using logistic regression and one using survival analysis) is not typically considered sufficiently distinct.
- 4. Meeting the Primary Data Collection Requirement through an RA is encouraged but not required.
- 5. Each RA should be completed with a <u>different</u> Epidemiology Graduate Faculty Mentor. In some circumstances, a student may benefit from a training experience with a public health agency or other relevant organization outside of Emory (e.g., CDC). These training experiences are considered on a case-by-cases basis and require approval from the student's advisor and a DGS prior to starting the RA. Such opportunities must be comentored by an Epidemiology Graduate Faculty member. The Epidemiology Graduate Faculty member co-mentoring the RA may not be the mentor for the student's other RA.
- 6. The training objectives of the RA are expected to require a minimum of 200 hours of commitment although completing the RA is based on meeting the proposed objectives, rather than the number of hours spent on the RA. It is common for RA commitments to exceed 200 hours.
- 7. The timing of the RA is not tied to the term but is instead determined by agreement between the mentor and the student. However, all or part of an RA may be included as an objective on the Research Hours Agreement Form for a given term.
- 8. Objectives can be modified during an RA with agreement from the mentor, the student, and a DGS. Generally, modification is expected to be limited to unforeseen circumstances. A revised RA agreement form should be submitted in these circumstances.
- 9. Research completed during the RA cannot be counted toward the 3 paper dissertation requirement. The RA can be related to the student's dissertation topic, but it should not be work the student would perform as part of his or her dissertation (e.g., not cleaning dissertation data, not writing the dissertation proposal, etc.). Writing a proposal for a training grant (e.g., F30 or F31) does not qualify as an RA although working with a faculty member to write a research proposal (e.g., R21, R01, etc.) that might include funding for a student does.
- 10. Students must submit the RA Completion Form* no more than 2 weeks after the conclusion of the RA.

11. Certain funding sources (e.g., training grants) may have additional criteria related to RAs, such as requiring a third RA. Please check with the principal investigator of the training grant or the program administrator for more information. Additional RAs required by the funding source do not require approval by a DGS.

*All forms should be submitted electronically with the signature of the <u>RA mentor</u> or a screenshot of the mentor's email approving the content of the form. For RAs with co-mentors, all mentors must approve. Electronic Forms should be titled using the following conventions: "StudentLastName_RA1_Agreement_FacultyLastName." or StudentLastName_RA2_Completion_FacultyLastName." Do not submit forms that do not include the mentor's approval. Students should upload signed forms to the EPI PHD Canvas site.

<u>Additional Research Opportunities</u>: Students are only required to complete 2 RAs. However, students are encouraged to consider opportunities to participate in research training beyond their RAs and their dissertation research. Before committing to such opportunities, students should consider how the additional training will contribute to their career goals and how it will affect their forward progress in the program. Students should discuss their training plans with their mentors and/or a DGS. Training opportunities that provide funding beyond the stipend are subject to additional conditions (see section 4.4).

1.3.4 Primary Data Collection

All PhD students are required to have primary data collection experience <u>during</u> their doctoral training that requires a minimum commitment of 50 hours to complete. The goal of this requirement is to ensure that students have direct experience with the challenges associated with obtaining primary data for epidemiologic research. This experience will provide a more nuanced understanding of the strengths and limitations of research data. Primary data collection refers to obtaining data from the primary source (e.g., recruiting study participants, conducting interviews with participants, abstracting medical chart data, collecting laboratory data, etc.). The expectation is that the student picks a primary data collection experience that is a new experience for her or him. Both the student's advisor and a DGS must approve a student's primary data collection plan and his or her satisfactory completion of the requirement. To fulfill the primary data collection requirement, students must participate in a minimum of 50 hours of activities addressing this requirement. Activities for supplemental pay cannot be used to meet this requirement.

Although some students will collect primary data for their dissertation, it is strongly recommended that students fulfill this requirement prior to beginning their dissertation research. Students are encouraged to fulfill this requirement during one of their research assistantships (RAs) described in the previous section. If a student will not complete the Primary Data Collection Requirement through an RA opportunity or dissertation work, he or she must identify an alternative opportunity to meet the requirement.

Students must submit a description of proposed primary data collection activities to a DGS for approval. In some cases, proposed activities will be reviewed by the full PhD Program

Committee. <u>Most students should plan to complete the Primary Data Collection Requirement</u> <u>prior to entering Candidacy</u>. However, students who plan to collect primary data as part of their dissertation work may complete the requirement later. If plans to collect primary data as part of the dissertation change, the student must identify and complete an alternative, approved primary data collection experience prior to the dissertation defense. Students are required to submit a primary data collection completion form including approval from the primary data collection supervisor regardless of whether this requirement was completed as part of a Research Assistantship or an alternative activity.

1.3.5 Ethics Training

Students receive training in ethics in research both through the Epidemiology Program and the LGS Jones Program in Ethics. Students are required to enroll in JPE 600 and a minimum of 4 JPE 610 workshops. The LGS sponsors numerous seminars and workshops on scholarly integrity. Though not required, students are strongly encouraged to complete the minimum 4 JPE workshops prior to entering Candidacy. Additionally, students receive at least 6 hours of ethics training related to Epidemiology through EPI 790R (Epi Doctoral Seminar) class sessions in the first two years of the Program. Within the required Epidemiology PhD coursework students may gain exposure to topics such as ethics in human subject research and ethics of authorship. Students are exposed to additional ethics training through discussions with their mentors when participating in research (e.g., RAs, dissertation, and other opportunities).

1.3.6 English as a Second Language Program (International Students Only)

International students must participate in mandatory English assessment sessions administered by the LGS prior to the first day of class. Students who do not meet the minimum assessment requirements must participate in oral and written English communication classes directed by LGS. The ESL curriculum consists of three courses:

- 1. Intermediate Pronunciation/Communication
- 2. Advanced Pronunciation/Communication
- 3. Graduate Writing

These required courses carry 2-4 hours credit and are graded S/U. Courses appear on official transcripts. These courses do not count towards the 18 credit hours of required coursework in Epidemiology or the 54 credit hours that must be completed before entering Candidacy.

1.3.7 Qualifying Examination

Upon completion of all required coursework and the TATTO program, the student may take the Qualifying Examination (QE). The purpose of the epidemiology doctoral QE is to evaluate whether students have mastered the knowledge, skills, and philosophy of a doctorally trained epidemiologist. The exam requires students to demonstrate their proficiency in applying the principles and methods of epidemiology and to demonstrate their ability to integrate epidemiologic knowledge. Thus, the QE is intended to ensure that students are broadly qualified in the practice of epidemiology and application of epidemiologic methods and are prepared to pursue independent research in a specific area of epidemiology.

The exam consists of two parts. The first part focuses on competency in core methodological and quantitative areas relevant to all epidemiology research, including population science concepts, study design, data-collection methods and measurement, understanding bias, statistical and quantitative methods, and causal inference. The second part focuses on the ability to apply this knowledge within a selected area of substantive epidemiologic research.

<u>Timing:</u> Students who enter without a Master's degree in epidemiology or a degree from another Epidemiology program will take the QE in June of their second year. Students entering the Program with a recent Master's degree in epidemiology from Emory may take the QE in June of their first year with permission from a DGS and his or her advisor. However, students who opt to take the QE in the first year of the PhD program should be aware that the sequence of required courses is designed to be spread over 2 years. As a result, there will be topics that are covered out of sequence for students completing the required coursework in 1 year.

The QE is generally offered the week prior to the Society for Epidemiologic Research's Annual Meeting. The QE will be held during the weeks of June 8-12 in 2020 and June 14-18 in 2021. It is the student's responsibility to be available for the exam; no alternative exam dates will be scheduled for any reason.

In mid-January, students taking the QE in a given year are asked to identify one substantive area that aligns with their research interests on which they will be tested in June. The options for substantive area questions typically include: Cancer Epidemiology; Cardio-Metabolic Epidemiology; Reproductive, Pediatric, and Perinatal Epidemiology; Genetic and Molecular Epidemiology; Social Epidemiology; and Infectious Disease Epidemiology.

