

Doctoral Guidelines

PhD and DrPH Programs
in Epidemiology

Department Of Epidemiology

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WELCOME, AND A GUIDE TO THESE GUIDELINES

Dear doctoral students and faculty,

We are pleased to share with you the 2017-2018 PhD doctoral student guidelines. They incorporate all changes adopted in recent years.

A quick overview of the information presented in this guide:

- **Section I** provides a broad overview of the goals, structure, and administration of the PhD program in the Department of Epidemiology.
- **Section II** addresses the basics of admission and registration and provides information about covering the costs of a doctoral degree.
- **Section III** provides a roadmap to help doctoral students optimize their educational experience through engagement with faculty and peers in the department.
- **Section IV** covers the program requirements. Its four subsections address the following:
 - pre-dissertation requirements
 - pre-dissertation research
 - the dissertation process
 - information about waivers, exemptions, grandfathering and academic honesty and the honor code
- **Section V** describes:
 - monitoring students' progress through the doctoral program
 - resources for help with issues students may encounter during their time in the program

It is our sincere hope that these guidelines will enable our students to have an optimal educational experience in the Department of Epidemiology. We welcome and encourage any suggestions for their improvement.

My very best wishes,

Leslie L. Davidson, MD MSc

Director, Department of Epidemiology Doctoral Programs

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Section I

Introduction

The goal of doctoral training

The overarching goal for the Columbia University doctoral programs in epidemiology is to train students for careers as leaders in research and training in academic, not-for-profit, clinical, governmental and private sector settings. Our graduates have achieved prominence as faculty in academic institutions, as leaders in national and local public health, as well known clinical epidemiologists, as researchers in national and international NGOs, and in industry.

The PhD and the DrPH (see appendix)

The Department of Epidemiology offers outstanding doctoral training through two different degrees, the Doctor of Philosophy (PhD) and the Doctor of Public Health (DrPH). Either degree can be a route to a career in academic public health, clinical epidemiology or public health leadership. The PhD is oriented towards preparing students for academic research careers. The DrPH provides experienced professionals in public health, policy or a clinical field with the skills and competencies to excel in their chosen fields. Both the PhD and the DrPH programs currently share a rigorous methods sequence of advanced courses designed to prepare doctoral students for a career in which they develop, implement, and disseminate leading research in their fields. Changes are underway for the skill based courses required for the DrPH and will be fully implemented by 2019.

Competencies for the PhD

By the time they receive the PhD (and for DrPH students who matriculated before 2017) students will be able to:

- identify and address critical public health issues that merit epidemiologic study and design
- conduct and publish independent, scholarly research that advances knowledge about the causes, prevention, and amelioration of human disease
- teach graduate students or health professionals in academic and other settings
- work collaboratively with health professionals in other disciplines on research and applied projects that include epidemiologic elements

Training programs

Training programs for PhD, funded through the National Institutes of Health, are currently available in a number of areas related to research strengths in the department. Information about these programs is available on the departmental website at mailman.columbia.edu/become-student/departments/epidemiology/programs/training-programs.

There are also fellowships for candidates from underrepresented minorities offered through the NIH funded Initiative for Maximizing Student Diversity (IMSD) (contact Ana Abraido-Lanza at afl7@cumc.columbia.edu or Dr. Silvia Martins at ssm2183@cumc.columbia.edu) and several other training programs in the University which are open to doctoral students in Epidemiology. These programs provide focused, structured training in a substantive area while providing tuition support and predoctoral fellowships with stipends.

Administration

The PhD program is administered by the Epidemiology Doctoral Steering Committee (Subcommittee on Epidemiology) under the auspices of Columbia's Graduate School of Arts and Sciences (GSAS) and administered by the Mailman School of Public Health. GSAS rules are followed for tuition payment, residence requirements, and preparation and defense of the dissertation. DrPH students fall solely within the rules and requirements of the Mailman School of Public Health and the guidelines of the Department of Epidemiology.

Departmental structures administering the doctoral programs

The Doctoral Steering Committee is responsible for all aspects of the doctoral programs and, in agreement with the Department Chair and the Director of Doctoral Programs (called the Director of Graduate Studies in the GSAS), sets policy for both programs, reviews student progress, and evaluates program success. The Doctoral Steering Committee acts on behalf of, and with agreement of, the faculty. It consults with students with regard to policy issues. In collaboration with the Departmental Curriculum Committee, it reviews and agrees on required coursework. Courses themselves are reviewed and evaluated by the departmental Curriculum Committee and the MSPH Curriculum Committee.

There are three subcommittees of the Doctoral Steering Committee: the Admissions Committee, the Methods Examination Committee, and the Foundation Essay Committee. These three have explicit functions but overall policy is determined by the Doctoral Steering Committee. The Admissions Committee reviews applications and offers admission to both doctoral programs. The Methods Examination Committee sets the exam protocol and it plans and grades the Methods Examination annually. The Foundation Essay Committee sets the exam protocol and plans and oversees the grading of the Foundation Essay annually.

The Doctoral Steering Committee itself is composed of the Director of the Programs, the Chairs of the three subcommittees, a representative from each funded training program and one from the departmental Diversity Committee as well as two or three student representatives. There are also two members of the Admissions Subcommittee. These committees have administrative support from the Director for Academic Programs and the Project Manager for Academic Programs.

Section II

Admission, Registration, and Covering Costs

1

Admission to the PhD and DrPH Programs in Epidemiology

Timeline

Applications for admission to the PhD and the DrPH programs are available online through SOPHAS (sophas.org). Applications are reviewed in January and February and applicants are notified of our decision by early March. Funding decisions are conveyed as early as February but may be offered through the summer as opportunities become available.

Prior degree requirements

All doctoral students must have received a master's degree as specified below prior to registration in the doctoral program. Those enrolled in a master's program at the time of application must provide evidence of completion (e.g., via a letter from their sponsor/advisor) prior to entry. Individuals who have completed a doctoral degree in a program that does not confer a master's degree (e.g., MD, JD) are also eligible although prior experience or training in epidemiology is expected as outlined in **Section IV**. Applicants to the DrPH program are expected to have completed a Master's in Public Health. Applicants to the PhD program must have completed, or be in the process of completing, a master's degree in epidemiology or a closely related field. An exceptional student with an unrelated master's degree may be admitted directly to the doctoral program contingent on initial successful completion of the prerequisites listed on page 13.

Recommended background

Successful applicants should demonstrate commitment to public health, a clear understanding of what epidemiology entails, and research interests and career goals appropriate to a career linked to epidemiology. Applicants who have demonstrated their ability with relevant work or trainee experience will be well-prepared to undertake the challenging courses and research engagement required for our doctoral programs.

Coursework in mathematics (e.g., calculus) and statistics as well as a strong background in the natural and/or social sciences are highly recommended. The statement of purpose, an essential component of the admissions review, is the appropriate place to explain how an applicant's background and experience matches the recommended qualities for a successful candidate. It is essential to map out the rationale behind undertaking a doctoral program in epidemiology. We carefully review the statement of purpose and the required writing sample to determine whether the candidate has the ability to write clearly and persuasively. The required essay provides evidence of writing skills.

2

PhD and DrPH registration and tuition

Policies for the PhD program

The PhD requires continuous registration and the completion of six Residence Units (RUs) prior to being awarded the MPhil or PhD degree. Tuition is calculated on a flat-fee basis, and not by individual course. Students entering with a master's or other terminal degree (e.g. MD) are eligible for "advanced standing" which reduces the number of RUs required to four. Students apply for advanced standing after they have completed one semester of coursework in the PhD program. Registration for RU entitles the student to take an unlimited number of courses during fall and spring semesters. Students may register for a full or a half RU. Students who have received advance standing must complete four full RUs to be eligible for an MPhil or PhD degree. The four RUs may be accumulated as four full RUs, eight half RUs, or a combination of both. Students registered for a full RU are considered full-time. While the RU is not itself a course, it is assigned a course ID number for registration purposes.

After completion of all required courses and RUs, PhD students will have other degree requirements to fulfill, including successful completion of the two qualifying examinations. After this point, students maintain continuous registration through one of two ways: Extended Residency (ER) or Matriculation and Facilities (M&F), according to the following guidelines:

- Students who are taking qualifying exams must register for ER
- Students who are defending a dissertation may register for M&F if they (a) do not hold a University funded fellowship or appointment and (b) registered for an RU or ER during the previous semester
- Students who do not hold a University funded fellowship or appointment and are not completing a degree requirement may register for M&F
- Students who live more than 200 miles from the University, who do not need to be full-time certified by the Department and who do not require Student Health Service or Health Insurance may register for part-time M&F

PhD Students registered for a full RU can take as many courses as they want; students registered for a half RU may enroll in three courses per semester. M&F entitles the student to use university facilities but not to take courses.

Policies for the DrPH program

The DrPH requires the completion of 30 credits and continuous registration. The tuition is determined by credits for courses taken. Each course beyond the MPH has a set number of credits. During the exam semester and thereafter while undertaking the dissertation, students must register for one credit per semester and maintain continuous registration until completion.

3

Covering the costs of a doctoral degree

Earning a doctoral degree can be an expensive undertaking, but there are several ways to cover some or all of the costs. These include:

- Training program fellowships (departmental or institutional)
- Other scholarships and fellowships arising both inside and outside the University
- Research-based employment—Graduate research assistantships (GRAs)
- Seminar leadership
- NIH individual dissertation grant awards (F31 and R36)

The department supports student efforts to identify and secure financial support while in the program but the responsibility for funding is ultimately the student's. In addition to the slots funded through the specific Departmental Training Programs, doctoral students in Epidemiology are eligible for other funded fellowships. Availability varies from year to year. Applicants are also strongly encouraged to be proactive and pursue funding alternatives inside and outside the university, such as federally funded dissertation grants.

Application procedures and deadlines for NIH training program fellowships vary by program; please check the MSPH website or with training program directors/ coordinators for details. These usually require an additional specific application and an interview.

A student must be up to date with any financial responsibilities to the University prior to registration for each year and before registering to undertake the comprehensive exams. Prior to the award of either degree, all financial requirements must be discharged before the degree is conferred.

Section III

Advising and Departmental Engagement

Engagement between department faculty and students is at the heart of the doctoral program in Epidemiology at Columbia. There are many ways in which a candidate can engage, some optional and some built into the structure of the program. These include working with an advisor and, later, a dissertation sponsor and dissertation committee, membership in a department research cluster, journal club, joining a research team, and forming or joining student work groups or interest groups.

1

Advising

Upon admission to a doctoral program in Epidemiology, each student is assigned an academic advisor. The advisor provides information and recommendations regarding coursework, qualifying examinations, and other academic issues during the student's first years in the program. Although advisors initially assigned often serve through the qualifying examinations and sometimes through to the dissertation defense, students may request a change once they become familiar with the faculty and their interests become more focused. The advisor may or may not also serve as the dissertation sponsor. When a student chooses a sponsor for the dissertation, that person may become the student's advisor as well. However, students should feel free to keep an advisor in addition to a sponsor. Students are also encouraged to talk with the Director for Academic Programs and the Director for Doctoral Programs about courses, exams, upcoming activities, administrative procedures, etc. Other students are a good resource for advice as well. The advisor and later the dissertation sponsor discuss progress with the student and complete the [Annual Progress Report Form](#) with the student.

During the four to seven years that most doctoral students spend in the Department of Epidemiology, some may encounter problems requiring additional help. See [Section V-4 Getting Help](#) for a list of resources that may prove useful for a range of issues.

2

Cluster membership

There are five clusters in the Department of Epidemiology whose members collectively include all faculty and all doctoral students. The five department clusters, reflecting our areas of strength are: chronic disease epidemiology, infectious disease epidemiology, injury epidemiology, psychiatric and neurological epidemiology, and social epidemiology. Doctoral students, required to participate in a department cluster, may choose which cluster they wish to join. Cluster seminars are open to all students regardless of cluster membership. The Department of Epidemiology has a wide range of internationally recognized research strengths, faculty and training in the following substantive areas: cancer, environmental hazards, genetics, infectious diseases, reproductive, perinatal and pediatric conditions, neurologic disorders, psychiatric disorders, substance use, life course and social epidemiology. A list of faculty members, along with their areas of interest, publications, and brief biographies can be found on our [faculty directory](#).

The cluster provides an intellectual and administrative home for students and faculty and meets regularly in a variety of ways including seminars, workshops, discussion of work in progress and symposia. Usually, though not always, the student's advisor is a member of the same cluster. These clusters may or may not have attached training programs that fund students. Funded training programs offer students additional opportunities for engagement to their fellows.

Students are also encouraged to join a research group of a member of the faculty and participate in implementing research studies in an area of interest to them. Faculty generally welcome student participation in their work. We expect students to gain a grounding in areas beyond that of their cluster through coursework, research engagement, and seminar attendance.

3

Working with a sponsor on the dissertation

Students who have completed their coursework and passed their comprehensive exams usually move on within a few months to select a sponsor who will supervise their work as they develop their dissertation. This is a close mentorship relationship. The department policy on mentoring doctoral students offers advice and ground rules on developing this relationship and what students can expect. It can be found in [Appendix 2](#). The sponsor selects the dissertation committee in consultation with the student. The committee members work with the student to a varying degree (see [Section IV-3](#) on the dissertation).

4

Peer engagement

Doctoral students are involved in formal and informal doctoral student organizations and often form interest groups within clusters or on topics of interest in addition to more or less formal writing groups and study groups. Peer-to-peer learning is one of the most effective approaches to learning in a doctoral program.

5

Staying in the loop and voicing your opinion

Getting a PhD or DrPH involves more than coursework, exams, and a dissertation. It also entails building a network of friends and colleagues and becoming part of—and helping create—the community within the Epidemiology Department. We strongly encourage students to spend time in departmental “spaces,” attend seminars, form study groups, work with faculty, collaborate with other students, etc. We also encourage students to get involved in departmental activities by participating in the doctoral and masters student groups, serving on departmental committees, and the like. Many of the improvements made in our program (e.g., new courses, exam formats, events) stem from students’ suggestions and willingness to participate. There are several important mechanisms for communicating ideas or concerns, including student organizations, formal student representation on the doctoral and curriculum committees, meetings with the Director of Doctoral Programs Director and Director for Academic Programs as well as meetings with the Chair of the Department.

Doctoral student organizations

The Doctoral Student Council (DSC) has been an independent student organization representing all PhD and DrPH students in the Department of Epidemiology. The mission of the DSC is to serve as a strong advocate of students’ interests and concerns and to work closely with the department faculty and administration to strengthen the doctoral program and develop solutions that are highly amenable to students’ needs. The level of activity varies from year to year based on the level of student interest. As the official voice of the student body, the DSC aims to ensure that the views of all students are given an opportunity to be heard. Underlying our efforts is a desire to create a stronger sense of community among doctoral students and to foster a department environment that is supportive of students. The student members of the Doctoral Steering Committee coordinate the DSC. There is at least one pre qualifying exam student representative and one post qualifying exam (ABD) student member on the Doctoral Steering Committee.

Representation on Departmental Committees

Many procedures and requirements affecting doctoral students are formulated and implemented by departmental or schoolwide committees and sub-committees. In addition to the Doctoral Committee, these include the Curriculum Committee, Diversity Committee, and the General and Methods Examination Committees. Students who volunteer or who have been selected by their peers may serve on these bodies, provide input, represent student interests, and communicate with the DSC and their fellow students.

In summary, maintaining a strong program and creating an environment that serves both students and faculty requires everyone’s input. Students are encouraged to voice their opinions and to get involved.

Section IV

Program Requirements

1

Overview

The following is a snapshot of doctoral program components and requirements. Each component is described in greater detail on the following pages.

- Specified required courses in epidemiology and biostatistics*
- Additional coursework and electives
- Engagement in a departmental cluster (see [Section III-2.](#))
- Other additional requirements
- Teaching experience
- Two qualifying examinations, one focusing on epidemiologic methods (the Methods Examination) and the other focusing on the application of epidemiologic principles to identified problems or controversies (the Foundation Essay).
- Pre-dissertation research (strongly recommended for all, required by some fellowships)
- Development of a dissertation proposal
- Internal, private committee defense, followed by a public defense (a seminar presentation) of the dissertation proposal
- Dissertation research, completion, and public seminar presentation immediately prior to a private defense before the dissertation committee

* Exemptions, grandfathering and honor code are addressed in [Section IV-4.](#)

It is the expectation of the department that students will complete the doctoral program, including the dissertation, within seven years. Full-time students who enter with a master's degree in epidemiology typically spend two years taking courses and any other requirements of the program outside of the qualifying exams and the dissertation. Students are strongly encouraged to work with an epidemiology research group throughout the program. The teaching requirement is met by serving as a teaching assistant in an epidemiological course prior to taking the qualifying exams. Students must serve as a teaching assistant for at least one course but may assistant in teaching throughout the program, receiving compensation as per departmental and MSPH policy.

PhD students are awarded MPhil degree after they have successfully passed their qualifying exams and all PhD requirements with the exception of the dissertation proposal and dissertation. Students may only defend their dissertation proposal after passing the two qualifying exams and obtaining permission from the Director of the Doctoral program. In general, students will then spend an additional 6–12 months completing and defending a dissertation proposal, followed by 1–2 years completing and writing the dissertation. DrPH students matriculating in the program prior to 2017 are not eligible for the MPhil degree (which is solely offered by GSAS) but are subject to the same Dissertation requirements as the PhD. Students entering from 2017 will undertake a different culminating experience in line with new CEPH requirements. This is currently under development.

2
A

Pre-dissertation components

Course requirements and recommendations

Students entering with a master's degree typically spend two years completing the required methods coursework which is designed to be sequential. Required courses are designed to provide students with a solid foundation in epidemiologic methodology and to develop professional skills. Required courses may not be taken pass/fail. Students are encouraged to take elective courses to build detailed expertise in substantive and methodologic areas of interest and to gain additional skills. There are current and emerging differences between requirements for the DrPH and the PhD programs discussed later in this section.

Not all courses are offered every year (especially electives); many courses have prerequisites; some have limited enrollment; and some require the permission of the instructor. It is the student's responsibility to ascertain and meet any prerequisites or permission requirements, and to plan his/her schedule far enough in advance to ensure that courses are taken in the proper order.

The required course sequence is built on a foundation including prior study of epidemiology and biostatistics. It is expected that most incoming doctoral students will have had substantial prior coursework in epidemiology and biostatistics as outlined below (Pre-requisites to undertaking the doctoral methods sequence). Incoming doctoral students with little prior coursework in epidemiology or biostatistics should plan to include courses described below either before matriculation or in their first year. Students missing more than one of the prerequisite courses will need three years to complete coursework. P8400 Epidemiology III is offered in the summer and can be taken before beginning the methods sequence if that is the only missing prerequisite.

Before undertaking the advanced methods courses required for the doctoral program, students should have mastered the following: introductory epidemiology, observational epidemiology, intermediate epidemiological analysis, introductory biostatistical methods, categorical analysis, applied regression analysis and the application of epidemiological analysis through relevant software, such as SAS. Students attending another institution for their masters may review the relevant syllabi at MSPH to determine if they have mastered the required material.

Sequencing of required and recommended courses for a full time PhD or DrPH student

YEAR, SEMESTER	REQUIREMENTS - PhD	REQUIREMENTS - DrPH (for those matriculating before 2017)
YEAR 1, FALL	Epidemiology IV: Critical Thinking in Epidemiology History of Epidemiology Biology and Physiology for Epidemiologists Mentored research	Epidemiology IV: Critical Thinking in Epidemiology Integration of Science and Practice for Doctoral Students DrPH Seminar
YEAR 1, SPRING	Applied Regression II Publications, Presentations, and Grants Substantive courses/Biostatistics elective Mentored research	Applied Regression II DrPH Seminar Elective Courses Mentored research/Practicum
YEAR 2, FALL	Epidemiology V: Concepts in Causal Inference Substantive course / biostatistics elective Mentored research	Epidemiology V: Concepts in Causal Inference DrPH Seminar Substantive course/Biostatistics elective Mentored Practicum
YEAR 2, SPRING	Applications of Epidemiology Research Methods II Epidemiology VI: Advanced Techniques in Epi Methods Mentored research TA	Applications of Epidemiology Research Methods II Epidemiology VI: Advanced Techniques in Epi Methods DrPH Seminar Mentored Practicum TA
YEAR 3, SUMMER	Methods Exam	Methods Exam
YEAR 3, FALL	Foundation Essay	Foundation Essay
YEAR 3, SPRING	Dissertation Proposal	Dissertation Proposal
YEARS 4 & 5	Dissertation	Dissertation

We spell out the sequence of courses above to clarify the meaning of “full-time student”. There is sometimes confusion because for PhD students status can be defined in two different ways: one based on payment mechanism and the other based on course load and prior experience of Epidemiology and Biostatistics. These have different implications for length of time in the program. It is difficult to be a “full-time” student in terms of course load if you are working a full-time job off campus. If students only take 1–2 courses per semester, they will need to spend 3 years on coursework. Those students who begin the program taking masters level Epidemiology and Biostatistics courses may also have to add an extra year of coursework.

A-i

Additional coursework and electives

Students should work with their advisors to determine the additional coursework required to meet the specific competencies of the two degree programs and to meet their individual career goals. Additional statistical and methods courses should be taken as needed. The course Selected Problems in Measurement in Epidemiology (P8417) is highly recommended. Though History of Epidemiology, Publications, and the Biology and Physiology Courses are not required for the DrPH students they are eligible to enroll.

In addition to required courses, doctoral students are expected to take substantive courses in their area of concentration and in areas where their training is weak. It is also expected that students gain substantive public health and epidemiologic knowledge outside their area of concentration through attendance at seminars and courses. These should be selected in consultation with their academic advisor. Note, some specialized courses are taught annually, while others are not.

A-ii Additional requirements

Seminars

Doctoral students are expected to attend their cluster and departmental seminars (i.e., Columbia University Epidemiology Grand Rounds (CUEGRs) and Epidemiology Department Seminars). They should attend many of the dissertation proposal and final dissertation seminars of their peers.

Teaching experience

All Doctoral Students are required to serve as a teaching assistant (TA) for at least one Epidemiology Course before they undertake the qualifying exams. Faculty mentor the TAs for their courses. There are multiple opportunities to participate in workshops and webbased resources dedicated to enhancing teaching skills which are open to but not required for doctoral students.

Pre-dissertation research experience

It is expected that all doctoral students will be actively engaged in epidemiologic research throughout the doctoral program. This should be arranged in consultation with their academic advisor. Note that PhD students must have completed analysis on a research topic or a systematic review to take the required course, Publications, Presentations and Grants, in their second semester. Many DrPH students take this course as well, though it is not a DrPH requirement

Course on the responsible conduct of research/research ethics

Starting with the cohort matriculating in 2014, students will be required to take one of the following courses addressing the responsible conduct of research: P9630 or G4010.

Training program fellows

Students who are funded by training programs or fellowships may have additional program or fellowship-specific course requirements and should plan their schedules accordingly.

A-iii Requirements specific to the DrPH program

New requirements for the DrPH

Beginning with students matriculating in 2017 Integration of Science and Practice will be a two credit course using case based approaches to examining core CEPH DrPH competencies adopted by the MSP. This course will include all DrPH students entering the school from any of the five departments offering a DrPH. Other required coursework is in development for implementation by January of 2019.

The DrPH seminar

The Columbia DrPH has been grounded in research skills and includes a research dissertation but there is a required monthly DrPH Seminar offered over the first two years and a required mentored public health practicum, candidates have gained exposure to the

following areas competencies and skills associated with a practice-based professional Doctor of Public Health Degree.

DrPH Competencies:

- Advocacy
- Communication
- Community/Cultural Orientation
- Leadership
- Management
- Professionalism and Ethics

The DrPH Seminar will include the completion of the mentored practicum required for the degree. The seminar series will include small group discussion, and candidate presentation of the mentored practicum projects.

The DrPH practicum

The DrPH in Epidemiology requires the completion of a mentored practicum. Mentors will include Columbia full time and adjunct faculty with experience as senior public health practitioners or clinical epidemiologists. Other potential mentors are those who can bring specialist expertise to the area encompassing the practicum project. Students are encouraged to work with a Public Health Entity such as a Department of Health or an NGO or community organization in the conceptualization and completion of the practicum project.

The practicum project should be linked to the planned career trajectory of each candidate and should lead to the development of a product which is not a research publication or research proposal, though the product should make use of epidemiologic research evidence. A practicum might include but is not limited to the following: a report (paper or web-based) interpreting research findings for the general public or for a specific target audience; practice guidelines for a professional organization; a policy statement; a design for a community program; an action plan to achieve a public health goal; a plan for a training component in their discipline such as creating a workshop particularly in epidemiologic methods for clinicians or developing a teaching case illustrating epidemiology methods. The DrPH practicum, like other requirements, must be completed before undertaking the qualifying exams.

Cross Departmental Training

A new requirement for first year PhD and DrPH doctoral students from departments across the school. For the first year students this will include seven monthly required sessions addressing issues such as presentation skills, teaching syllabus creation, translating policy into public health impact, public health communication and media training, resumé development and networking. For all students, sessions on preparing of an F31 or R36 grants will be offered across departments for students.

A-iv

Criteria to remain in good academic standing

To remain in good standing, students must (1) receive grades of B or higher in all required courses and (2) achieve an overall grade point average (GPA) of B+ (3.3) or higher. Students whose grades do not qualify for good standing (e.g., who receive a

grade of B- or lower in a required course) will be reviewed by the Doctoral Committee with input from the director of the course, the student, and his/her academic advisor. Based on this review, the Committee will determine whether the student should (1) continue in the program in good-standing without further conditions; (2) continue on a probationary basis until specified conditions (e.g., additional remedial coursework, tutoring) are met (at which point the student returns to good-standing); or (3) be dismissed from the program. Dismissal from the program requires review by and agreement of the Department Chair and review by the MSPH Office of Student Affairs. Students may not take required courses pass/fail. Only students in good-standing may sit for the qualifying examinations.

B

The qualifying examinations

Principles

Students should not be examined on material/concepts not included in the formal doctoral training unless they are so notified at the start of the program.

The time interval required for preparation, administration, and grading of the exams (now 7 months for those who pass, but longer for others), should be shortened.

Changes to exams should be transparent, with clear communication between students and faculty.

Overview

There are two qualifying examinations, one focusing on epidemiologic methods (the Methods Examination) and the other requiring synthesis and application of epidemiologic principles (and other relevant research) addressing a substantive and unresolved question in an area of interest to the student, most likely related to plans for the dissertation (the Foundation Essay). Currently both DrPH and PhD students undertake the same qualifying exams but over the next two years as the program requirements diverge based on CEPH requirements, there will be a different approach to qualifying exams for the DrPH candidates.