<u>Assessment</u>: The program administrator masks the students' identities on all exam materials. The students' identities remain masked until the final grading decisions have been made. At least 2 faculty members grade each question. The QE Committee assigns the final grade of pass or fail to each part of the exam after reviewing the submitted grades. Students must pass both parts of the QE to move forward in the Program. Students who do not pass one or both parts of the QE may retake the part or parts of the exam that they did not pass the following year. A second failure on either part of the examination results in dismissal from the PhD Program. However, students failing the QE a second time may petition to complete a terminal Master's of Science (MS) degree in Epidemiology (See section 2.3). A DGS sends each student a letter with exam results by mid-August.

Honor Code: Students are bound by the honor code and may not discuss specific QE questions with anyone.

<u>Additional Information</u>: More detailed information on the policies and procedures related to the QE are provided in a separate document to students planning to the take the exam annually.

1.3.8 Dissertation (A) Overview

Students are encouraged to begin exploring research topics as soon as they enter the program. The faculty advisor will help to guide the student in this search. The doctoral dissertation must meet the requirements of the Epidemiology Program and the LGS. In particular, the dissertation must demonstrate mastery of epidemiologic research methods applied to a research question and the capability for independent and creative thought and research. As indicated in the LGS catalog, "the dissertation must make an actual contribution to existing knowledge or be a fresh and significant critical interpretation of existing knowledge."

Dissertation research in the Epidemiology Program may address a substantive research question or a methodological question. Dissertation research in epidemiologic methods must significantly advance epidemiologic techniques, methods, or theory. Such dissertations should be informed by or applied to a substantive epidemiologic research question.

Students are encouraged to contribute to data collection as part of their dissertation (e.g., performing interviews, analyzing blood samples, etc.) where possible, even if they have already met the Primary Data Collection Requirement. Students whose dissertations do not involve primary data collection are expected to meet the Requirement before entering Candidacy (see section 1.3.4).

The Dissertation includes the following Milestones:

- 1) Dissertation Concept Letter
- 2) Dissertation Proposal Overview
- 3) Dissertation Proposal: Written Proposal and Oral Proposal Defense
- 4) Dissertation: Dissertation Document, Dissertation Defense, LGS Review

The Concept Letter and the Proposal Overview (described further below in (D) and (E)) are approved by the Dissertation Chair (and co-chair if applicable) and the PhD Program Committee. The Concept Letter and Proposal Overview serve several purposes including the following:

- To provide students and faculty with milestones to ensure the student's timely progress through the program, especially during the period between passing the QE and proposing
- 2) To standardize expectations for the scope of dissertations, thereby assuring that all dissertations reflect work that matches the quality of our faculty and our Program
- 3) To help students and advisors anticipate potential barriers to successfully completing the proposed work before substantial work has been done
- 4) To provide students with experience in explaining their research concisely and clearly and in responding to reviewer feedback
- 5) To provide the Program with uniform metrics by which to assess each student's progress or lack of progress through the program

After the Overview has been approved, all remaining dissertation-related products are approved by the Dissertation Committee. The final written document is also approved by the Dean of the LGS.

Year 1	Year 2	Year 3	Year 4	Year 5
Completic following: O Course O TATTC O JPE 60 O RAs	on of the ework 0 0 & 610 ry Data	10/15 – Submit Concept Letter with Chair identified 04/15 – Submit Proposal Overview with Dissertation Committee Members identified	09/15 – Student must be in Candidacy to remain in good standing 12/10 – Approval of written Dissertation Proposal and successful Oral Proposal Defense to remain in good standing	Defend Dissertation

Below is a table depicting progress expectations for Epidemiology doctoral students:

Foundational work on a student's dissertation including data collection and work to assess feasibility is encouraged prior to approval of the Concept Letter. However, publishing manuscripts before the proposal defense would disqualify the work from being part of the dissertation. The location of the line between foundational work and publishing is less easy to define. As a guide, the Dissertation Committee should have the opportunity to give a student meaningful feedback that potentially alters the course of the planned work in order to accommodate their suggestions.

(B) Dissertation Chairs and Co-Chairs

Each student's research is supervised by a Dissertation Chair and a committee of advisors (see section (C) below). The Dissertation Chair is typically the student's primary mentor. For some students, their faculty advisors become their Dissertation Chairs, but this is not always the case. Students are strongly encouraged to having ongoing discussions with their faculty advisors and other faculty members about potential dissertation topics and mentorship styles in order to identify the mentor who will be best able to help them achieve their research goals.

The Dissertation Chair must be Epidemiology Graduate Faculty. Epidemiology Graduate Faculty with a primary appointment in the Epidemiology Department may serve as a Dissertation Chair, and Epidemiology Graduate Faculty with a secondary appointment in the Epidemiology Department may serve as chair with the approval of the PhD Program Committee. Dissertation Committees with a chair who has not had a student graduate* from the Epidemiology PhD Program at Emory must include a co-chair who has graduated* a student from the Program. A current list of all Epidemiology Graduate Faculty that indicates who is eligible to be a co-chair is available on Canvas. The role of the co-chair is to serve as a resource to both the student and the faculty member regarding the dissertation process for our Program. The co-chair may provide feedback ranging from answering questions about the proposal defense protocol to clarifying the appropriate scope of a dissertation in our Program to providing more general mentoring guidance.

Because the co-chair will serve as a resource for both the student and the Dissertation Chair, both should be involved in identifying an appropriate co-chair. Ideally, the co-chair will be someone who adds to the Dissertation Committee through content knowledge or methodological expertise. However, in some circumstances, the co-chair's primary contribution to the committee will be serving as a co-chair rather than providing substantive or methodologic expertise needed for the dissertation. In the latter case, the co-chair would still be expected to read the proposal and dissertation, participate in the proposal and dissertation defense, and be eligible for authorship on resulting manuscripts. However, the co-chair's research contributions might be related to general epidemiologic principles rather than specific subject matter expertise.

Co-chairs should be identified by the time the student is ready to submit his or her Concept Letter in the Fall of Year 3 (see section (D) below). Both the Chair and the co-chair should sign the Concept Letter and Proposal Overview.

In some cases, a student may have a Dissertation Committee led by co-chairs for other reasons.

*Graduated is defined here as having served as Chair or co-chair on a committee for an Epidemiology doctoral student at Emory who has submitted a committee-approved dissertation to LGS for review.

(C) Dissertation Committee

The Dissertation Committee is selected by the student and his or her Dissertation Chair. The proposed Committee must be approved by the PhD Program Committee at the time of the Proposal Overview submission (see section (E) below). Members of the Dissertation Committee assist the Dissertation Chair in mentoring the student through the dissertation process. Committee members may bring unique or overlapping expertise to the Committee. It is recommended that the committee include a member with clinical or biologic expertise related to the proposed area of research and a member with appropriate methodologic expertise.

The Committee must have at least <u>4</u> members; Committees with more than 5 members are not recommended. At least 3 Committee members must be LGS Graduate Faculty, and at least 2 of these must be Epidemiology Graduate Faculty. Of the Epidemiology Graduate Faculty, at least 1 must have a primary appointment in the Epidemiology Department. Faculty with secondary appointments to the Epidemiology Department, may fulfill 1 of the Epidemiology Graduate Faculty spots (including chair) with approval of the PHD Program Committee.

All tenure track faculty with a primary appointment in Epidemiology are Epidemiology Graduate Faculty. Some non-tenure track faculty with a primary appointment in Epidemiology as well as some faculty with a secondary appointment to Epidemiology are Epidemiology Graduate Faculty. Students should consult Canvas to determine who the current Epidemiology Graduate Faculty are.

Non-tenure track faculty with a primary appointment in Epidemiology and faculty with a secondary appointment to Epidemiology who are interested in becoming Epidemiology Graduate Faculty should submit a request to a DGS. The request should include a current CV and an e-mail that summarizes 1) the faculty member's work with doctoral students to date, 2) the reason the faculty member wants to become graduate faculty in Epidemiology, and 3) how the faculty member plans to work with doctoral students in the future. The request will then be reviewed by the Epidemiology PhD Program Committee.

If a proposed Committee Member does not have an affiliation with Emory University, an outside reader request must be sent to LGS including the proposed member's CV and a letter from a DGS outlining why this individual is necessary to the Committee. This request should be submitted with the Dissertation Committee form. A letter template is available on Canvas. Students are encouraged to contact the program administrator for assistance after drafting their letter but prior to submission.

<u>Students must meet with their committee at least once per year</u>; more frequent meetings are recommended. It is the responsibility of the student to coordinate the time and location for committee meetings.

(D) Dissertation Concept Letter

I. Purpose

The Concept Letter provides students with an early opportunity to organize their thoughts regarding their dissertation topic, committee requirements, and timeline. This letter represents the first of three milestones that aim to facilitate timely and successful progress through the dissertation process. The Concept Letter provides the Dissertation Chair and the PhD Program Committee with the opportunity to provide early feedback about any concerns, such as that the proposed project may not meet the standards for a dissertation in epidemiology or that there are potential barriers that may prevent successfully completion of the proposed work. Further, it provides an opportunity to gain experience in concisely communicating research ideas and responding to feedback. Students should anticipate receiving constructive feedback on the submission, even when the Concept Letter is approved.

The projects described in the Concept Letter will likely evolve as the proposal develops and the student conducts the research and writes the dissertation. A new Concept Letter may be required if there is a <u>substantial</u> change in the dissertation. A substantial change includes (but is not limited to) a change to the proposed Dissertation Chair or a change to the data source. If this situation occurs, please consult with the co-DGSes.

Students should not undertake substantial dissertation work until their Concept Letter has been approved (see section (A) above for more details).

II. Process

- A. <u>Timing</u>: Students are expected to submit the Concept Letter no later than October 15th of their third Fall in the program. Students are encouraged to submit their Concept Letters earlier if they start working on their dissertation earlier. Generally, the Concept Letter is reviewed after a student passes the QE. In some circumstances, a student may petition to have his or her Concept Letter reviewed prior to passing the QE. Petitions are reviewed by the PhD Program Committee and decided on a case by case basis. Students who have not passed the Qualifying Examination before the start of their 3rd academic year should arrange a separate deadline with a DGS.
- B. <u>Review</u>: The Dissertation Concept Letter should be reviewed and approved by the Dissertation Chair before submission to the PhD Program Committee (via Emory Box). Members of the PhD Program Committee will review Dissertation Concept Letters. The co-DGSes will provide feedback and a decision about the status of the Concept Letter (approved or revisions requested) within 1 month of submission.
- C. <u>Resubmission</u>: Substantial concerns by the PhD Program Committee may be accompanied by a request for the student to revise and resubmit the Concept Letter. Revised Concept Letters, should be approved by the Dissertation Chair before resubmission. Students are <u>strongly encouraged</u> but not required to submit a concise point-by-point response to the PhD Program Committee's concerns with the revised Concept Letters. The primary concerns raised by the Committee should be addressed in the revised Concept Letter, whereas the point-by-point response should serve to guide the Committee in identifying the changes rather than being a place to provide extensive additional information. The point-by-point response does not count against the page limit. Revised Concept Letters must be submitted by the 15th of a given month to be reviewed by program committee members.
- D. <u>Research Hours</u>: The Concept Letter should be included as an objective in the Research Hours Agreement starting in the term in which it is due and continuing until it is approved.

III. Content

The Concept Letter is a 2-page document (not including title page and references) describing the student's proposed research. The Concept Letter is similar to the Specific Aims page of a grant proposal with additional information requested. The Concept Letter should be single-spaced with 1-inch margins in an NIH approved font and font size. The Concept Letter should follow the outline below.

- A. Title Page: title, name, Dissertation Chair name, co-chair if applicable, and date (does not count against page limit)
- B. Brief description of the overarching research question and the public health or clinical importance of the topic
- C. Description of 2-4 aims that contribute to the overarching research question

- Inclusion of hypotheses is encouraged
- Clear definitions of the exposure(s) and the outcome(s) are also encouraged
- D. Proposed approach. This should include:
 - 1. Proposed data sources
 - Planned data sources should be identified and progress should be being made to acquire the data
 - The description of the data source should include a brief description of the proposed study population and an indication of the sample size
 - 2. Barriers/feasibility (e.g., the main concerns with moving this project forward)
 - This section should include serious logistical concerns (e.g., access to data)
 - This section should also include other potential concerns such as sources of bias that might severely affect the value of the study (e.g., a generic concern about confounding would not need to be stated, but a concern about confounding by indication might deserve attention) or concerns about sample size
 - 3. Next steps
- E. Dissertation Chair and proposed areas of expertise to be represented on the committee.
 - Note: students are not expected to have approached potential committee members, aside from the chair, when they submit their Concept Letter
- F. References (does not count against page limit)
- G. The student's signature, the Dissertation Chair's signature, and the co-chair's signature if applicable (does not count against page limit)

Additional information on the Concept Letter will be provided to Year 3 students early in the Fall through a meeting and a document posted on Canvas.

(E) Dissertation Proposal Overview

I. Purpose

The Proposal Overview provides students with the opportunity to expand upon the description of the proposed work in the approved Concept Letter, to identify their proposed Dissertation Committee, and to provide a more refined timeline. It represents the second of 3 milestones that aim to facilitate timely and successful progress through the dissertation process. The Overview provides the Dissertation Chair and the PhD Program Committee the opportunity to provide feedback on a more developed description of the proposed dissertation work prior to the proposal defense in order to identify any residual concerns about potential barriers to the successful completion of the dissertation work. The Overview helps to ensure consistent application of program standards to all epidemiology dissertations. Further, it gives students additional experience in concisely communicating research ideas. Students should anticipate receiving constructive feedback on the submission, even when it is approved.

The projects described in the Overview will likely evolve as the proposal develops and the student conducts the research and writes the dissertation. A new Overview must be submitted if there is a <u>substantial</u> change in the dissertation. However, substantial changes in the proposed work are rare at this stage.

Students should not undertake substantial dissertation work until their Proposal Overview and proposed Dissertation Committee have been approved. It is the expectation that all Committee members will be provided with the opportunity to contribute to the development of the dissertation. (see section (A) above for more details).

II. Process

- A. <u>Timing</u>: Students may submit the Overview only after the Concept Letter has been approved. Students are expected to submit the Overview no later than April 15 of their third Spring in the program. However, students who are able to prepare their Overview earlier are encouraged to submit it earlier with approval of their Dissertation Chair.
- B. <u>Approvals</u>: The Dissertation Proposal Overview must be developed based on the approved Dissertation Concept Letter and must address any concerns outlined in the PhD Program Committee decision letter about the Concept Letter. Further, the Overview must be reviewed and approved by the Dissertation Chair before submission to the PhD Program Committee (via Emory Box). The proposed Dissertation Committee members should be familiar with the proposed work and should have agreed to serve on the committee, but they do not need to sign off on the Overview. Members of the PhD Program Committee will review Dissertation Proposal Overviews. The decision of the PhD Program Committee (approve or request revisions) will typically be provided to the student and the proposed Dissertation Chair within 1 month of submission.
- E. <u>Resubmissions</u>: Substantial concerns by the PhD Program Committee may be accompanied by a request for the student to revise and resubmit the Proposal Overview for further review. Revised Overviews should be approved by the Dissertation Chair before resubmission. Students are <u>strongly encouraged</u> but not required to submit a concise point-by-point response to the PhD Program Committee's concerns with the resubmission. The primary concerns raised by the Committee should be addressed in the Revised Overview. The point-by-point response should serve to guide the Committee in identifying the changes rather than being a place to provide extensive additional information. The point-by-point response does not count against the page limit. Revised Overviews must be submitted by 15th of a given month to be reviewed by program committee members.
- C. <u>Research Hours</u>: The Overview should be included as an objective on the Research Hours Agreement in all terms following approval of the Dissertation Concept Letter until the Overview is approved.

III. Content

The Overview is an expanded version of the Dissertation Concept Letter, which clearly addresses any issues or concerns raised by the PhD Program Committee. However, the <u>initial</u> Overview submission should not be accompanied by a point-by-point response to the PhD Program Committee's review of the Concept Letter. It consists of two parts: 1) a 4-page, singlespaced description of the proposed objectives of the dissertation and the approach to achieving these objectives and 2) a list of the proposed Dissertation Committee members with a brief description of their contribution to the student's dissertation training. The Overview should not exceed 4 pages single-spaced (not including the title page, references, or committee composition) with 1-inch margins in an NIH approved font and font size. The timeline and any figures or tables should fit within the 4 page limit. The Overview should follow the outline below.