These examinations are designed to test students' understanding of, and ability to apply, epidemiologic concepts and reasoning to substantive areas and methodologic problems. Because of the different purposes and structures of the two exams, there are separate protocols for each which are updated annually and summarized below. Students undertake the examinations only after successfully completing all course work requirements. The Foundation Essay can only be undertaken after successful completion of the Methods Examination. The examination protocols provide more detail.

The first qualifying examination, the Methods Examination, is generally taken within three to six months of completing coursework. Ideally, both examinations are completed within several months of course completion. Any student planning to take an examination should let the Director for Academic Programs know of his/her intention at least two months in advance of the examination. Students usually form informal study groups to prepare for the exams. Copies of previous Methods exams are available from the Director for Academic Programs.

Students with documented learning disabilities working with the Office of Disability Services may receive an accommodation agreed upon with that office in consultation with the Director of Doctoral Programs and the Director for Academic Programs. Those for whom English is a second language for whom the combined time and word limit

of the Methods Exam would not fairly test their abilities may petition the Chair of the Exam Committee for extra time.

As of May 2017, students are expected to take the Methods exam the summer after they finished required coursework and then they should submit the Foundations Essay within a year of passing the Methods Exam. If a particular student faces a challenge in this timeline, they may request an extension from the relevant Doctoral Subcommittee.

B-i

The Methods Examination

Purpose

The purpose of the examination is two-fold. First, it is intended to provide doctoral students with the opportunity to integrate and synthesize epidemiologic methods from courses and most importantly from the larger research literature. The literature on epidemiologic methods changes and develops and the purpose of this exam is to understand the standard methods as well as newer advanced methods in the literature and how these advances improve on overall inference. It is intended to indicate to the department that the student understands epidemiologic methods sufficiently to proceed to the next stage in the doctoral program.

General approach

The methods exam is designed to cover the central issues in epidemiologic methods. These include:

- Epistemologic questions about causation
- Causal inference
- Relationships among theory, hypotheses, and empirical testing
- Study design (including sampling and measurement strategies)
- Basic and advanced data analysis
- Confounding, bias, measurement error, mediation, and effect modification
- Interpretation of study results

Methods Examination Committee

This Committee is a subcommittee of the Doctoral Steering Committee and its Chair sits on the Doctoral Steering Committee.

The Methods Examination Committee is responsible for the exam protocol and evaluates whether the exam is functioning as expected and evaluates the outcomes. The exam questions are written by faculty members chosen from among the Methods Exam Committee members and other instructors that teach the methods sequence and required courses. A copy of the full protocol is available from the Committee chair.

Students preparing to take the Methods Examination meet as a group with the Committee after completion of coursework to discuss the process, review the reading list, and answer questions. There is a reading list, updated each year and distributed to the students, which is also available from the Director for Academic Programs. The exam, generally given in August or September, consists of four pairs of questions.

Students must answer one question from each pair. The exam is take home, written under the honor code, closed book, and lasts approximately 8 hours on a single day.

Passing and failing the Methods Examination

Students will receive a letter grade for each exam question. Students who receive a grade of B or better on all questions have passed the methods examination, though B is not considered an optimal grade.

Reporting of Results: Grades will be completed within 30 days of receipt of the exam.

Re-writes/Failing 1 Section: Students who receive a B- or lower on one question must rewrite the question they have failed and answer the other question in that section. Rewritten questions receive a grade of excellent essay, passing essay or failing essay. If the student receives a grade of “failing essay” during the rewrite period, the student must complete a remediation task designated by the Methods Exam Committee. Remediation tasks receive a grade of excellent task, passing task or failing task. Students can meet (and are encouraged) to meet with the methods exam chair and the members who wrote that section for feedback to help prepare the rewrites or remediation tasks. If student fails the task, the student has failed the methods exam.

Fail to submit an answer to one question: Students who fail to submit an answer to one question will not have passed the exam and may not offer rewrites within that year. He or she will have to take the omitted question the following year.

Failing examinations: Students who receive a grade of B- or lower on two or more questions have failed the exam and must retake it the next time it is offered. Students may only take the exam twice. If a student fails Methods Exam the first time, the Doctoral Committee will review his or her progress in consultation with both the student and his/her advisor and the Chair of the Methods Exam Committee prior to the student’s second attempt in the following year. They will discuss whether they perceive a need for any specific remediation prior to retaking the exam.

B-ii

The Foundation Essay

As a second qualifying exam, students will write a background essay that lays the foundation for their dissertation proposal. The Foundation Essay may only be submitted after a student has successfully passed the Methods Examination. A passing grade on this essay, after passing the methods exam, is required to move forward to the dissertation stage. This will take the place of the general exam and take effect as of September 2015.

There is a new sub-committee, The Foundation Essay Committee, to oversee the Foundation Essay, including setting the protocol, a mentoring rubric to guide the process and the grading rubric to be used in the evaluation.

Requirements

In an essay of no more than single-spaced 12 pages, written under the supervision of the student’s dissertation sponsor or other faculty mentor, the student should:

- Define the research question(s) they wish the dissertation to address.
- Provide a synthesis of the current literature that is a principled argument for the research question(s).

- Address the disagreements or conflicting findings in the literature about the research question (s).
- Identify and distinguish alternative hypotheses related to the question.
- Explore and provide a critical evaluation of the evidence on these differences (alternative hypotheses), based on both substantive and methodological concerns.
- Identify the obstacles, both substantive and methodological, that hinder a clear resolution of the issue. This should include a discussion of possible confounders, effect modifiers and mediators, if appropriate.
- Identify and articulate the specific aims and hypotheses that derive from the synthesis of the literature.
- Provide references, which are not included within the 15 page limit, that are appropriate to the research question, the review of the literature, and the specific aims you choose.

Topic

The research question to be approached by the student will most likely be close to the question to be addressed by the student for the dissertation. Students may address a broader topic looking to discover the key research gaps and then settle on a research question for the dissertation.

Evaluation

The Foundation Essay Committee will judge the paper on the following domains:

- Writing a logical, coherent argument supporting the selected research question
- Clearly identifying the unresolved questions regarding the specific aims/hypotheses,
- Providing a synthesis of the literature to support this argument
- Articulating specific aims supported by this argument, and
- Clearly operationalizing the aims in terms of the relationship among different variables including the mechanisms posited for the exposures under study.

The evaluation committee will decide if the essay provides sufficient evidence of the candidate's ability to write a defensible dissertation. They will submit their recommendation to the Doctoral Steering Committee. The Doctoral Steering Committee will review the recommendation. If it approves the recommendation of the Foundation Essay Committee considers the essay acceptable, the candidate may move on to complete and defend a dissertation proposal. If it is not acceptable, then the candidate will have a second and final opportunity to submit a foundation essay at one of the agreed submission dates. If the second submission is not acceptable, the Doctoral Steering Committee will recommend to the Chairman and the Mailman School Academic Standards Committee that the candidate be terminated from the program in line with department, Mailman and University policies.

B-iii

Examination results, appeals, and the need to remain in good academic standing

Getting examination results

The Chairs of the two examination committees will inform students in writing of their examination results and enclose a copy of the comments of the graders. He/she will also inform the Director of Doctoral Programs in writing of the grades (for the Methods Exam, it will include the grade for each question as well as the overall grade for each student). A copy of the examination questions and answers will be retained in the student's file, though exam grades will not appear on a student's transcript.

Appealing an examination grade on either the Methods Examination or the Foundation Essay

Students who wish to question the grade for the examination should first speak with the Chair of the appropriate examination committee and request that the examination (or the relevant exam question) be reviewed by the graders, following the procedures set down by that exam committee. The graders may adjust the grade following this informal review. If the student is not satisfied that the exam has been appropriately graded, he or she may appeal formally within 30 days from receipt of the grade to the relevant exam committee explaining the grounds for the appeal. The relevant exam committee sets the format and timeframe for the appeal. Should that appeal fail and the student wishes to further challenge the grade, he or she may direct the appeal to the Chair of the Doctoral Steering Committee (GSAS uses the term Director of Graduate Studies) within one month of the rejection by the exam committee. The Chair of the Doctoral Steering Committee will then forward the appeal, the exam protocol and question as well as the original exam to an ad hoc subcommittee of the Doctoral Committee Faculty who will make a final determination regarding the grade in question. If the appeal is turned down and the student believes that the decision is not just or possibly biased, the student may appeal (within two weeks of receiving the appeal rejection) to the Chair of the Department. If that is rejected, the student may appeal to the MSPH Vice Dean for Education who will decide whether to review it. There is no further appeal.

Examination grades needed to remain in good standing

In order to continue in the program and undertake the dissertation, students must pass both exams. Students who do not meet this standard will be reviewed by the Doctoral Steering Committee, with input from the student and his/her academic advisor. Based on this review, the Doctoral Steering Committee will assess whether there are extenuating circumstances that justify continuation in the program or whether to recommend that the student should leave the program and not go forward to the Dissertation stage. In the former case, the committee may require that the student complete additional coursework, tutoring, written work, and evaluation to the standard of the exams before proceeding to the dissertation. If a student passes both exams successfully but does not complete and successfully defend a dissertation by the University time limits, the PhD student will leave the program with an MPhil.

In the event that the Doctoral Steering Committee recommends that a student is asked to leave the doctoral program at any stage, before or after the receipt of the MPhil, the student's performance will be reviewed by the Department Chair. This is in accordance with MSPH and GSAS guidelines.

C

Research experience

It is expected that current students join a research group in a paid or unpaid capacity during their first or second year in the program in order to get practical experience in epidemiologic research. These “field placements” can be useful for developing dissertation ideas and/or gaining experience with different stages of research (e.g., grant writing, instrument development, data collection, data analysis). Some students work with more than one group simultaneously; others work with different groups sequentially, and still others work with a single group throughout their training. Many use placements as a source of financial support. Some fellowship programs require that students participate in such field placements, and fellowship rules govern whether the position is paid or unpaid and any limitation on number of hours worked per week. Students should review with the principal investigator (PI) if the students should be added to the IRB approved study personnel.

D

Teaching experience

All students are required to fulfill at least a one-semester teaching requirement by serving as a teaching assistant, typically in an introductory or intermediate level epidemiology course. The goal of this activity is to provide experience in graduate level teaching, in mentoring students, to reinforce knowledge and skills in epidemiologic principles, and to prepare for the qualifying exams. Teaching assistants receive a payment. The MSPH provides training sessions in teaching for faculty and doctoral students. Candidates are strongly urged but not required to take advantage of these in developing their competencies in teaching and training.

Teaching assistants are expected to conform to a high standard of professionalism both in their interactions with students and in working closely with the professor in fulfilling the learning objectives and class content outlined in the syllabus.

Please consult with the Director for Academic Programs if you are interested in a teaching assistant position. Eligibility is determined by Human Resources and final decision on a teaching assistant sits with the instructor of the class.

3

The dissertation process

A

Overview of the dissertation process

There are several steps to getting a dissertation off the ground and completed. These are summarized on the top row of Figure 1 in [Section II-C](#). As before, DrPH students matriculating before 2017 will undertake a research dissertation while those entering after 2017 will be subject to the requirements under current development. In brief (see below for details), these steps include:

- Identifying a potential dissertation topic or general area of interest
- Finding a sponsor and negotiating a research project that the sponsor agrees to supervise
- Discussion with sponsor who will select and invite (at least) two additional members for the dissertation committee (chair and the second reader) who meet departmental (DrPH) or departmental and GSAS guidelines (PhD); this three-person committee reviews and approves the dissertation proposal and these members must participate in the internal proposal defense
- Writing and revising a proposal of no more than 25 single-spaced pages and submitting it to the three-member committee with a summary report from Turnitin (students defending after September 1, 2014)
- The internal defense: Defending the proposal at a face-to-face meeting that includes (at a minimum), the sponsor, chair, and other second reader; making all revisions indicated by the committee
- Presenting the proposal at a formal, public, and advertised seminar in the Department of Epidemiology including questions from two faculty discussants in the Department of Epidemiology
- Making any additional revisions indicated by the three-person committee following the public proposal defense
- Obtaining IRB review and approval for the proposed project jointly with the sponsor
- Writing and revising the dissertation, including three required papers and brief introduction and conclusion chapters
- Selection by the Sponsor of the two remaining committee members (who meet GSAS and/or departmental guidelines) needed for the five-member dissertation committee in consultation with the student. This is the committee who participates in the final dissertation defense. (Note: this final committee must be approved by the Chair of the Doctoral Committee or Department Chair and the University.)
- Circulating a completed dissertation to the entire committee with approval by the internal committee
- Presenting dissertation findings at an open departmental seminar
- Defending the dissertation to the five-member committee having submitted the dissertation and a report from Turnitin (beginning with students defending after September 1, 2014)
- Making revisions required by the committee

- Formatting the dissertation following GSAS and MSPH requirements
gsas.columbia.edu/content/formatting-guidelines
- Depositing the completed dissertation electronically

Some important points to note:

- Although students usually follow the sequence of steps listed above, there are deviations. Many of the rules about setting up a dissertation committee, defending a proposal, formatting the dissertation, and defending the final product are set by GSAS for PhD candidates and the DrPH rules are identical. The rules for the PhD are available online at gsas.columbia.edu/dissertations.
- Also refer to related links on this site. It is essential that both the student and sponsor read and follow GSAS guidelines, some of which are summarized or copied below. The sponsor is responsible for creating a dissertation committee, not the student, though the student should be consulted.
- As of September 1, 2014, Turnitin summary reports are required when submitting both the dissertation proposal and dissertation itself. Students are required to submit to their sponsor a report from Turnitin.com when submitting the final dissertation proposal and when submitting the final dissertation to the full committee. Examiners may themselves submit proposals or dissertations to Turnitin if deemed appropriate.