- A. Title Page: title, name, Dissertation Chair name, co-chair's name if applicable, and date (does not count towards page limit)
- B. The overarching research question and the public health or clinical importance of the topic. This is likely more developed than the concept letter but should still be relatively brief
- C. Specific aims and how each aim supports the overarching research question
- D. A brief summary for <u>each</u> specific aim with information about:
 - 1. Study design to address the aim and data source(s)
 - Generally, data sources at this stage should be in hand or the use of the data for the dissertation should be approved
 - 2. Study population, including sample size considerations
 - 3. Potential analysis plans this should be brief
 - If one of the aims is a methodological aim, this section should be more developed compared with a substantive aim
 - 4. Barriers/feasibility (e.g., the main concerns with moving this project forward)
 - These should include any logistical barriers and barriers related to sources of bias that could strongly affect the value of the study (e.g., confounding by indication should be mentioned where appropriate but a general concern about confounding does not need to be mentioned)
 - Ideally, plans to address these barriers should be mentioned
- E. Overall study timeline
- F. References (does not count against page limit)
- G. The composition of the proposed Dissertation Committee (does not count against page limit). <u>Anyone listed as a committee member should have orally agreed to be part of the</u> <u>Dissertation Committee and should be familiar with the proposed work.</u> For each proposed committee member, starting with the chair, please include the following information:
 - 1) Chair, Co-chair, Committee member
 - 2) Graduate faculty, Not graduate faculty –for graduate faculty who are not graduate faculty in the Epidemiology Program, please indicate in which program they are graduate faculty.
 - 3) Primary appointment in Epidemiology, Secondary appointment in Epidemiology, Other
 - 4) Department or agency affiliation
 - 5) A brief summary of the individual's contribution to the committee (redundancies are fine). <u>This summary should be shared and approved by each proposed</u> <u>committee member prior to submission.</u>
 - 6) <u>In a separate document</u>, include the CV of any committee member who does not have a primary or secondary appointment in the Epidemiology Department.

H. The student's signature, the Dissertation Chair's signature, and the co-chair's signature if applicable. The signatures do not count against the page limit and can be included on the proposed Dissertation Committee page.

Additional information on the Proposal Overview will be provided to Year 3 students early in the Fall through a meeting and a document posted on Canvas.

(F) Dissertation Proposal

The Dissertation Proposal includes two parts, the written dissertation proposal and the oral dissertation proposal defense. For both the dissertation proposal document and the oral proposal defense, the student's Dissertation Committee assesses the student's success.

<u>Written Proposal</u>: The format of the written dissertation proposal is determined by the Dissertation Chair. However, it must include a critical review of the relevant literature and a discussion of how the dissertation will make a significant contribution to the field. The proposal should also include the specific aims of the dissertation and a methods section, including the study design, study population, and proposed analytic methods for all components of the research. The proposal typically covers many of the sections included in federal grants (e.g., NIH, CDC). However, the proposal is often longer.

The student should submit a draft of the Dissertation Proposal to each committee member well in advance of the planned oral defense date to allow time for review (2 weeks minimum; longer strongly encouraged). The Dissertation Chair reviews the Dissertation Proposal <u>before</u> it is distributed to the committee. Typically, before receiving the written proposal, members of the Dissertation Committee will have met with the student individually or as a group several times to help refine the research hypotheses and the plan to evaluate these hypotheses.

<u>Proposal Defense</u>: The Dissertation Committee will indicate to the student when the proposal defense may be scheduled. Students must submit a dissertation proposal announcement (1-page summary) that will be distributed to the Epidemiology Program (faculty and PhD students) to the program administrator and Canvas <u>at least two weeks prior to the Proposal Defense</u> <u>date, after the Dissertation Chair has approved the announcement</u>. The announcement must include the student's name; preliminary dissertation title; committee members; date, time and location of the proposal; and a brief structured abstract (300-500 word limit). The abstract should include the following content: study goals/objectives/ hypotheses; methods, including study design, study population, and proposed analytic methods; and potential impact of the work on public health.

The Oral Dissertation Proposal Defense includes a public presentation of the proposed research (40-45 minutes) and a question and answer period (15-20 minutes) that is open to the public. This is followed by a closed-door examination by the Dissertation Committee. The examination may address any methodologic or substantive material deemed appropriate by the Dissertation Committee. For example, committee members may ask questions about the proposed

approach to the research, questions about alternative approaches, contextual or substantive questions about the research, or questions about epidemiologic concepts.

<u>Evaluation</u>: At the conclusion of the closed examination session, the Dissertation Committee must decide whether or not the student has the necessary knowledge and skills to successfully implement the PhD dissertation work. The Dissertation Committee may pass the student unconditionally, request additional work before passing the student, or fail the student. A student who fails the oral examination will be given one additional attempt. Students failing the oral examination twice will be dismissed from the Program.

To be in good standing with the Epidemiology PhD program, a student must have an approved written Dissertation Proposal and have successfully defended the Proposal orally no later than December 10th of Year 4 in the program. Successful completion of the Dissertation Proposal Defense is marked by submission of the Dissertation Committee Form to LGS with each Committee Member's original signature and DGS approval.

Scheduling: The student is responsible for scheduling a time, date, and room for the Dissertation Proposal Defense (classrooms may be reserved at https://25live.collegenet.com/emory/ - students should consult Stevene McGee if they have trouble reserving a room). Students should not schedule a dissertation proposal defense for Fridays between 12:00 and 1:30 pm. This time is traditionally used for Faculty Meetings, Epidemiology Grand Rounds, and Public Health Sciences Grand Rounds. Other times to avoid include during Doctoral Seminar (Thursdays 12:00-1:00), EPI PhD Program Committee Meetings (typically the first Friday of the month from 1:30-2:30 p.m. though this may change on an annual basis), EPI PhD Applicant Interview Days, Research and Progress Day, and the MPH Admitted Student Visit Days (typically the third or fourth Thursday and Friday in March). Students are encouraged to check potential times with the program administrator to make sure there are no unexpected conflicts.

(G) Dissertation Document and Oral Defense

The Dissertation is composed of two parts as well. The written document and the oral dissertation defense.

<u>Dissertation Document</u>: The format of the dissertation should follow Emory University guidelines. Typically, the first chapter consists of an introduction to the problem including a critical review of the literature with a justification and rationale for the research. Although the dissertation format is at the discretion of the Dissertation Chair, students are strongly encouraged to include manuscripts that are suitable for publication in lieu of the results chapters. This should include <u>3 or more publishable papers (see section (H) below)</u>. In addition, the dissertation should include a concluding chapter with a discussion of the strengths, limitations, and overarching conclusions of the research. Analyses not included in the manuscript chapters may optionally be included in an appendix. Students may access successful epidemiology dissertations via <u>https://etd.library.emory.edu/.</u>

It is expected that the full Committee will be provided the document with sufficient time to have read a complete draft prior to the oral defense, typically at least 4 weeks prior to the final defense.

<u>Oral Dissertation Defense</u>: The Dissertation Committee will indicate to the student when the final oral defense of the dissertation research may be scheduled. <u>Students ready to defend their dissertation should submit an announcement to the program administrator to disseminate to faculty and students and to Canvas, at least 2 weeks prior to the defense. This announcement should include the following information: student name; title of dissertation; committee members; date, time, and location of the defense; and an abstract following the format of the dissertation proposal. Students are responsible for arranging the time and location of their defense (refer to previous specifics for coordinating the Oral Dissertation Proposal Defense in section (F) above).</u>

The Dissertation Defense includes an oral presentation (40-45 minutes) with a question and answer period (15-20 minutes), which is open to the public. This public presentation is followed by a closed-door session with the Dissertation Committee during which the Committee may raise questions or concerns about the dissertation work.

<u>Evaluation</u>: The final evaluation of the Dissertation is made by the Committee after the Dissertation Defense in the absence of the student. The Committee may decide to pass the student unconditionally, request additional work, or fail the student. Failure is expected to be rare because the Dissertation Defense is typically only scheduled when the Dissertation Committee believes the student is ready to defend. However, requesting additional work after the Dissertation Defense to address Committee concerns may be more common.

<u>LGS Review</u>: If the Dissertation Committee approves the Dissertation as written at the Dissertation Defense, the Dissertation Document and other relevant paperwork may be submitted to the LGS for review. If the Committee requests additional work, the revised Dissertation Document may be submitted to LGS for review after the Committee approves the revisions. Prior to graduation, the Dean of the LGS reviews and approves the dissertation.

<u>Deadlines</u>: Students should refer to the LGS website for dissertation submission deadlines related to Fall, Spring, and Summer graduation dates. Typically, submission of paperwork and the dissertation to LGS is required at least one month prior to the conclusion of the term (<u>http://www.graduateschool.emory.edu/academics/policies/completion.html</u>). This site contains forms, processes, and deadlines.

(H) Dissertation Publication Guidelines

The Dissertation is expected to result in at least 3 manuscripts publishable in peer-reviewed journals. The timing of submission of these manuscripts relative to the final Dissertation Defense is at the discretion of the Dissertation Committee but <u>should not occur prior to the Dissertation Proposal Defense</u>. The expectation is that substantial work on the dissertation should only occur after the Dissertation Proposal has been successfully defended and the

Dissertation Committee has had the opportunity to provide feedback on the proposed work. <u>Manuscripts submitted for publication prior to the Dissertation Proposal defense cannot be</u> <u>counted towards the dissertation.</u> Manuscripts may be submitted for publication prior to the final Dissertation Defense with Committee approval.

Authorship should be discussed as early as possible to avoid potential problems regarding who is included and in what order. <u>The student should be first author on all publications of their</u> <u>dissertation research</u>. The Committee Chair is generally senior author, which may be second or last, depending on the Chair's preference. Members of the committee should have the opportunity to contribute to the dissertation manuscripts to a degree that warrants authorship although individual committee members may opt not to be a co-author on individual manuscripts. Students are encouraged to review authorship standards of American Journal of Epidemiology and/or International Committee of Medical Journal Editors (ICMJE) recommendations for defining the role of authors and contributors. Manuscripts should be reviewed and approved by all authors prior to submission for publication. Persons who have made contributions to the study that are not sufficient to merit authorship should be acknowledged. However, students should confirm with individuals that they are willing to be named in the acknowledgments prior to naming them.

PhD students should note that it is a policy of the LGS that it be acknowledged on all work published during their doctoral studies. For example, PhD student affiliation should be listed as "Epidemiology PhD Program, Rollins School of Public Health and Laney Graduate School, Emory University, Atlanta, Georgia." The student should consult the Dissertation Chair and co-authors about other funding sources that need to be acknowledged, including LGS funding where appropriate.

1.3.9 Student Research and Progress Day Symposium

Each Fall and Spring, the faculty and students convene for a half-day Symposium to share the research and progress of our PhD students. <u>All PhD students, including incoming students (for Fall term), are required to attend this Symposium every year</u>. Typically, the Symposium is held the first Monday before term classes start. Beginning as early as their second year, students will present at the Student Research and Progress Day. Students should plan on presenting at least 2 times during their tenure in the program. The Symposium provides the students with the opportunity to gain experience presenting research in a supportive environment and helps to prepare them for the dissertation proposal defense, the dissertation final defense, and conference presentations. The Symposium also provides students and faculty the opportunity to learn about the range of research being performed in the Program, to discussion research-in-progress, and to foster collaborations through intellectual and social exchanges. There are opportunities throughout the day for informal conversations between students and faculty.

1.3.10 Program Progress Summary & Individual Development Plan and LGS Annual Progress Report

<u>Program Progress Summary & Individual Development Plan (IDP)</u>: In accordance with recommendations from the National Institutes of Health, all Epidemiology PhD students are

required to submit an IDP on an annual basis after discussion with his or her advisor(s). At this time, students also submit a Program Progress Summary. A DGS reviews the submitted Program Progress Summary & IDP and provides feedback as well. Returning students must submit the Program Progress Summary & IDP in September and matriculating students must submit them in January of their first year.

The Program Progress Summary allows the student and mentor to see the student's progress in the Program and to make sure the student is completing milestones in a timely manner. The Summary provides an opportunity to discuss upcoming milestones and how to address any delays where relevant. The Program Progress Summary includes information the mentor does not otherwise have access to such as performance in the core classes. In addition, there is a section that includes CV building activities that are not requirements of the program but that may be worth incorporating in the student's training.

In contrast, the IDP provides a guide to thinking and talking about the student's long-term goals, progress towards these goals, and potential barriers to meeting these goals. Although the IDP concept was initially developed as a tool to assist employees in career and personnel development, it is increasingly being used in research fields (both pre- and post-doctoral level training), and the NIH is now requiring it for all trainees who are supported by NIH funding (e.g., T32). It is not a performance evaluation or a one-time activity. Rather, it should be viewed as a partnership between the student, his or her advisor, and the Epidemiology Program, which is intended to make sure the student is receiving the training and support needed to accomplish his or her short and long-term goals. Students are invited (and encouraged) to consult with other appropriate faculty and public health professionals in completion of this document.

<u>LGS Annual Progress Report</u>: The LGS requests an annual report from the all of the programs in the School. The report consists of several components completed by a DGS related to the Epidemiology PhD Program (e.g., data on admissions, enrollment and student progress; list of graduate faculty; etc.) as well as information provided by current students. Students are required to submit information including publications and presentations as well as information on any proposals submitted for funding. This information is used to monitor the success of the Epidemiology PhD Program both with respect to LGS expectations and compared with peer institutions.

1.3.11 Departmental/Program Citizenship

Departmental/Program citizenship enhances the learning experience. The Program expects PhD students to be active in the life of the Department throughout their time in the Program. This includes attending Epidemiology Grand Rounds and other Department-sponsored lectures and seminar series (e.g., faculty candidate seminars) as well as supporting other students by attending their Dissertation Proposal Defenses and final Dissertation Defenses. These activities help prepare students for their own presentations and expose students to the scope of current research in the field. Students are also strongly encouraged to attend Program events such as alumni panels, meetings with visiting faculty, and professional development workshops.

Students are expected to attend an average of at least one Department, Program, Rollins School of Public Health, or LGS sponsored event per week during the Fall and Spring terms.

<u>Students are strongly encouraged to remain in Atlanta for the tenure of the program</u> unless dissertation research is occurring elsewhere. Residency in Atlanta provides direct benefits to the student such as access to professional development and research training activities beyond the classroom, and it provides indirect benefits such as fostering a sense of community with peers and mentors. This community provides the foundation for professional ties that will continue beyond graduation from the Program. Although the Program does not have a residency requirement, students who wish to move outside of the Atlanta area should discuss this with their Dissertation Chairs and a DGS. Typically, a student making such a request is expected to be making adequate progress in the program and to have successfully defended his or her dissertation proposal.

1.4 Admission to Candidacy

The following requirements must be met in order to apply for candidacy:

- Completion of Required Epidemiology Coursework including EPI elective hours that total at least 18 credit hours of graded coursework selected from methods and elective course offerings in the Epidemiology Program (excluding PUBH 700, PUBH 701, EPI 791, TATT 600, 605, 610, and EPI 798R). (see section 1.3.1)
- Completion of no less than 54 credit hours at the 500 level or above composed of the EPI Required coursework above, EPI 798R, pre-candidacy research hours, and the TATT courses. (see section 1.3.1)
- Completion of all TATTO requirements including TATT 600, TATT 605, TATT 610, and EPI 791. (see section 1.3.2)
- 4) Completion of 2 RAs (see section 1.3.3)
- 5) Completion of JPE 600 and 6 hours of Program-based Training (see section 1.3.5)
- 6) Passing the Qualifying Exam (see section 1.3.7)
- 7) Approved Dissertation Concept Letter (see section 1.3.8 (D))
- 8) Approved Dissertation Overview (see section 1.3.8 (E))

It is <u>strongly recommended</u> that all students complete their primary data collection requirement before entering candidacy, especially students who are not planning to collect primary data for their dissertations.

Application for admission to candidacy is made by submitting the "Application for Admission to Candidacy" form to the LGS. Information and forms related to applying for candidacy can be found at: http://www.gs.emory.edu/academics/policies/candidacy.html. Students must complete and submit the Admission to Candidacy Form within one week of completing all requirements to apply for Candidacy. For students matriculating in the Fall of 2017 or later, this will be after the student is notified of approval of the Dissertation Overview. Students who enrolled prior to the Fall of 2017 may be admitted to Candidacy based on the requirements in the Epidemiology PhD Program Handbook from the year in which they first enrolled in the

program or this Handbook. Decisions about which criteria to use for these students should be made in consultation with the Dissertation Committee chair and a DGS.