If you have questions, ask the Chair of the Doctoral Committee and/or Director for Academic Programs; it is easier to fix a problem at the outset than at the end of the process.

B

Finding a dissertation topic and question

Students are encouraged to begin thinking about potential dissertation projects while completing their coursework and preparing for qualifying exams. The foundation essay qualifying exam was designed to facilitate and focus this work. While there is no single or “best” way to choose a dissertation topic (and many students consider multiple possibilities before making a final selection), there are strategies that help. Reading journals, attending seminars and conferences, and talking with faculty and students may generate ideas. Identifying available data sets (e.g., from projects of faculty members or public use data) may help narrow the field of interesting questions to those that are “doable.” Looking over proposals and dissertations filed with the department may clarify what and how much is expected in dissertation research. “How-to-write-a-thesis” books and seminars in grant writing may also be of assistance. Thinking about what type of career you aspire to should also influence choices. And, perhaps most important, talk with your academic advisor and other faculty about next steps!

C

Finding a sponsor and negotiating a project

Once a student has identified a topic or question of interest, it is time to find a sponsor, i.e., someone who conducts research in the chosen area, meets GSAS specifications (see GSAS guidelines), and is willing to provide guidance and support on an ongoing basis. The sponsor need not be the person who “owns” or provides the data, although that person is often a member of the dissertation committee. Students work most closely with their sponsor to develop a dissertation proposal and conduct their dissertation research.

Two strategies used by many students to identify potential sponsors are joining a research group while taking courses and/or serving as a teaching assistant for faculty members whose research appears interesting. These strategies help lead students into faculty networks that may lead to a dissertation. Students who are having difficulty locating potential sponsors are encouraged to talk with their academic advisor and to elicit their advisor’s assistance in contacting faculty whom they may not know personally. Adding the line “I am contacting you at the suggestion of Dr. XYZ” increases the likelihood of a quick response from faculty. In addition, students may schedule an appointment with members of the Doctoral Committee to brainstorm ideas about possible projects and sponsors. Further guidance can be found in the doctoral program policy on mentoring available in [Appendix 2](#).

Once a potential sponsor is identified, the student and sponsor work together to define a dissertation project, identify appropriate data, discuss possible committee members, and construct a timeline for completing proposal and research steps. This is essentially a negotiation from which either party can withdraw if a mutually agreeable project is not found. Note, whereas some potential sponsors suggest an area for a dissertation to a student, which the student then develops into a research question with specific aims, other potential sponsors expect students to take the lead in choosing an area and defining a research question, and see their role as providing suggestions and advice along the way. Whichever of these approaches is followed, the student must conceive of, and specify, the specific aims, the hypotheses and the approach.

D

Forming a PhD or DrPH dissertation committee

The responsibility for selecting and recommending the final defense committee members rests with the Sponsor, Department or Program Chair, and the Director of Graduate Studies (DGS). Students may not select their own defense committees. Furthermore, students should not be placed in the position of having to ask particular faculty members to serve on their defense committees. The rules are the same for both PhD and DrPH. It is the responsibility of the sponsor—not the student—to identify potential committee members and to obtain their agreement; however, it is expected that the student will have input into their selection and be introduced to faculty they may not know. Once selected, the initial three or, if selected, the final five person committee must be reviewed by the Chair of the Doctoral Committee prior to the proposal defense to assure compliance with MSPH and GSAS guidelines. Committee membership is then sent to GSAS for final approval for PhD students.

The doctoral defense will be conducted by a final defense committee that is composed of exactly five members. At least three of the members of the final defense committee must be from the list of approved departmental doctoral sponsors, and at least one of the five must be either:

- a faculty member, clinician or practitioner who holds a position at another university or research institution
- a full-time faculty member at Columbia University outside the student's own department or program
- a research scientist at Columbia University outside the student's own department or program
- an adjunct professor at Columbia University outside the student's own department or program

OR

- a full-time faculty member whose appointment is at Barnard College, Jewish Theological Seminary or Union Theological Seminary

The final member may be drawn either from the groups indicated above or a full-time faculty member in the student's interdisciplinary program whose field is outside of the student's dissertation field.

Approval of committee members

Faculty from the list above are nominated as committee members by the Department or Program Chair in consultation with the sponsor or DGS. When submitting the Dissertation Defense Application, the department/program provides the Dissertation Officer with evidence of the faculty member's qualifications, usually a curriculum vitae, for approval by the appropriate university office, GSAS, or MSPH.

Final approval of the members of a final defense committee rests with the Dean of the Faculty of the Graduate School of Arts and Sciences after initial approval by the Director of Doctoral Programs in the case of the PhD and with the Department Chair and the Director of Doctoral Programs in the case of the DrPH.

When a sponsor is proposing for the dissertation committee members who have not been previously approved by the University to serve on a defense committee and who

- do not have a Columbia affiliation, and/or
- do not serve at Columbia in an adjunct capacity, and/or
- do not hold a PhD,

the committee member must be approved by GSAS in the case of PhD candidates or by the Director of Doctoral Programs or the Department Chair in the case of the DrPH. Sponsors must submit for approval a copy of the curriculum vitae of this committee member.

Three of these five members—the sponsor, the chair, and second reader, members of the Epidemiology Faculty—must be selected early enough in the process to read the dissertation proposal, participate in the proposal defense, and attend the presentation of the proposal at a formal departmental seminar. They must approve and sign the proposal approval form before the student proceeds further with the dissertation.

Most full-time faculty in the Department of Epidemiology are members of the GSAS Doctoral Subcommittee; these are listed on the GSAS website gsas.columbia.edu/dissertation-sponsors. The Director for Academic Programs has an up-to-date list. There are rules about who can serve as sponsor and chair of a committee. The list indicates which epidemiology faculty can serve in these roles for a PhD dissertation committee.

Timing of committee formation

A student may choose a sponsor who may form a committee prior to the student's successful completion of the comprehensive examinations. The student may begin planning for the dissertation with the appropriate faculty support. However, a student may not defend a dissertation proposal before having successfully completed both comprehensive exams. Similarly, the M. Phil. degree may not be conferred on PhD candidates before successful completion of the exams. Permission to work with a sponsor on the preliminary stages of a dissertation before completion of the comprehensive exams may in no way be interpreted as permission to defend a proposal or to defend a dissertation. The form authorizing a student to move on to defend a dissertation proposal must be signed by the Department Chair or Director of Doctoral Programs before the dissertation committee can authorize the student to defend the dissertation proposal.

This new guideline in no way constrains a student to choose a sponsor before successfully completing the comprehensive exams. However, students who plan to collect data for their dissertation are strongly advised to begin working with a sponsor before attempting to decide on study design, instrument selection, or questionnaire development. The sponsor will decide in consultation with the candidate on the timing of committee formation.

E

Committee member roles

The Sponsor is a member of the Department of Epidemiology with prior experience on dissertation committees, works closely with the student from the start and throughout the process as a mentor assisting the student to refine the aims, hypotheses, and design. The student must shape his or her own aims, hypotheses, and study design. It is suggested that the sponsor and the student jointly agree on a written learning contract as outlined in the department mentoring policy in [Appendix 2](#). In addition to regular meetings regarding the development of the dissertation, the sponsor has the responsibility to review progress with the student annually as set out in the guidelines. The sponsor will introduce the student at the final public dissertation seminar.

The Second Reader, another member of the Department of Epidemiology, will, at a minimum, read and critique at least one draft of the proposal and later, carefully review and critique the dissertation itself before the final defense. The second reader must agree with the sponsor that the student is ready to defend before the dissertation is disseminated and the defense date set. It is expected that he or she should be actively involved in the process, usually commenting on several drafts and providing comments on the aims, design, and analytic approaches. Students are encouraged to meet with the second reader individually or in committee.

The Chair should be a senior member of the Epidemiology Department, a professor or associate professor with experience of dissertation committee membership. His or her role is to guarantee that the dissertation process moves forward smoothly in accordance with the university and departmental guidelines. The Chair will read the dissertation proposal and the dissertation at least once prior to the proposal defense and the dissertation defense respectively. In the event conflicts arise between a student and sponsor or other committee member, the Chair may be able to mediate the disagreement and enable the process to move forward without recourse to the Chair of the Doctoral Committee or the Chair of the Department. The Chair leads the internal proposal defense, the discussion at the public proposal defense and the final closed dissertation defense. The Chair is responsible for chairing both the public proposal defense and the final defense. If unexpected circumstances dictate that he or she can not be present, arrangements must be made for someone else to run the defenses.

All three core committee members must agree that a dissertation proposal is ready to be defended before the sponsor schedules the proposal defense with the Director for Academic Programs. Later they must also agree that the final dissertation itself is ready to be defended.

F

Writing and revising the dissertation *proposal*

The dissertation proposal should follow NIH guidelines for research though the proposal can be up to 25 single-spaced pages long and should specify which of two dissertation formats the student intends to follow: (1) a literature review of publishable quality justifying the aims and two publishable papers plus accompanying documentation or (2) the “traditional” book-like dissertation including a literature review justifying the aims and chapters addressing specific elements of the research. Regardless of the format chosen, the proposal should include the sections listed below. To ensure that the proposal does not become unduly long, page limits are suggested for each section. The first four sections should not exceed 25 pages in total. When submitting the final proposal to the core committee, the student must include a Turnitin summary report for the sponsor.

- **Specific Aims:** State concisely and realistically what the research described in the application is intended to accomplish and/or what hypotheses are to be tested. (1-2 pages)
- **Significance:** Briefly sketch the background to the proposal, critically evaluate existing knowledge, and identify specific gaps that the project is intended to fill. State concisely the importance of the research described in the proposal by relating the specific aims to longer-term objectives. State the relevance to public health. (3-6 pages)
- **Preliminary Studies (optional):** This section may be used to describe preliminary research of the student that is pertinent to the proposal and/or other information that will help to establish the experience and competence of the student to pursue the proposed project. (1-3 pages)
- **Experimental Design and Methods:** Discuss in detail the experimental design and the procedures to be used to accomplish the specific aims of the project. Describe the protocols to be used, the data to be collected, and the tentative sequence or timetable for the project. Include the means by which the data will be analyzed and interpreted. Justify the proposed sample size with statistical power calculations. Describe any new methodology and its advantage over existing methodologies. Discuss the potential difficulties and limitations of the proposed procedures and alternative approaches to achieve the specific aims. (12-20 pages)
- **Literature Cited:** Although no page limitation or number of references is specified, make every effort to be complete but judicious in compiling a relevant and current bibliography.

G

Defending the dissertation *proposal*

The proposal defense consists of two sequential steps: internal and external defense of the proposal.

Internal defense

Students defend their proposal to their three-member committee (the sponsor, chair, and the second reader). They can include the other two-committee members at this point if the sponsor and student wish.

As noted earlier, the three committee members must review the proposal and agree that it is ready to be defended. At the initial defense, the student meets in person with his/her sponsor, chair, and second reader. Absent members may be included via teleconferencing. The student typically provides a brief oral overview of the proposal, and the committee questions the student on any aspect of the proposal. The internal defense usually lasts one and a half to two hours.

Sometimes, the discussion following the internal defense presentation raises important questions about the aims, study design, or analysis that need to be addressed before the proposal is presented for the public defense. In some cases, the committee may decide that the defense was premature and agree to repeat it, with no negative consequences for the student. If revisions are major, the proposal should be revised and reviewed by the sponsor or committee before scheduling the public proposal defense.

If the requested revisions are minor, the student may proceed to the second stage of the proposal defense and the Director for Academic Programs will schedule a public proposal defense presentation at a seminar.

Public proposal defense

Following successful defense of the proposal before the three-member committee, students make an oral presentation of their proposal at a public seminar, such as the Epidemiology Department seminar series, a cluster seminar or the seminar series sponsored by a training grant program (e.g., psychiatric epidemiology, cancer epidemiology, infectious disease epidemiology).

The public defense presentation must take place as a publicly announced open seminar. At least two of the three committee members approving the proposal must attend the public defense. In addition, two members of the epidemiology faculty who are not on the committee are invited by the student's sponsor to serve as discussants of the presentation having reviewed the proposal prior to the meeting. Students should send the proposal to the discussants **at least four weeks** prior to the scheduled seminar. The role of the two additional faculty members is to comment on the oral presentation in terms of content and methodology. Issues raised in the oral presentation must be addressed by the student under the supervision of the sponsor with the agreement of the other committee members. At the external defense seminar, normally one hour and up to one hour and a half, the candidate normally presents for about 40-50 minutes, leaving approximately 20-30 minutes for discussion. After the external defense, the committee members provide comments and agree upon one of the following outcomes:

- **Minor Revisions:** The student will work to complete the revisions and submit the revised proposal to his/her sponsor for approval.
- **Major Revisions:** The student will complete the requested revisions for the approval of all three members of the committee.
- **Not Acceptable:** The student must choose another topic and develop an entirely new proposal.