In order to remain in good standing with the LGS, students who matriculated in Fall of 2017 or later must be in Candidacy by September 15th of their fourth year. Students who matriculated prior to Fall of 2017 must be in Candidacy by August 1st of their fifth year. Students who do not meet the Candidacy deadline will be placed on probation, will not be eligible for PDS funds, and may forfeit financial support. These sanctions are lifted when the student enters Candidacy.

Part 2: Student Due Progress

2.1 Due Progress Expectations

<u>Full-time Progress</u>: Students are expected to be making satisfactory, full-time progress towards their degree (i.e., be in full time training) throughout their tenure in the doctoral program. Full time progress is indicated by enrolling in a minimum of 9 credit hours each term (Fall, Spring, and Summer). Credit hours may include course work and/or research hours.

<u>Grades</u>: During coursework, due progress according to the LGS and the EPI PhD Program, is indicated by maintaining a GPA of 2.7 or higher in each term, receiving no grade lower than a Bin any required course, taking no more than one grade of incomplete in any term, not receiving a grade of incomplete failing (IF) or incomplete unsatisfactory (IU), and having no more than two grades of incomplete active at any point. Although LGS allows a student to have one incomplete in a term, the incomplete must be for course that is less than 9 credit hours.

Receiving less than an A- in any required Epidemiology coursework (including required courses in biostatistics) may raise concerns about the student's ability to successfully pass the Qualifying Examination. Therefore, any PhD student having difficulty in coursework and/or earning less than an A- in a required course should meet with his or her faculty advisor, the course instructor, and/or a DGS within one month of receiving a grade of B+ or lower to develop a plan to address any areas of weakness in the student's training.

When students are enrolled in research hours (EPI 798R & EPI 799R), due progress is based on receiving a satisfactory grade (S). The grade for research hours is based on meeting the objectives identified in the Research Hours Agreement form. The faculty mentor determines whether the objectives have been met or not and assigns a grade of S or U.

<u>Additional Measures of Progress</u>: Several Program milestones must be met by specific time points in order to be making due progress in the program. These include the following:

- Taking the QE by the end of Year 2
- Completing the TATTO and RA requirements by the Fall of Year 3 in the program
- Submitting the Concept Letter by October 15th of Year 3
- Submitting the Proposal Overview by April 15th of Year 3

- Entering Candidacy by September 15th of Year 4 for students matriculating in Fall of 2017 or later or by August 1st of Year 5 for students matriculating before Fall 2017
- Successfully defending the Dissertation Proposal by December 10th of Year 4 for students matriculating in Fall 2017 or later or by August 1st of Year 5 for students matriculating before Fall 2017
- Students should plan to defend their dissertations within 5 years of entering the Program. However, LGS policy allows up to 7 years for students who enrolled in Fall 2017 or later. Students who have not successfully defended their dissertations by the end of Year 7 may request a DGS petition the Dean of the LGS for an extension. See the LGS Handbook for details. Students who enrolled prior to Fall 2017 have 8 years to graduate; see LGS Handbook for additional information

<u>Inadequate Progress</u>: Students not meeting the due progress expectations laid out above may be placed on probation by the LGS. The student's advisor and a DGS will meet with a student facing probation to develop a corrective plan. A DGS will also explain the terms and conditions of probation and of reinstatement to good standing. Per LGS policy, during the probation term, the student must not take an incomplete in any course or receive a failing grade (including a U). In addition, the student must attain a cumulative GPA of at least 2.7 and reduce the number of incomplete on her/his/their record to one. Students who meet the conditions of their probation will be reinstated to good standing. This reinstatement happens automatically, and the student will not be notified of the action. Students who have not met the conditions of their probation will continue on probation for a second term. A student who does not met the conditions of their probation during their second consecutive probationary term will be terminated from the Program by the LGS unless (1) the Program provides written justification for the student's continuation and (2) the LGS approves.

2.2 Time to Degree

PhD students typically graduate within 5 years (see table in section 1.3.8). Students complete required coursework during Years 1 and 2, and take the QE by June of their first or second year in the program. In Year 3, students focus on preparing their dissertation Concept Letter and Dissertation Proposal Overview. Students must be in Candidacy no later than September 15th of Year 4 and must successfully write and defend their Dissertation Proposal by December 10th of Year 4 (see section 2.1 for deadlines for students who matriculated before Fall 2017). Students who do not meet either deadline will be placed on probation, will not be eligible for PDS funds, and may forfeit financial support. These sanctions will be lifted when the student enters Candidacy or successfully defends his or her Dissertation Proposal.

Students complete their dissertation work during Years 4 and 5. However, the timing of dissertation milestones between Candidacy and Graduation differ depending on the specific demands of the dissertation research project. Steady progress towards graduation should be maintained during all terms. Generally, students will be considered to be making due progress after Candidacy if their research has advanced in substantial, demonstrable ways over the past 12 months.

According to LGS policy, a student must complete all requirements for the PhD within 6 years of commencing the Program. Extensions beyond this will be granted only under extraordinary circumstances and as described in the LGS Handbook. See section 2.1 and LGS Handbook for deadlines for students who matriculated before Fall 2017.

2.3 Terminal Master's Degree

Some students admitted to the doctoral program may leave the program before completing the requirements for a PhD. Such students may choose to petition the Epidemiology PhD Program Committee to earn a Master's of Science (MS) in Epidemiology. The PhD Program Committee reviews all petitions. If the petition is approved, then all LGS requirements for the Master's degree must be satisfied and additional Departmental requirements must be fulfilled for the degree to be awarded. The requirements for the MS include 30 credit hours of coursework (starting from enrollment in the Program) and a master's thesis. See LGS Handbook for any additional requirements. Please note that LGS requires 2 readers for a master's thesis, unlike the MPH/MSPH. Typically, a student has one semester to complete a terminal MS after successfully petitioning to pursue the MS.

Part 3: Academic Policies and Procedures

3.1 Registration

Students will register for coursework after consultation with their advisor and with the aid of the program administrator. Students will self-register or ask the program administrator to enroll them in courses during the pre-registration period. Pre-registration begins in April for the following Fall and in October/November for the following Spring. Students are responsible for enrolling in at least 9 hours per term. Students must register for EPI 790R, Doctoral Seminar, every Fall and Spring term through the term they successfully defend their dissertations.

In rare situations, a student may petition the PhD Program Committee to be exempt from EPI 790R for a semester. This may occur if the student is not in residence in Atlanta (see section 1.3.11) or if the student has an unavoidable conflict with the course meeting time related to responsibilities to the organization covering her or his stipend. Students petitioning for an exemption to EPI 790R for a semester should discuss their advisors and send a DGS an e-mail detailing the reason for the request prior to the start of the semester. Students must make a separate request each semester where an exemption is desired.

3.2 Add/Drop/Swap

Students may change their course schedule through OPUS during add/drop period. This period usually occurs during the first five days after registration in the fall and spring terms.

3.3 Auditing Courses & Courses Outside RSPH

Students should consult with their faculty advisor, a DGS, and their the program administrator as needed prior to registering. All courses taken as audit status and/or outside RSPH require instructor permission. If, upon consultation with his or her advisor, the student chooses to audit

a course or register for a course outside RSPH, the student must first get permission via email from the course instructor. The email approval should be submitted to the Epidemiology program administrator for registration in the course. <u>Audited courses do not fulfill degree</u> <u>requirements, count towards full-time student status, or fulfill specific credit hour</u> <u>requirements.</u>

3.4 Grades

Courses have the following grading options: letter grade (A, A-, B+, B, B-, C, or F), satisfactory/unsatisfactory (S/U), or audit. All required courses and epidemiology electives must be taken for a letter grade; other courses may be taken for S/U or audit provided the student obtains permission from the instructor of the course. Although courses that are only graded on an S/U basis (e.g., TATTO courses, Doctoral Seminar, research hours, etc.) can count towards the 54 credits required to reach Candidacy, courses that can be taken for a letter grade must be taken for a letter grade to contribute to this requirement.

Please note that per LGS Policy (1.1.1 C), courses in which students receive a letter grade of C do <u>not</u> count towards 54 credit hours needed to apply for Candidacy.