After the student successfully completes the seminar presentation, the sponsor, chair, and second reader who approved the proposal sign the proposal defense form and return it to the Director for Academic Programs to be filed.

H

Obtaining IRB review and approval of the dissertation *proposal*

All researchers, including doctoral students and sponsors, must obtain IRB approval from Columbia University and other participating sites (if applicable) for research involving human subjects prior to recruiting participants, collecting data, or analyzing data. Columbia Policy on students as researchers is set out in research.columbia.edu/sites/default/files/content/HRPO/StudentresearchPolicy031612FINAL.pdf.

Students must comply with all IRB regulations that may be related to their work. Students are advised to speak with their sponsors (and whoever “owns” or provides their thesis data, if different) early in the process of developing their proposal to ensure that IRB applications are filed and approvals are received in a timely fashion. The principal investigator of a previously approved study that has generated data that a student plans to analyze for their dissertation must obtain approval to add that student to the list of research personnel listed on that protocol. Students who are undertaking research with minors need to have completed the relevant CITI modules (also available on the IRB testing site). Students are also advised to check the IRB website for related materials and speak with IRB representatives if they have questions regarding procedures.

Writing and revising the dissertation

As noted above, students in the PhD and DrPH programs in Epidemiology may choose between two formats for their dissertation. The first is the “traditional” book-like format. This option consists of a comprehensive, integrated set of chapters that provide a rationale for the thesis specific aims, review of the relevant literature, description of study methods, presentation of findings, and a conclusion. Examples of dissertations following this format are available online at ProQuest/UMI and Academic Commons (Columbia’s online research repository). The second format consists of a series of publishable papers, preceded by a comprehensive literature review and followed by an integrative concluding chapter and an appendix that fully describes the study methodology. The student must select one format only. A “hybrid” dissertation combining two formats is not permissible. The student may later change the format selected, provided all members of the Dissertation Committee approve. The choice of format does not affect other requirements for fulfilling the doctoral degree.

The second format was added to give students supervised experience in preparing the kind of succinct and focused manuscripts required by most scientific journals as well as to encourage the publication of doctoral dissertation research. Since 2005, all candidates have chosen this format. This format requires that the systematic review and the empirical papers should be publishable. Though it is difficult to define publishable, the committee should adopt standards similar to those used in reviewing papers for epidemiological journals. It should be noted, however, that the second format may require greater effort from both the student and faculty supervisor than the more traditional thesis because the dissertation must be comprehensive and thorough, while at the same time succinct. The department has established the following rules for dissertations following the second format:

For the second format, the dissertation should consist of the following:

- An introductory chapter consisting of a comprehensive literature review, introducing and supporting the specific aims of the dissertation and highlighting the gap(s) or controversies in contemporary understanding of the gap that the dissertation will fill or the question that will be resolved. The literature review must be thorough, current, and otherwise suitable, if condensed and adapted to meet journal requirements, for standalone submission to a journal as a review article. Conforming to the standards of a systematic or structured review, the chapter must include the search criteria, data sources, quality standards, and plan for the extent of the search. It should address relevant theories, methods and arguments in the field, as well as the biological, environmental, psychological and socio-historical contexts of the disease or condition, and include any other material necessary to build a logical and persuasive justification for the focus of the dissertation.
- Two data-analytic papers of publishable quality consistent with the standards of a peer-reviewed journal in the field.
- A final chapter that integrates and discusses the findings of the papers. It should include discussion of the conclusions of the research and their relationship to the specific aims, and should make recommendations for further studies. It should note the contribution to science and to the health of the public.
- An appendix outlining in detail the study methods. Tables too long and detailed for the text may be included in the appendix. If applicable, the appendix also includes papers submitted for publication (that are based on the dissertation data).

J

Additional requirements for papers submitted as part of the PhD or DrPH dissertation

Supervision and enrollment

The work must have been done under the supervision of a Columbia faculty member with an appointment in Epidemiology and must have been submitted while the student was enrolled as a doctoral student in epidemiology.

Specific aims and hypotheses

Students must develop the aims, hypotheses and analytic approaches used in their dissertations. This means that a student's dissertation work may not simply fulfill specific aims already fully developed by someone other than the student. The student's dissertation work may relate to a specific aim already developed in a grant but not constitute sole fulfillment of that aim. The student's work must reflect his or her original development of ideas, analytic strategies, and interpretation.

Epidemiologic content

Dissertations submitted in fulfillment of doctoral degree requirements in epidemiology must demonstrate the candidate's competence in the use of epidemiologic methods and concepts. Most dissertations in the Department of Epidemiology involve tests of hypotheses about risk factors and outcomes. A few focus on problems or innovations in epidemiologic methods, and a small but growing number are interdisciplinary or transdisciplinary in nature but all should have relevance to epidemiologic approaches to the health and well being of the public. Such dissertations are acceptable if they include a significant focus on epidemiologic hypothesis testing via epidemiologic methods. For example, of two empiric chapters, one might deal with laboratory characterization of a biomarker of an exposure, and the other with a case-control study testing the association of that exposure, based on the results of the laboratory work, with an outcome (usually but not always health-related). The thrust of the literature review and the final chapter would be on the epidemiologic issues.

Authorship

The doctoral candidate must be the sole author of the papers (hereinafter termed dissertation papers) that comprise the dissertation submitted to the candidate's committee as the basis for the defense and, thereafter, to the university in partial fulfillment of the requirements for the PhD or the DrPH. The doctoral student must have had the primary role in the design and execution of the studies, in the analysis, in the interpretation of the data, and in the writing of the dissertation papers.

However, under the norms regarding authorship in epidemiology, members of the dissertation committee, as well as others, may ultimately meet the criteria for co-authorship of papers submitted for publication (hereinafter termed papers for publication) that arise from the student's dissertation. Dissertation committee members may be and often are investigators on the project(s) from which the data that the candidate analyzes for the dissertation come or may be involved in other relevant research. However, in agreeing to be dissertation committee members, they undertake to serve purely as mentors, challenging and guiding the doctoral candidate toward acceptable standards of logic, validity, and clarity, but allowing him or her to decide how to meet those standards. Within these constraints, the framing of the questions and the interpretation of the data should be left to the doctoral candidate. The candidate, committee members, and co-authors on publications arising from the dissertation should be aware that the dissertation papers are the candidate's work.

Any pressure from the dissertation data owner and/or sponsor to produce a publication based on the same data within a given time frame should not be imposed on the student as he/she works with the sponsor or other committee members on the dissertation. Before the candidate develops the dissertation proposal, it is helpful for the data owner and the candidate to prepare a data use agreement that spells out their expectations. That agreement should stipulate that, except in such cases as extreme delays in completing revisions, the student will be first author of the papers for publication.

The dissertation papers may and should be revised for submission to journals. Papers arising from the dissertation when submitted for publication may have committee members and others as co-authors and may incorporate the co-authors' preferences regarding analytic approaches, graphic presentation, opinions, and interpretations. The papers for publication will reflect the criteria for authorship and the formatting and space requirements of the journals to which they are submitted.

It is preferable that papers based on the dissertation data not be submitted for publication prior to the defense. However, if a paper based on the dissertation data has been submitted for publication prior to the defense and has co-authors, it must be submitted as an appendix to the dissertation. The candidate must submit as part of the dissertation a manuscript that represents his or her sole work (mentored of course by sponsor and committee) and a statement signed by the co-authors of the paper for publication, affirming that the dissertation paper is the candidate's sole work.

K

Preparing for the dissertation defense

Planning

When the *sponsor, chair, and second reader* agree that the student is ready to defend the dissertation and there is a date for defense scheduled, the Director for Academic Programs will submit the Application for Dissertation Defense to GSAS. The committee as listed on this form is then approved by the Chair of the Doctoral Committee or Department Chair. For PhD students, the department then sends the form to the Dissertation Office in 107 Low. The Dissertation Officer confirms that the student has accumulated the required number of Residence Units, possesses an MPhil, is correctly registered as a defending student, and has a dissertation committee that meets GSAS guidelines on committee composition; after confirming the above, the Dissertation Office provides the dissertation blue folder and the official dissertation form. A similar form is available for the DrPH students.

Distributing dissertation copies to committee members

Dissertation sponsors typically read and provide feedback on multiple drafts of dissertation chapters/papers. Other members of the committee may only read "near-to-finished" drafts or read multiple drafts of selected chapters. Students should talk with their sponsor about when to seek input from committee members. The degree of involvement of committee members varies substantially depending on the composition of the committee and research topic.

Once all chapters and supporting documents have been completed and the sponsor, second reader, and the chair agree that the dissertation is ready to be defended, the student distributes the thesis to all five committee members. No less than four weeks should be allowed for committee members to read the manuscript. Simultaneously, the Director for Academic Programs should be notified that the dissertation has been distributed so that a time, date, and place of defense may be arranged. At this time, the student must submit a report from Turnitin to the sponsor with the dissertation.

Scheduling the defense

Scheduling a dissertation defense entails several steps. First, the Office of the Dean must approve the dissertation committee. The candidate should talk with the Director for Academic Programs about the paperwork involved early on in the process (see above). The Department of Epidemiology schedules its own defenses and then provides the Dissertation Office with the time, date, and place. Given professors' busy schedules, four or more weeks will be needed to find a workable defense date and time. Once a date, time, and place are set, the Director for Academic Programs notifies the Dissertation Office, which then prints the Voting Sheet that the committee members will use at the defense. *The student should not schedule the defense—either the sponsor, chair, or the Director for Academic Programs schedules the defense.*

The defense

For all DrPH and PhD students who defend a dissertation proposal after May 15, 2012, the final dissertation defense will be preceded by an open public seminar followed immediately (after a 15 minute break) by a closed defense, attended only by the five committee members. This seminar, presided over by the candidate's sponsor, will include a talk of 45 minutes, leaving 15 minutes for discussion and questions. Members of the dissertation committee will not ask questions at the public seminar. The student need not try to include all aspects of the dissertation, rather should craft and deliver an informative seminar designed for an audience who are not experts in his/her field. If appropriate, the student can focus on a single aim. The goal is to communicate well and share the approach and the findings with members of the department and others who attend. The talk should review the background, methods, and results and contextualize the contribution made by the dissertation to epidemiologic knowledge and, as appropriate, to public health

The final defense is attended only by the student and his/her committee members and lasts approximately and no longer than two hours. The chair of the committee runs the defense. First there is a short discussion by the committee without the student present to determine the general focus of the defense discussion. Next the student makes a brief presentation of the dissertation research and major findings (5 minutes). Following the presentation, committee members ask questions about the research approach, findings and their implications. When the committee members have completed their questions, the student is asked to leave the room while the committee deliberates. Committee members discuss whether the dissertation is adequate, and what revisions are required. It is the responsibility of the sponsor to communicate with the student about required revisions. Depending on the level of revision needed, the sponsor and/or additional members of the committee will read the revised portions and determine whether the revisions are acceptable.

The committee may vote as follows:

- **Pass with minor revisions:** The candidate must complete minor revisions and deposit two final copies of the dissertation in the Dissertation Office no later than six months from the date of the defense. The sponsor approves the revisions.
- **Incomplete – major revisions:** The candidate may submit acceptable revisions no earlier than three months, but no later than one year, from the date of the defense. The Chair should inform the candidate that failure to make the necessary revisions within this time frame will result in a rejection of the dissertation

- **Fail:** This vote indicates that the dissertation cannot be made acceptable even with major revisions and that the candidate is not recommended for the degree. If deemed acceptable, the candidate will be permitted to sit another defense.

M

Depositing the dissertation

Once the student has successfully defended the dissertation (i.e. passed with minor revisions), the only remaining academic requirement is the final dissertation deposit. The dissertation deposit, not the defense, is the final requirement for the PhD or the DrPH. The regulations covering the dissertation deposit are uniform to facilitate cataloging and to ensure that the work is accessible for other scholars. The availability of the dissertation to interested scholars is an integral part of the requirements for the doctoral degree. Note: it is the student's responsibility to see that the dissertation text, tables, etc. comply with the required GSAS or DrPH format. If the candidate does not follow all the regulations concerning format, the Dissertation Office will ask the student to correct the dissertation before accepting the final deposit. The deposit-related material received at the defense includes a listing of the materials that are to be included in the final deposit, which are now deposited electronically. The dissertation must be deposited no later than six months from the defense.

The digital version of the dissertation is uploaded to both ProQuest and Academic Commons.

Degrees are awarded in October, February, and May of each year. The candidate is eligible to receive the degree on the next conferral date following completed deposit. Commencement for the three conferral dates of the academic year is held once each year in May. There are no conferral ceremonies held in October or February. Once the candidate has deposited his/her dissertation, the PhD or DrPH can be awarded.

N

Participating in commencement ceremonies

As of January 1, 2017, the following MSPH policy took effect: Doctoral may choose to participate in May Commencement Ceremonies if they have distributed their dissertation to their committee before the date named as the deadline to be included in the Commencement or Convocation Program. This policy represents a reasonable expectation of defending and depositing a dissertation before the University deadline for conferral of October degrees. This date is published on the University website.

4

Waivers, exemptions, grandfathering, and the honor code

A

Obtaining waivers for required courses

As of June 2017, students can no longer waive out of P9494: Publications, Presentations, and Grants for any reason even if they have numerous publications. The main reason for this is that the students feel that participation in this and other required courses creates a strong cohort effect and is beneficial to all students at any stage of their publishing career.