3.5 Transfer Credit

Coursework taken at other institutions may be accepted as transfer credit toward the doctoral degree with Epidemiology Program approval. To be considered for transfer credit, the coursework cannot have been used toward another degree and must have been completed within 3 years prior to entering the Epidemiology program. Receiving credit for coursework taken elsewhere is rare. However, prior coursework may allow students to place out of required classes with Program approval even if it does not qualify for transfer credits (see section 3.6).

3.6 Course Waivers

Students may petition the Program to waive out of a required course if they can demonstrate they have sufficient knowledge in the subject matter. Courses that may be considered for a waiver include EPI 530: Epidemiologic Methods 1, BIOS 500: Biostatistical Methods 1, and/or EPI 534: Programming in SAS & R. If a student would like to waive a required course he or she must submit a detailed syllabus of a course covering the same material that has been previously taken for review by the EPI PHD program. If approved, the student may be required to replace those hours with electives. See the program administrator for more information.

3.7 Leaves of Absence

A student in good standing may be granted 2 one-year leaves of absence. A leave of absence provides time away from the program for the student to attend to any personal issues. Time spent in a leave of absence does not count against the LGS time to degree requirement.

Students interested in taking a leave of absence should first contact a DGS and the program administrator. If they approve, the Epidemiology Program forwards a recommendation that the student be granted the leave of absence to the LGS Dean, who provides final approval. For

additional information, see the LGS Handbook. Per LGS policy, a readmission form <u>must</u> be filled out by the student returning from a leave of absence. This may be done as early as the pre-registration period prior to the term the student wishes to return or at least 2 weeks prior to registration.

3.8 Completion of Degree

A student approaching the end of a degree program is responsible for ensuring that all Epidemiology Program, LGS, and University requirements are met. It is the student's responsibility to be aware of and to meet all deadlines. Failure to do so may result in failure to receive the degree until the following term. Students must be registered in the term they receive their degree. Detailed steps for graduation are available at: <u>http://www.gs.emory.edu/resources/progress.php?entity_id=7</u>.

Part 4: Financial Information

4.1 Tuition and Stipend Information

Epidemiology doctoral students making adequate progress who are in good standing, receive funding including a stipend and tuition scholarship for 5 years. Typically, students receive their first 2 years of support from the LGS. This includes full tuition support and 12 months of stipend support (See Canvas for tuition and stipend levels). In some instances, support in the first 2 years may be in the form of training grants or faculty mentor funding. The support in the first 2 years covers the student's time to complete coursework, RAs, and TA requirements.

After the second year, students are expected to transition to alternate sources of funding such as research grants, dissertation grant support, mentor support, training grants, fellowships, etc. A student may receive funding directly related to his or her dissertation work, or the funding may be related to other research training activities. Although students in good standing can expect to be funded for 5 years, <u>students are expected to actively participate in identifying funding for years 3-5</u>.

Towards the end of their first year, students will collaborate with their advisor, mentors, and a DGS to develop a plan for ongoing support. Students are strongly encouraged to proactively seek funding opportunities; in this process, they will gain valuable experience in proposal writing and the funding process.

Students receiving stipends must be registered as full-time students (no less than 9 credit hours/term) during the period that they are receiving their stipend and be in good standing. During the Summer term, students must register for 9 credit hours of Research Hours to maintain their full-time student status.

4.2 External Funding

Given the importance of grantsmanship to professional development in the field of epidemiology, students are encouraged to seek external funding to cover their stipends and for their research projects through writing grants to federal or other agencies (e.g., foundations,

non-profit organizations). Students who seek external funding should discuss their plans with their mentor. A DGS should also be informed of any grant submissions. Planned proposals should be entered into the Research Administration Services (RAS) Public Health and Nursing Intent to Submit Form (<u>https://redcap.emory.edu/surveys/?s=M7FE4ADH73</u>) in order to be assigned support personnel. Sample proposals and additional resources are available on Canvas.

4.3 Student Fees

Students are responsible for all activity, athletic, computing, and mental health fees throughout their tenure in the doctoral program unless a Training Grant or other funding source specifically covers these fees. A summary of tuition and fees can be found here: <u>http://www.gs.emory.edu/funding/tuition.html</u>.

4.4 Supplemental Pay While Receiving a Stipend

Students may choose to supplement their stipend by engaging in research or training beyond their training in the Program., including serving as a TA for pay (i.e., a non-TATTO TA). This additional work, related to public health services or research/doctoral training, <u>may not total</u> <u>more than 10 hours per week</u>. Students considering such opportunities should discuss the advantages and disadvantages of these activities with their faculty mentor. If the mentor approves the experience, <u>the student must request approval from a DGS prior to accepting the position</u>. Note that the 10 hours per week should be time outside the time committed to being a full time student.

Please note that paid TA opportunities are generally discouraged during semesters you are enrolled in TATT 605 and TATT 610. If you are considering a paid TA opportunity while enrolled in TATT 605 or TATT 610, you must get approval from the instructor of the TATTO course in addition to your advisor and a DGS. Please be careful not to commit to TAing for pay before getting the necessary approvals.

At the beginning of each term, the student may request approval for supplemental pay activities in the upcoming term through a survey on Canvas. If a student is invited to participate in a paid activity mid-term, he or she should complete the Canvas survey and let a DGS and the program administrator know that a new entry has been added to Canvas.

4.5 Professional Development Support Funds

All students are encouraged to apply for PDS funds for financial assistance with attending conferences, gaining special training that is not available at Emory, and conducting research. Approval from a DGS must be acquired prior to submitting PDS funding requests. Instructions for applying and application forms can be found at: <u>http://www.gs.emory.edu/professional-development/pds/index.html</u>.

Students are strongly encouraged to plan to request funds in advance of conference deadlines. There is a one month grace period after the conference to apply for PDS funds. However, all applications more than 30 days after the conference, including reapplications, are administratively rejected. PDS applications for funding are typically not accepted mid-June through mid-September. Ms. Stevene McGee administers the PDS award disbursement to students and should be contacted by the student once the student is notified of the award. Students receiving conference support must submit the talk abstract or a slide of the poster presentation to Ms. McGee when requesting reimbursement. Abstracts and posters may be displayed on the Departmental welcome screen.

Part 5: Grievance Policy

Students who have a grievance related to some aspect of their PhD program in Epidemiology should report it to a DGS. The student should describe the grievance and relevant details in a letter addressed to a DGS, who will try, if possible, to resolve the grievance in conversation with the student and relevant parties. If this is not successful, a DGS will appoint a committee of three Epidemiology Graduate Faculty members (or faculty members outside the Epidemiology Graduate Faculty if the situation warrants it) who will review the grievance and propose an appropriate response. If it is impossible to resolve the grievance within this committee or within the framework of the Epidemiology PhD Program administrative structure, a DGS will forward the grievance to the Office of the Senior Associate Dean of the LGS. From this point forward, the issue is with a DGS, the student should go directly to the Senior Associate Dean of the LGS.

Appendix 1. Sample Course Plans

Course plans vary by student and depend on the courses the student has completed prior to entering the PhD program. All students MUST be registered for at least 9 hours a term to be in full-time status. The course plans below do not include course requirements NOT specified as EPI required coursework in section 1.3.1.

No MPH or MSPH FALL Number Credits SPRING Number Credits Name Name 4 EPI II 2019 EPI 530 EPII EPI 545 4 2020 EPI 533 SAS & R 2 EPI 731 **EPI** Foundations 3 EPI 790R **Doctoral Seminar** Doctoral Seminar 1 EPI 790R 1 BIOS 500 4 EPI XXX ≥0 BIOS I Elective^a **BIOS 510** Prob Theory 4 BIOS 591P BIOS II 4 PUBH 700 Intro PH 0 PH Research PUBH 701 1 **JPE 600** 0 Ethics Suggested RA 1 Suggested RA 2 Total Total 15 ≥12 EPI III 4 4 2020 EPI 550 2021 EPI 560 EPI IV EPI 791 Teaching EPI 1 EPI 739 EPI V 2 EPI 790R **Doctoral Seminar Doctoral Seminar** 1 1 EP 790R EPI XXX Elective^a ≥0 EPI XXX Elective^a ≥0 **TATT 600** TATTO 1 **TATT 610** TATTO 2 **TATT 605** TATTO 2 ≥9 ≥9 Total Total

Possible course plan for a student entering without a Master's degree in epidemiology

aIn place of EPI electives, students could enroll in research hours (EPI 798R)

Possible course plan for a <u>student entering with a Master's degree in Epidemiology or a related</u> <u>Public Health field from a program outside of Rollins School of Public Health</u>; exact courses will depend on the student's prior coursework completed.

		Non-	RSPH I	MPH or	MSPH		
FALL	Number	Name	Credits	SPRING	Number	Name	Credits
2019	(EPI 530 (EPI 534 EPI 790R EPI 791 (BIOS 500 BIOS 510 PUBH 701 TATT 600 TATT 605	EPI I ^a SAS & R ^b Doctoral Seminar Teaching EPI BIOS I ^a Prob Theory PH Research TATTO TATTO	4) 2) 1 1 4) 4 1 1 2	2020	EPI 545 EPI 731 EPI 790R EPI XXX BIOS 591P	EPI II EPI Foundations Doctoral Seminar Elective ^c BIOS II	4 3 1 ≥0 4
Total	JPE 600	Ethics	0	Total		Suggested RA 1	>10
Total			≤19	Total			≥12
2020	EPI 550 EPI 790R EPI XXX	EPI III Doctoral Seminar Elective ^c Suggested RA 2	4 1 ≥4	2021	EPI 560 EPI 739 EP 790R EPI XXX TATT 610	EPI IV EPI V Doctoral Seminar Elective ^c TATTO	4 2 1 ≥0 2
Total		ith approval of a DGS	≥9	Total			_ ≥9

^aTypically waived with approval of a DGS

^bStudents may replace EPI 534 with R bootcamp (Fall) if they have previously taken a class in SAS or with EPI 533 Programming in SAS (Spring) if they have previously taken a class in R, subject to approval by a DGS

^cIn place of EPI electives, students could enroll in research hours (EPI 798R)

Possible course plan for a <u>student matriculating in Fall 2019 with a Master's degree in</u> <u>Epidemiology from Rollins School of Public Health</u>; exact courses will depend on the student's prior courses completed. Student's taking just one year of coursework prior to the written qualifying exam should note that some topics will be taught out of order because the ideal sequence of courses takes two years to complete. Students planning to take the Qualifying Exam at the end of Year 2 may want to consider the Spring 2021 course plan for RPSH MPH/MSPH Matriculating in Fall 2020 instead of the Spring 2020 course plan below.

					•		
FAL	L Number	Name	Credits	SPRING	Number	Name	Credits
2019	EPI 739	EPI V ^a	2	2020	EPI 731	EPI Foundations	3
	EPI 791	Teaching EPI	1		EPI 738	Adv EPI I ^{b,c}	2
	EPI 590R	R bootcamp	1				
	EPI 790R	Doctoral Seminar	1		EPI 750	Longitudinal ^{b,c}	3
	EPI XXX	Elective	≥0		EP 790R	Doctoral Seminar	1
	BIOS 510	Prob Theory	4		EPI XXX	Elective	≥0
	PUBH 701	PH Research	1		TATT 610	TATTO	2
	TATT 600	TATTO	1				
	TATT 605	TATTO	2				
	JPE 600	Ethics	0				
Tota	1		≥12	Total			≥11
202	D EPI 798R	Research Hours	≥1 ^d	2021	EPI 798R	Research Hours	≥1 ^d
	EPI 790R	Doctoral Seminar	1		EPI 790R	Doctoral Seminar	1
	EPI XXX	Elective	≥1 ^d		EPI XXX	Elective	≥1 ^d
		Suggested RA 1				Suggested RA 2	
Tota	1		≥9	Total			≥9

RSPH MPH/MSPH Matriculating in Fall 2019 only

^aIn 2019-2020, this course will continue to be offered in the Fall, but starting in 2020-2021, it will move to the spring. Taking this course in Fall Year 1 is the current norm for students with an MPH or MSPH from RSPH who enroll in the EPI PhD Program even though this timing is out of order from the ideal sequence of the courses. Students planning to take the Qualifying Exam at the end of Year 2 may want to consider taking EPI V in Spring 2021 instead.

^bThese courses will not be offered after Spring 2020. They will be replaced with EPI 560 EPI IV starting in Spring 2021. Students wishing to take the Qualifying Exam at the end of Year 1 should take these courses as described above; students taking the Qualifying Exam at the end of Year 2 may wish to follow the Spring 2021 course plan for students Matriculating in Fall 2020 instead

^cStudents with an RSPH MSPH will have already taken EPI 538 & EPI 750. They can reach 9 credit hours through a combination of electives and/or research hours

^dElectives and Research Hours combine to a minimum of 8 credits (+1 credit required for EPI 790R)

Possible course plan for a <u>student matriculating in Fall 2020 with a Master's degree in</u> <u>Epidemiology from Rollins School of Public Health</u>; exact courses will depend on the student's prior courses completed. Students matriculating in Fall 2019 with an MPH/MSPH from RSPH who plan to take the Qualifying Exam at the end of Year 2 may wish to replace the Spring 2020 course plan above with the Spring 2021 course plan below.

RSPH MPH/MSPH Matriculating in Fall 2020 OR
Matriculating in Fall 2019 & Taking the QE in Year 2

FALL	Number	Name	Credits	SPRING	Number	Name	Credits
2020	EPI 791	Teaching EPI	1	2021	EPI 731	EPI Foundations	3
	EPI 590R	R bootcamp ^a	1		EPI 560	EPI IV	4
	EPI 790R	Doctoral Seminar	1		EPI 739	EPI V	2
	EPI XXX	Elective	≥0		EP 790R	Doctoral Seminar	1
	BIOS 510	Prob Theory	4		EPI XXX	Elective	≥0
	PUBH 701	PH Research	1		TATT 610	ΤΑΤΤΟ	2
	TATT 600	ΤΑΤΤΟ	1				
	TATT 605	ΤΑΤΤΟ	2				
	JPE 600	Ethics	0				
Total			≥11	Total			≥12
2021	EPI 798R	Research Hours	≥1 ^b	2022	EPI 798R	Research Hours	≥1 ^b
	EPI 790R	Doctoral Seminar	1		EPI 790R	Doctoral Seminar	1
	EPI XXX	Elective	≥1 ^b		EPI XXX	Elective	≥1 ^b
Total			≥9	Total			≥9

^aOnly affects students who completed their MPH/MSPH prior to 2021

^bElectives and Research Hours combine to a minimum of 8 credits (+1 credit required for EPI 790R)

Appendix 2. Candidacy Checklist

	Epidemiology PhD Program Candidacy Checklist*
	Students must be in Candidacy no later than September 15 of year 4
Со	oursework Requirements
	Completion of specified required Epidemiology coursework, including EPI electives that
	total no less than 18 credit hours
	Minimum GPA of 2.7
	No I (Incomplete) or IP (In Progress) on record
Re	search Hours Requirements
	Satisfactory completion of EPI 798R, pre-candidacy research hours, and other course work (e.g., TATT 605) that when added to the above required coursework requirements total no less than 54 hours.
	imary Data Requirement
	DGS and Advisor approval that Primary Data Collection Requirement (no less than 50
	hours) is complete OR approval that dissertation involves significant primary data collection experience
Re	search Assistantships
	Completion of 2 approved Research Assistantships of no less than 200 hours each
Jor	nes Program in Ethics
	Complete JPE 600 course
	Completion of 6 hours of Program-based Training.
ΤA	ЛТО
	Completion of TATT 600
	Completion of TATT 605 (TA 1)
	Completion of EPI 791 (Concurrent with TATT 605)
	Completion of TATT 610 (TA 2)
Qu	ualifying Exam
	Passed Qualifying Exam
Dis	ssertation Milestones
	Approval of Dissertation Concept Letter by EPI PHD Program Committee
	Approval of Dissertation Overview by EPI PHD Program Committee
S	itudents are encouraged to consult the LGS information on degree completion no later
	than when submitting the Application for Candidacy:
	http://www.gs.emory.edu/academics/policies/completion.html

*Students enrolled prior to Fall 2017 may enter Candidacy based on the expectations in the PhD Program Handbook from the year they enrolled or this Handbook, whichever occurs first.