We will continue to allow students to waive out of P9489: Application of Epi Research Methods II with appropriate documentation of competency. In the past, students were able to waive this course at the instructor's discretion. Going forward, there will be a

waiver exam. We will continue to allow students with a prior medical degree to waive out of P9410: Biology and Physiology for Epidemiologists. Currently, doctoral students who believe they have passed an equivalent doctoral level courses (with a grade of B+ or higher) at other institutions may apply for a waiver for other required courses. Applications should be addressed to the Director of Doctoral Programs. These should include a clear rationale, a course syllabus, and transcript from the institution where the course was taken.

B

Exemptions from program requirements

Students seeking an exemption from any program requirement should send an email to the Director of Doctoral Programs explaining the request and the logic behind the request for exemption.

C

Grandfathering students when requirements change

In general, the applicability of program changes depends on the stage within the program that the student has reached. The procedures and requirements before taking the comprehensive exams described in these guidelines apply to all doctoral students entering in 2012 (those entering before 2012 are subject to previous guidelines). Students who have completed both qualifying examinations are not affected by subsequent changes in course requirements or examinations. Those who have successfully defended their dissertation proposal are not affected by changes in requirements pertaining to coursework, qualifying exams or the dissertation proposal defense. Changes in doctoral dissertation format or content will be in effect for students who have not yet defended their proposal or as dictated by GSAS or the Mailman School. Changes in final dissertation defense policies over the last four years as outlined in these guidelines will pertain to students who defend their proposals after May 1, 2012. Where a change in program requirements has an impact on students currently undertaking program elements other than as noted here, affected students will be notified by email. Students who have questions about whether requirements apply should talk with the Director of Doctoral Programs; those wishing to seek an exemption should send a letter by e-mail to the Director of Doctoral Programs outlining the request and offering a cogent justification.

D

Academic honesty and honor code

All students enrolled at Columbia are expected to adhere to the required standards for academic and scientific integrity. MSPH and GSAS have slightly differing policies, found at the URLs below:

- Mailman School Honor Code of Academic Integrity at mailman.columbia.edu/sites/default/files/pdf/community-standards-and-conduct.pdf
- GSAS statement on Academic Integrity at gsas.columbia.edu/student-guide/research/academic-integrity-and-responsible-conduct-research

DrPH students are governed by the MSPH policy while the PhD students must comply with both MSPH and GSAS. These policies are compatible with each other and do not represent any conflicts for the PhD students who must follow both.

Section V

Mentoring, Satisfactory Progress, and Getting Help

1

Mentoring

The Doctoral Committee places strong emphasis on appropriate mentoring by faculty and has endorsed mentoring guidelines to inform both faculty and students of the department's expectations. This is a close mentorship relationship and the department [policy on mentoring](#) and doctoral students offers advice and ground rules on developing this relationship and what students can expect. Mailman also has a useful site for faculty on the role of a mentor mailman.columbia.edu/information-for-teaching-learning/faculty-mentoring.

2

Annual review of progress

In order to monitor student progress, trouble-shoot potential problems, and allow for student input, all PhD and DrPH students and their academic advisors are asked to review their progress against the Doctoral Program Competencies and to complete an Annual Progress Report Form and submit an updated CV. This should include a thoughtful evaluation of the progress made in the previous year, including discussion of any barriers faced. The plan for the coming year should be detailed and measurable. The completed forms will be reviewed annually and included in students' folders. The Director of Doctoral Programs also reviews students' progress throughout their training, including annual reviews of student transcripts, grades on qualifying examinations, and progress on completing dissertations. In the event of questions or problems, students are asked to meet with a member of the Doctoral Committee and/or other appropriate faculty (e.g., their academic advisor, dissertation sponsor) to discuss progress and formulate a plan for moving forward. We encourage students to talk with their advisor on a regular basis in order to plan next steps and address problems before they become serious. Students may also request a meeting with the Director of Doctoral Programs. Students are required to complete the review, discuss it with the advisor or sponsor and submit it to the Director of Doctoral Programs. A student who fails to submit this within the specified time frame is not in good standing in the university and will not be allowed to register for the following semester.

3

Satisfactory progress

The satisfactory progress of doctoral students is assessed annually on the basis of academic performance, including the timely completion of all certifying and comprehensive exams and dissertation requirements such as the development of the dissertation proposal, grades, and performance in any required teaching or research requirements.

Failure to make satisfactory progress

A student who fails to maintain satisfactory progress will be alerted to his or her deficiencies, advised of the means to remedy them, and told the consequences of his or her failure to do so. A student who fails to maintain satisfactory progress after such a probationary period will have his or her candidacy terminated.

In cases of egregious failure to achieve progress, a student may be dismissed from the degree program without a probationary period.

The GSAS regulations in this regard are found at gsas.columbia.edu/content/satisfactory-academic-progress

Allowable time for completion of all requirements

The overall University policy for making satisfactory academic progress is that the PhD degree should be completed within at most 18 semesters of full time study. The Department of Epidemiology maintains the same policy for DrPH students. Students pursuing a part time DrPH should agree on an appropriate time limit with the Director of the Doctoral Program.

Students who enter a PhD or DrPH program are allowed nine years of continuous registration to satisfy all requirements for the doctoral degree. Students who do not complete all requirements for the doctoral degree by the end of the ninth year will no longer be considered doctoral degree candidates and will be notified accordingly in writing. To request an extension of one or two semesters to the nine year rule, a student must submit their most recent progress report and indicate all the steps they will take, on a timetable, in order to complete the dissertation and defend it by the end of the extension. A sponsor's letter of support is required and should indicate support of the student's written plans and timetable and demonstrate that ongoing progress is being made. The request will be reviewed by the Director of Doctoral Programs and if appropriate, the Chair of the Department. If approved, the student must deposit the dissertation by the end of the second semester extension or no longer be a degree candidate at Columbia.

Only those semesters in which a student has been registered are counted toward the time-to-degree limit—i.e., official leaves of absence granted by GSAS or MSPH are not counted. Students who have not registered continuously and who have not received an approved leave of absence must apply for and be accepted for reinstatement by both the department and the Mailman School.

4

Getting help

Students remain in a doctoral program for a number of years and issues may arise which require assistance beyond the scope of the advisor or sponsor. Below is a list of resources that may prove useful for a range of issues.

Within the department

Doctoral Student Representatives

The doctoral student representatives are a good resource for students to get advice from peers. It is often true that other students have had similar experiences and have found ways to solve similar problems.

Director for Academic Programs

Liliane Zaretsky (lz3@cumc.columbia.edu) can assist with solving many administrative problems that students face over the course of their doctoral training.

Director of Doctoral Programs

Leslie Davidson (lld1@cumc.columbia.edu) is Chair of the Doctoral Steering Committee and Director of Doctoral Programs. If a student or member of the faculty has questions about policies, requirements, status, standards, or difficulties, they should contact her. Students having difficulty with a sponsor or advisor or other faculty member should contact her. She can help resolve problems and/or intervene when initial attempts to resolve issues have been unsuccessful.

Chair of the Department

If after working with the Director for Academic Programs and the Director of Doctoral Programs, attempts to resolve a conflict remain unsuccessful, a student may approach the department chair, Professor Charles Branas, at c.branas@cumc.columbia.edu.

Outside the department

Office of Student Affairs (OSA)

The OSA assists students as they navigate their academic programs. From orientation to graduation, the office monitors academic progress, assists with registration-related questions, develops co-curricular programming to enhance student life, and assists students who encounter any academic or personal obstacles along the way.

mailman.columbia.edu/people/current-students/academics

The Office of Disability Services

The Department of Epidemiology works closely with the Office of Disability Services (ODS) to facilitate equal access for students, including coordination of reasonable accommodations and support services for students with disabilities. ODS works with students with all types of disabilities, including physical, learning, sensory, psychological, AD/HD, and chronic medical conditions. ODS also provides assistance to students with temporary injuries and illnesses. The Department of Epidemiology is committed to a campus culture that is sensitive and responsive to the needs of students. The department wishes to enable students with disabilities to fully realize their potential, recognizing their abilities and independence while supporting reasonable accommodation, maintaining equal access and preserving their confidentiality, in line with the spirit and provisions of the amended Americans with Disabilities Act.

To register with the Office of Disability Services, students must complete a Graduate Application for Accommodations and Services, and submit documentation of their disability. The application and guidelines for disability documentation are available online at health.columbia.edu/disability-services and at the ODS office. Students are encouraged to register with the Office of Disability Services at the time of their matriculation at Columbia University although they may do so later if appropriate. Review of requests for accommodation and disability documentation may take two to three weeks to complete. Students are eligible to receive reasonable accommodations only when the entire registration process is complete. For more information, please contact the Office of Disability Services at 212.854.2388 or disability@columbia.edu. The liaison with Disability Services for the Mailman School is Eric Ratner, 212.342.3717 or emr2211@columbia.edu.

Center for Student Wellness

The purpose of the Center for Student Wellness (CSW) works to promote health and enhance learning by addressing health-related barriers to academic success. The Center offers a wide range of services for students in the Health Sciences including counseling and mental health consultation and treatment. The CSW assures confidentiality and does not report the names of visitors to the office and will not act without permission, except in cases of imminent serious risk to individual safety, or if required by law. Located at 107 Bard Hall, the CSW is open Monday through Friday by appointment and also maintains walk-in hours. Services provided by the CSW are free to CUMC students. For more information, call them at 212.304.5564 (email student wellness@columbia.edu) or see their website at cumc.columbia.edu/student-health/center-student-wellness.

Ombuds Office

The Ombuds Office is another excellent source for thoughtful and confidential advice regarding challenges or conflicts involving academic issues. More information can be found at ombuds.columbia.edu. The office has drop in hours Wednesdays from 10:30am–2:30pm or an appointment can be made by calling 212.304.7026 or emailing ombuds@columbia.edu.

Student Services for Gender-based and Sexual Misconduct

The Student Services for Gender-based and Sexual Misconduct is designed to support students facing inappropriate behavior based on sex and/or gender discrimination that may or may not be sexual in nature. Their website contains information on resources, on policy and on how to get advice. It can be accessed at sexualrespect.columbia.edu and they can be contacted at 212.854.1717.

Annual progress report

STUDENT'S NAME

DATE (MONTH/DAY/YEAR)

YEAR OF FIRST REGISTRATION

Instructions

Review last year's progress report.

Pages 1–4 should be completed by the **doctoral student** and then discussed in a meeting with his/her **academic advisor** or **dissertation sponsor**.

Pages 5–6 should be completed by the **academic advisor/dissertation sponsor** and discussed in a meeting with the student. The candidate should also complete **Appendix 2 Competency Appraisal Form** and an updated CV and discuss them at the same meeting. Both the student and advisor/sponsor should sign page 6.

Return the forms electronically to Elizabeth Ferrari at ef2109@cumc.columbia.edu.

NOTE: Submission of this form is required and you may not register, take exams, defend proposal or dissertation if it has not been submitted.

1. **Current status.** Please (a) check the one category that best describes where you stand in the process of completing your doctoral degree and (b) indicate when you anticipate completing this stage (i.e., semester and year).

Taking required courses in preparation for the Methods Examination and Foundation Essay

Completed required courses — preparing for the Methods Examination and/or Foundation Essay

Methods Examination and Foundation Essay completed, or both passes

Still identifying dissertation topic — don't have a sponsor

Identified topic, working on proposal with potential/confirmed sponsor

Working on a dissertation (based on a successfully defended proposal)

Regarding your answer to question 1, please indicate when you anticipate completing this stage (i.e., semester and year):

2. **Your advisor and/or your sponsor.** Who is your academic advisor (i.e., the faculty member who advises you about courses, qualifying exams, potential dissertation topics or sponsors)? If you already have a dissertation sponsor, your advisor may now be your sponsor or you may have another faculty member as an advisor in addition to your sponsor.

I don't have an advisor or a sponsor (please get in touch with Leslie Davidson to facilitate acquiring an advisor)

My advisor is _____

My dissertation sponsor is _____

3. **How often do you meet with your advisor?** During the past year, how often did you meet or speak with your advisor or sponsor about your progress and next steps (e.g., courses, exams, dissertation topics, proposal, research)?

- | | |
|-----------------------|--|
| Once or more per week | Once every 4–6 months |
| 2–3 times per month | Once per year |
| Once per month | I did not speak with a faculty advisor last year |
| Once every 2–3 months | I don't have an advisor/sponsor |

4. **Primary interests.** What are your primary areas of interest in epidemiology? (You may check more than one.)

- | | | |
|------------------------|-----------------------|---------------------|
| cancer | pharmacologic | psychiatric |
| cardiovascular disease | maternal child health | social epidemiology |
| environmental | methodologic | substance abuse |
| genetic | neurodevelopmental | other: _____ |
| infectious disease | neurologic | |
| international health | perinatal | |

5. **Prior research experience.** Aside from data analysis and interpretation, have you had any hands on research experience involving population based studies?

- YES NO

If you answered yes to the above question, please expand.

- | | | |
|----------------------|---|--------------|
| study design | data collection | other: _____ |
| instrument selection | study coordination | |
| data development | experience implementing research in the field | |

Questions #6–8 for students who have passed comprehensive exams

6. **Have you decided on a dissertation topic?**

- I have decided on a topic for the dissertation
- I have not yet decided on a topic but I am getting close to a decision
- I am having trouble settling on a topic
- I would like to discuss this with someone in the program

7. **How often do you meet with your sponsor?** If you have a sponsor who is not also your advisor, how often did you meet or speak with your sponsor during the past year about your progress and next steps (e.g., dissertation topics, proposal, research)?

- | | |
|-----------------------|--|
| Once or more per week | Once every 4–6 months |
| 2–3 times per month | Once per year |
| Once per month | I did not speak with a faculty advisor last year |
| Once every 2–3 months | I don't have an advisor/sponsor |

8. **Stage of dissertation.** If you are working on a dissertation please select the stage you are at.

- | | |
|------------------------------------|----------------------------|
| proposal | dissertation writing |
| research (if appropriate) | planning for final defense |
| internal/external proposal defense | |

Title/focus: _____

Has your sponsor created a committee for you yet? (**NOTE:** Sponsors, and not candidates, form the dissertation committee and approach potential committee members.)

- YES NO

If yes, who is on your committee?

- Sponsor: _____
Chair: _____
2nd reader: _____
Outside reader – name and department: _____
Outside reader – name and department: _____

Questions #9–10 for all doctoral candidates

9. **Please describe progress you have made toward completing your degree during the past year and review any obstacles that you have encountered.** This should represent serious reflection and not simply a cursory summary. If you feel you have not made enough progress in the past year, please discuss what has held you back.

10. **Please describe your goals and objectives for next year.** Be specific about plans and address how to overcome any obstacles identified in question 9. If you have made little progress in the last year, include detailed plans on how you mean to transform this. Also include plans to fill gaps in training identified in the competency appraisal form.

TAKE THIS COMPLETED FORM FOR A DISCUSSION WITH YOUR ADVISOR/SPONSOR.

Advisor/Sponsor Comments

STUDENT'S NAME

ADVISOR/SPONSOR'S NAME

DATE

Instructions

This page should be completed by the academic advisor/dissertation sponsor after meeting with the student and reviewing the student's progress report. If the student has a sponsor and a different advisor, the sponsor should complete this form with or without input from the advisor.

File this completed form with Elizabeth Ferrari at ef2109@cumc.columbia.edu. Retain copies for student, advisor, and/or sponsor.

1. Please comment on student's progress toward completing his/her doctoral degree in epidemiology.
2. Please comment on candidate's progress toward skills and mastery of competencies as reviewed on the Competency Appraisal Form.
3. Please comment on this student's goals for next year.

APPENDIX 1 ANNUAL PROGRESS REPORT

4. Is this student's timeline for completing the PhD or DrPH degree reasonable?

YES NO

If no, please explain:

5. Has the student met with you to discuss his/her progress and this report?

YES NO

If no, please explain:

Student's reply to advisor's/sponsor's comments:

I agree with the above.

I don't agree with the above.

Comments:

SIGNATURE OF FACULTY ADVISOR/SPONSOR

DATE (MONTH/DAY/YEAR)

SIGNATURE OF STUDENT

DATE (MONTH/DAY/YEAR)

APPENDIX 2 PhD COMPETENCY APPRAISAL FORM

DOCTORAL CANDIDATE _____

FACULTY ADVISOR/SPONSOR _____

DATE _____

DOMAIN	COMPETENCIES	DEGREE REQUIREMENT	REQUIREMENT STATUS	ADDITIONAL RESOURCES	SELF-APPRAISAL
DESCRIPTIVE EPIDEMIOLOGY	<ul style="list-style-type: none"> Produce descriptive epidemiology of a given condition Analyze strengths and limitations of descriptive studies Identify relevant data from existing large and small data sets 	<ul style="list-style-type: none"> Epi 1 or equivalent, prerequisite or undertaken within program 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> Audit Epi 1 Self study/syllabus available 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
BIOLOGY (MASTERY IN YOUR AREA OF EXPERTISE)	<ul style="list-style-type: none"> Understand general principles of human physiology and pathophysiology Demonstrate competence in the disease/condition addressed in dissertation 	<ul style="list-style-type: none"> Biology and Physiology for Epidemiologists (PhD only) Understanding demonstrated in Dissertation 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> Additional courses in the university possible Work with sponsor or committee and directed reading 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
HISTORY OF PUBLIC HEALTH AND EPIDEMIOLOGY	<ul style="list-style-type: none"> Understand the general history of the development of epidemiology, including descriptive epidemiology and development of methods Demonstrate an understanding of the major epidemiologic studies of selected diseases Demonstrate understanding of history of development of epidemiology: study designs; analytic methods; approaches to causal inference 	<ul style="list-style-type: none"> History of Epidemiology (PhD only) 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> Directed reading 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
BASIC KNOWLEDGE OF LEADING PUBLIC HEALTH PROBLEMS	<ul style="list-style-type: none"> Identify major chronic and infectious diseases, their pathophysiology, descriptive epidemiology, risk factors Identify leading causes of death Know the principles/applications of screening and surveillance Understand the global, cultural, and social context of health and how these influence the conduct, interpretation, and dissemination of research and interventions 	<ul style="list-style-type: none"> No formal requirement but expected from prior training or undertaken within program 	<input type="checkbox"/> N/A	<ul style="list-style-type: none"> Substantive courses in Epi or Public Health Public Health Surveillance Seminars Grand Rounds 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
ETHICS IN PUBLIC HEALTH	<ul style="list-style-type: none"> Identify key issues, controversies, affecting ethical issues in Public Health Understand concepts of human subjects protections and confidentiality Navigate IRB processes and challenges for approval Understand concepts of research Integrity 	<ul style="list-style-type: none"> Responsible Conduct of Research course IRB and HIPAA Certifications 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> Annual Ethics Symposium Ethics 101 offered by IRB? Other coursework 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
CRITICAL THINKING, INCLUDING SYNTHESIS OF INFORMATION	<ul style="list-style-type: none"> Systematic or Structured Reviewing Meta-analysis Reviewing 	<ul style="list-style-type: none"> Epidemiology IV Epidemiology V Epidemiology VI Foundation Essay Dissertation 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> Reviewing manuscripts for publication or abstracts for conferences 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan

APPENDIX 2 PhD COMPETENCY APPRAISAL FORM

DOCTORAL CANDIDATE _____

FACULTY ADVISOR/SPONSOR _____

DATE _____

DOMAIN	COMPETENCIES	DEGREE REQUIREMENT	REQUIREMENT STATUS	ADDITIONAL RESOURCES	SELF-APPRAISAL
TEACHING	<ul style="list-style-type: none"> Develop a course syllabus Develop teaching materials Teaching experience Grading and evaluation 	<ul style="list-style-type: none"> TA course (at least one semester) 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> GSAS Teaching Center CTL (new) 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
LIFE-LONG LEARNING	<ul style="list-style-type: none"> Planning, monitoring Engagement with colleagues/networking Activity in professional organizations 	<ul style="list-style-type: none"> No formal requirement 	<input type="checkbox"/> N/A	<ul style="list-style-type: none"> IDP training Portfolio development 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
PROBLEM CONCEPTUALIZATION	<ul style="list-style-type: none"> Systematic literature searches Review and evaluate literature Synthesize available information Identify meaningful gaps in knowledge Formulate an original and key hypothesis or statement of research problem 	<ul style="list-style-type: none"> Epidemiology IV Publications and Presentations Foundation Essay Dissertation Proposal Dissertation 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A		<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
STUDY DESIGN	<ul style="list-style-type: none"> Design a study Understand the advantages and limitations of this design in this specific context Calculate requisite sample size Identify and address sources of bias; describe direction and magnitude of bias and potential effects on measures of association Use systematic sampling methods New designs 	<ul style="list-style-type: none"> Epi IV Methods Exam Foundation Essay Dissertation 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A		<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
FIELD WORK/STUDY IMPLEMENTATION	<ul style="list-style-type: none"> Develop and test study protocols Train staff Recruit participants Panel maintenance and participant follow-up Collaboration with colleagues, others Relate to other organizations/communities 	<ul style="list-style-type: none"> No formal requirement 	<input type="checkbox"/> N/A	<ul style="list-style-type: none"> Field Methods in Epidemiology Participation in research implementation 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
DATA COLLECTION AND MONITORING	<ul style="list-style-type: none"> Design data collection approach and forms; assess reliability and validity; identify issues in measurement error Monitor conduct and progress of data collection; develop and implement quality control measures 	<ul style="list-style-type: none"> No formal requirement 	<input type="checkbox"/> N/A	<ul style="list-style-type: none"> Field Methods in Epidemiology Participation in research development and implementation 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan

APPENDIX 2 PhD COMPETENCY APPRAISAL FORM

DOCTORAL CANDIDATE

FACULTY ADVISOR/SPONSOR

DATE

DOMAIN	COMPETENCIES	DEGREE REQUIREMENT	REQUIREMENT STATUS	ADDITIONAL RESOURCES	SELF-APPRAISAL
DATA MANAGEMENT	<ul style="list-style-type: none"> Create data files appropriate for analysis; create new variables; clean data 	<ul style="list-style-type: none"> Dissertation 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> Participation in research development and implementation 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
DATA ANALYSIS	<ul style="list-style-type: none"> Use statistical packages to calculate and display statistics Conduct multivariate and longitudinal analysis Examine data for presence of confounding and interaction; measure and manage them 	<ul style="list-style-type: none"> Applications Epidem. Research Methods I and II Appl'd Regression II Epidemiology VI Methods Examination Dissertation 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> Additional Biostatistics coursework 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
DATA INTERPRETATION	<ul style="list-style-type: none"> Interpret results and make appropriate inferences Recognize issues of generalizability Recognize limitations and implications of research 	<ul style="list-style-type: none"> Publications and Presentations Epidemiology IV, V, VI Dissertation Proposal Dissertation 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> Engagement in manuscript reviewing 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
COMMUNICATION	<ul style="list-style-type: none"> Communicate research and results verbally and in writing Utilize tables and figures Communicate research to lay audience 	<ul style="list-style-type: none"> Publications and Presentations Foundation Essay Dissertation Proposal Epi V Dissertation 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> Conference presentations Grant writing Write for the 2x2 project or other publications 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan

APPENDIX 3 DrPH COMPETENCY APPRAISAL FORM

DOCTORAL CANDIDATE _____

FACULTY ADVISOR/SPONSOR _____

DATE _____

DOMAIN	COMPETENCIES	DEGREE REQUIREMENT	REQUIREMENT STATUS	ADDITIONAL RESOURCES	SELF-APPRAISAL
DESCRIPTIVE EPIDEMIOLOGY	<ul style="list-style-type: none"> Produce descriptive epidemiology of a given condition Analyze strengths and limitations of descriptive studies Identify relevant data from existing large and small data sets 	<ul style="list-style-type: none"> Epi 1 or equivalent, prerequisite for admission 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> Audit Epi 1 Self study/syllabus available 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
BIOLOGY	<ul style="list-style-type: none"> Understand general principles of human physiology and pathophysiology Demonstrate competence in the disease/condition addressed in dissertation 	<ul style="list-style-type: none"> Understanding demonstrated in Dissertation 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> Course: Biology and Physiology for Epidemiologists Work with sponsor or committee and directed reading 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
HISTORY OF PUBLIC HEALTH AND EPIDEMIOLOGY	<ul style="list-style-type: none"> Understand the general history of the development of epidemiology, including descriptive epidemiology and development of methods Demonstrate understanding of the major epidemiologic studies of selected diseases Demonstrate understanding of history of development of epidemiology: - study designs; analytic methods; approaches to causal inference 	<ul style="list-style-type: none"> Not required for the DrPH 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> Directed reading Course: History of Epidemiology 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
BASIC KNOWLEDGE OF LEADING PUBLIC HEALTH PROBLEMS	<ul style="list-style-type: none"> Identify major chronic and infectious diseases, their pathophysiology, descriptive epidemiology, risk factors Identify leading causes of death Know the principles/applications of screening and surveillance Understand the global, cultural, and social context of health and how these influence the conduct, interpretation, and dissemination of research and interventions 	<ul style="list-style-type: none"> Selected problems included in the DrPH seminar No formal requirement but expected from prior MPH training or undertaken within program 	<input type="checkbox"/> N/A	<ul style="list-style-type: none"> Substantive courses in Epi or Public Health Public Health Surveillance Seminars Grand Rounds 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
ETHICS IN PUBLIC HEALTH	<ul style="list-style-type: none"> Identify key issues, controversies, affecting ethical issues in Public Health Understand concepts of human subjects protections and confidentiality Navigate IRB processes and challenges for approval Understand concepts of research Integrity 	<ul style="list-style-type: none"> Responsible Conduct of Research course IRB and HIPAA Certifications 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> Annual Ethics Symposium Ethics 101 offered by IRB? Other coursework 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
CRITICAL THINKING, INCLUDING SYNTHESIS OF INFORMATION	<ul style="list-style-type: none"> Systematic or Structured Reviewing Meta-analysis Reviewing 	<ul style="list-style-type: none"> Epidemiology IV Epidemiology V Epidemiology VI Foundation Essay Dissertation 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> Reviewing manuscripts for publication or abstracts for conferences 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan

APPENDIX 3 DrPH COMPETENCY APPRAISAL FORM

DOCTORAL CANDIDATE _____

FACULTY ADVISOR/SPONSOR _____

DATE _____

DOMAIN	COMPETENCIES	DEGREE REQUIREMENT	REQUIREMENT STATUS	ADDITIONAL RESOURCES	SELF-APPRAISAL
TEACHING	<ul style="list-style-type: none"> Develop a course syllabus Develop teaching materials Teaching experience Grading and evaluation 	<ul style="list-style-type: none"> TA course (at least one semester) 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> GSAS Teaching Center CTL (new) 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
LIFE-LONG LEARNING	<ul style="list-style-type: none"> Planning, monitoring Engagement with colleagues/networking Activity in professional organizations 	<ul style="list-style-type: none"> No formal requirement IDP training a part of the DrPH seminar 	<input type="checkbox"/> N/A	<ul style="list-style-type: none"> Some offered through MSPH SEEDS Program 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
PROBLEM CONCEPTUALIZATION	<ul style="list-style-type: none"> Systematic literature searches Review and evaluate literature Synthesize available information Identify meaningful gaps in knowledge Formulate an original and key hypothesis or statement of research problem 	<ul style="list-style-type: none"> Epidemiology IV Publications and Presentations Foundation Essay Dissertation Proposal Dissertation 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> Participation in research with faculty Participation in F31/R36 seminars 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
STUDY DESIGN	<ul style="list-style-type: none"> Design a study Understand the advantages and limitations of this design in this specific context Calculate requisite sample size Identify and address sources of bias; describe direction and magnitude of bias and potential effects on measures of association Use systematic sampling methods New designs 	<ul style="list-style-type: none"> Epi IV Methods Exam Foundation Essay Dissertation 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> Participation in research implementation Seminars in developing an F31 or R36 NIH grant 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
FIELD WORK/STUDY IMPLEMENTATION	<ul style="list-style-type: none"> Develop and test study protocols Train staff Recruit participants Panel maintenance and participant follow-up Collaboration with colleagues, others Relate to other organizations/communities 	<ul style="list-style-type: none"> Assessed in annual progress report and if absent, often addressed in a research placement or job 	<input type="checkbox"/> N/A	<ul style="list-style-type: none"> Course: Field Methods in Epidemiology Participation in research implementation 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
DATA COLLECTION AND MONITORING	<ul style="list-style-type: none"> Design data collection approach and forms; assess reliability and validity; identify issues in measurement error Monitor conduct and progress of data collection; develop and implement quality control measures 	<ul style="list-style-type: none"> No formal requirement 	<input type="checkbox"/> N/A	<ul style="list-style-type: none"> Field Methods in Epidemiology Participation in research development and implementation 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan

APPENDIX 3 DrPH COMPETENCY APPRAISAL FORM

DOCTORAL CANDIDATE

FACULTY ADVISOR/SPONSOR

DATE

DOMAIN	COMPETENCIES	DEGREE REQUIREMENT	REQUIREMENT STATUS	ADDITIONAL RESOURCES	SELF-APPRAISAL
DATA MANAGEMENT	<ul style="list-style-type: none"> Create data files appropriate for analysis; create new variables; clean data 	<ul style="list-style-type: none"> Dissertation 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> Participation in research development and implementation 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
DATA ANALYSIS	<ul style="list-style-type: none"> Use statistical packages to calculate and display statistics Conduct multivariate and longitudinal analysis Examine data for presence of confounding and interaction; measure and manage them 	<ul style="list-style-type: none"> Applications Epidem. Research Methods I and II Appl'd Regression II Epidemiology VI Methods Examination Dissertation 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> Additional Biostatistics coursework 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
DATA INTERPRETATION	<ul style="list-style-type: none"> Interpret results and make appropriate inferences Recognize issues of generalizability Recognize limitations and implications of research 	<ul style="list-style-type: none"> Publications and Presentations Epidemiology IV, V, VI Dissertation Proposal Dissertation 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> Engagement in manuscript reviewing 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan
COMMUNICATION	<ul style="list-style-type: none"> Communicate research and results verbally and in writing Utilize tables and figures Communicate Public Health research to lay audience 	<ul style="list-style-type: none"> Foundation Essay Dissertation Proposal Dissertation OP Ed writing project required in DrPH seminar Practicum 	<input type="checkbox"/> Not begun <input type="checkbox"/> In progress <input type="checkbox"/> Fulfilled <input type="checkbox"/> N/A	<ul style="list-style-type: none"> Course available: Publications and Presentations Conference presentations Grant writing Write for the 2x2 project or other publications 	<input type="checkbox"/> Sufficient exposure <input type="checkbox"/> Have plan for more exposure <input type="checkbox"/> Need more exposure, need plan

This table outlines the *domains* representing the skills and experiences essential (in varying degrees) to a career in epidemiology. The *competencies* expected of DrPH candidates within these domains are listed. Some of these are specifically addressed in a degree requirement (column labeled Degree Requirement) and the column labeled Requirement Status allows a student to document whether they are met. Some are not specific requirements of the training program, but are important to be included in plans for career development. Candidates should demonstrate at least some familiarity in each domain as they approach the end of their doctoral training. The column Additional Resources suggests possible approaches to gaining exposure outside the degree requirements but these are not exhaustive. The final column allows the student to review their expertise in each domain, conduct a *self-appraisal* evaluating whether they have had sufficient exposure to, and expertise in, a domain. If more is needed, they are asked a plan to acquire it.

Mentoring policy

Mentoring, a “relationship that is built over time between a graduate student and a faculty member includes ...sharing knowledge, guidance, encouragement, positive and constructive criticisms and models of identity” (University of Michigan: rackham.umich.edu/downloads/publications/Fmentoring.pdf).

Columbia recognizes the signal importance of mentoring to doctoral training. “Mentoring graduate students, post-doctoral fellows, and junior faculty colleagues is one of the most important roles and responsibilities assumed by faculty members and academic administrators. The tie of a mentor to the individual mentored is a close and special relationship of trust often combined with an unequal distribution of power and influence between the individuals in the relationship” columbia.edu/cu/compliance/pdfs/COGR_COI.pdf (page 29). Although mentoring is central to a positive graduate school experience, students are rarely given explicit guidance in selecting mentors and fostering mentoring relationships. Similarly, faculty members rarely receive explicit training in mentoring. This policy offers guidance for students and faculty on issues central to promoting mentoring within the doctoral program.

It is our perception that the first step to good mentoring is open communication. In that spirit, we are outlining the basic types of mentoring relationships and some things you may think about in selecting mentors during the course of your doctoral study. In an effort to improve student mentoring and advising, this mentoring policy will be available on the departmental website for all Ph.D. and DrPH students. Students entering the program will be sent a copy via email. A version of this document geared toward advisors and sponsors will also be posted on the website.

Types of mentoring relationships

Some mentoring relationships between doctoral students and faculty are informal, with no specific academic responsibilities, while others are formal with minimal functions articulated in the PhD guidelines. A mentoring relationship can be limited to a single semester or span the student’s academic career and beyond. It may cover a narrow range of academic issues or discussion of virtually every aspect of the student’s life.

The two central formal mentoring relationships include academic advisors and dissertation sponsors.

Academic advisors

Each doctoral student is assigned an academic advisor upon entry into the program. The role of the academic advisor is to guide the student through the academic program. This includes: a) monitoring course work to make sure that the student takes courses in a logical sequence, b) planning a reasonable time line for completion of all requirements, c) providing guidance through the qualifying examination process, d) providing support and advice in making the transition from coursework and exams to writing the dissertation, and e) advocacy as needed if difficulties arise.

Because the advisor is assigned to the student upon entry to the program, students often choose another advisor once they become acquainted with the faculty and decide on an area of concentration. They may also choose other faculty for informal mentoring. The student may change academic advisors at any point in the program. When the student chooses a dissertation topic and sponsor, the sponsor often, but not always, takes over the role of academic advisor.

Dissertation sponsors

Once the student has decided on a dissertation topic he/she chooses a sponsor. The sponsor becomes a central mentor for the student. The formal responsibilities of the sponsor are outlined in considerable

detail in the Ph.D. guidelines. The roles of other dissertation committee members are also described in the guidelines.

Talking points

Many of the problems that arise in mentoring relationships result from divergent expectations on the part of the mentor and the student. Open channels of communication throughout the mentoring experience prevent many difficulties. Following are some of the issues that students and faculty should discuss before they enter a mentoring relationship.

Clearly, not all the issues will be applicable to every situation, but the following list, developed some years ago with the help of students in the Psychiatric Epidemiology Training Program, should provide useful guidance. In addition, it is important to understand that relationships with mentors develop over time. Therefore, we suggest that these issues be reviewed by a student and his/her mentor on a regular basis. This will ensure that as expectations and needs evolve over time, there is room for development.

Articulating your needs

One of the first things necessary for a successful mentoring relationship, is that the student knows what he/she wants and needs from this relationship. The more clearly you articulate your needs, the easier it will be to have them filled. Your needs and desires will change over time. It is important to know that your mentor cannot read your mind. If your needs change, you must communicate them. It may very well be that all your needs cannot be filled by one mentor. For example, one mentor may be great for bouncing around ideas, but not for career advice. Another may provide careful readings of dissertation or manuscript drafts, but not emotional support. Therefore, there is no need for a “perfect fit”. You may choose different mentors for different needs. Here are some things to think about as you negotiate a mentoring relationship with a member of the faculty:

- What type of help do you want from this faculty member?
- Is the goal a dissertation/thesis/paper/methods discussion?
- What role(s) do you want this faculty member to play – informal mentor/ sponsor/first reader/main advisor, outside reader?
- Do you want help developing your ideas or do you want to help develop an idea proposed by your mentor?
- Do you want guidance regarding a formulated idea using their data?
- Guidance regarding a formulated idea using someone else’s data?
- Do you just want access to their data?
- Guidance in formulating a dissertation/paper topic?
- General guidance regarding how to conduct research?
- Career guidance (time management, employment opportunities, grant writing)?
- Learning how a research team works?
- Watching the mentor conduct research to learn by apprenticeship?
- An opportunity to discuss various topics related to epidemiology?
- Are there specific tasks you want to learn (e.g., IRB protocols, writing a grant, writing research questions etc.)?
- Do you want technical advice regarding specific aspects of a project (i.e., statistics, methods, clinical expertise etc.)?

APPENDIX 4 MENTORING POLICY

- Do you have a problem you wish to discuss related to your studies, coursework, progress in the program or the dissertation?
- How long do you want this relationship to last? Until you finish your dissertation? One year, one semester, renewable?

Time Issues

- How often do you want to meet with this mentor?
- Do you want to spend time attending meetings of the research team?
- How long do you expect the meetings with your mentor to last?
- How quickly do you expect meeting times to be arranged?
- How much lead time do you think is reasonable for your mentor to respond to written material (for responses to dissertation drafts, consult the Doctoral Guidelines for departmental expectations)?
- How quickly do you expect e-mails to be answered?

Access and resources

- How much and what type of access will you have to the mentor's data?
- What are the parameters of the project, and limitations on the scope of the project, if any?
- Can you use the project's supplies, equipment, etc?
- Is there office space?
- Can you get help with data analysis? How much, what type, and from whom?
- Can you get help from the support staff?

Work and time constraints

- What are the time constraints for the project from the student's perspective and from the mentor's perspective?
- What are the workload expectations?
- Is the student expected to provide support to others on the team? If so, how?
- How long is the mentored project expected to last?

Products

- What product, if any, is expected from this relationship?
- What constitutes sufficient material for a paper/thesis/dissertation (consult the Doctoral Program Guidelines on this issue)?
- At what stages does the mentor want to review the material?
- How many drafts does the mentor/student expect to read/submit (have read)?
- Who decides when the thesis/paper is done (consult the Guidelines re the dissertation)?
- What decisions about standards rest with the student and what decisions rest with the mentor?
- How will conflicts regarding standards be negotiated?

Authorship

- What are the rules of authorship in the mentor's unit and in the department?
- Who will be the authors (and in what order) on papers deriving from the student's project (see Guidelines with respect to papers deriving from the dissertation)?

APPENDIX 4 MENTORING POLICY

- How will that be decided?
- How are authorship conflicts resolved?
- Under what conditions would authorship change?
- Who makes that decision?

Conflict Resolution

- How should problems with a sponsor or a placement in a research group be raised (email, discussion, memo?)
- What types of communication would be useful for what types of problem?
- How often will the mentor/fellow discuss their satisfaction/dissatisfaction with a research placement?

Points for Formal Written Agreement

- To what data will the student have access?
- Are there any conditions/limitations to this access?
- To what resources does the student have access?
- What agreements have you made regarding authorship?
- Is the mentor serving in some formal capacity (i.e., dissertation sponsor)?

Additional Resources

We hope that you find this helpful in finding and fostering mentoring relationships during your doctoral education and beyond. For those who want to learn more, following is a list of useful resources.

Web

- columbia.edu/cu/compliance/pdfs/COGR_COI.pdf (page 29) This is a website from the Office for the Responsible Conduct of Research here at Columbia. The section on mentoring and conflict of interest is useful. They also have an extensive annotated bibliography.
- oir.nih.gov/sites/default/files/uploads/sourcebook/documents/mentoring/guide-training_and_mentoring-10-08.pdf A resource for scientists and trainees at NIH's Intramural Research Program, emphasizing the importance of mentoring and describing the major components of mentoring in research, including: providing technical training in all aspects of scientific investigation, modeling responsible and effective behavior, and assisting in career planning.
- rackham.umich.edu/downloads/publications/mentoring.pdf Mentoring guide from Michigan.
- phd-survey.org Results of a study survey from Pew.

Books

- Huang, CA and Lynch J. 1995. *Mentoring: The TAO of Giving and Receiving Wisdom*. Harper Collins: New York.
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