

# Doctor of Public Health Student Handbook Department of Epidemiology

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https://www.publichealth.columbia.edu/academics/departments/epidemiology https://www.facebook.com/cuepidemiology https://twitter.com/CUEpidemiology Dear Doctor of Public Health (DrPH) students, prospective students, faculty, and staff,

We are pleased to share with you the Epidemiology DrPH student handbook that incorporates all changes to guidelines adopted in recent years.

Columbia University Mailman School of Public Health and departmental policies are reviewed and updated regularly. The Department of Epidemiology reserves the right to make changes at any time with appropriate notice communicated to the community including email notification.

We hope that this handbook can help Epidemiology DrPH students navigate the program and enhance their educational experiences. We welcome suggestions for improving the information presented in this handbook. Should you need any additional information or clarification, please do not hesitate to contact the Departmental and Committee faculty members and administrators whose names and contact information are listed on the prior page.

Our very best wishes,

The DrPH Committee
Department of Epidemiology

# **Table of Contents**

Section 1 DrPH Overview and Program Objectives	5
1.1. The DrPH Programs in the Mailman School of Public Health	5
1.2. The DrPH Program in the Department of Epidemiology	
1.3. The DrPH or PhD in the Department of Epidemiology	5
Section 2 Admission, Registration and Tuition	6
2.1. Expected Background and Prerequisites	6
2.2. Admission Requirements and the Application	
2.3. Costs & Funding	7
Section 3 Academic and Administrative Structures	8
3.1. Administrative Structure of the Department and the DrPH Committee	8
3.2. Faculty Advisors	
3.3. Membership in Departmental Units	
3.4. Representation on Departmental Committees	8
Section 4 MSPH Epidemiology DrPH Program Requirements	9
4.1. Overview	9
4.2. DrPH CEPH Competencies and MSPH Epidemiology Competencies	9
4.3. Foundational Prerequisites for Students without an MPH	
4.4. DrPH Course Requirements and Recommendation	
4.4.1. The DrPH Core Curriculum	
4.4.2. Courses Required by the Department of Epidemiology	
4.4.3. Menu of Selective Courses Required by the Department of Epidemiology	
4.4.5. Cross Registration Policies	
•	
Table 1. Summary of the Epidemiology DrPH Program Requirements	
4.5. Applied Practice Experience (APEx)	14
4.5.1 Overview of MSPH APEx	
4.5.2. Department of Epidemiology APEx Protocol	
4.6. The Epidemiology DrPH Portfolio	
4.7. The Epidemiology DrPH Qualifying Exam	
4.8.1. Elements and steps of a DrPH integrative Learning Experience in Epidemiology	
4.8.2. ILE Format	
4.8.3. Institutional Review Board (IRB) Review and Approval of the ILE Research	
4.8.4 Integrative Learning Experience Process	
4.8.5. Suggested Timeline for the ILE Completion	
4.8.6. Depositing the ILE Report	
4.9. Filing for Graduation and Participating in Commencement Ceremonies	
4.10. Teaching Competency and Experience	
4.11. Mailman School of Public Health Continuous Registration Policy	
4.12. Waivers and Exemption	
4.12.1 Obtaining Waivers and Exemption	
4.12.2. Grandfathering Students when Requirements Change	
4.12.3. Academic Honesty, the Honor Code and Expectations for Conduct	Zt

Section 5 Satisfactory Progress and Getting Help	27
5.1. Annual Review of Progress	27
5.2. Criteria to Remain in Good Academic Standing and Satisfactory Progress	27
5.3. Allowable Time for Completion of All Degree Requirements	28
5.4. Available Resources and Getting Help	28
5.4.1. Within the Department of Epidemiology	28
5.4.2. Outside the Department	29
Appendix A: Suggested Guidelines for Epidemiology DrPH APEx Report	
Appendix B: episummer@columbia Funds for Students	

#### **Section 1 DrPH Overview and Program Objectives**

#### 1.1. The DrPH Programs in the Mailman School of Public Health

The Doctor of Public Health (DrPH) degree programs at the Mailman School of Public Health (MSPH) are advanced professional degrees designed to train individuals seeking academic, policy- or program-oriented careers in public health. These degree programs are uniquely grounded in several values and structural elements, including a shared cross-departmental core curriculum that complements the scientific research and practice skills embedded in each MSPH department offering the degree.

The initial streamlined core curriculum includes courses in Leadership in Public Health, Organizational Behavior, Strategic Management and Essentials in Teaching and Communication in Public Health. In the departmental-specific coursework, students complete advanced coursework specific to each discipline. Completing the DrPH program requires successful completion of: a) 36 credits of required, selective and elective coursework; b) an Applied Practice Experience that provides an opportunity to develop additional expertise in an area of public health practice; c) the completion of a portfolio documenting the achievement of competencies along with a qualifying examination, and d) the Integrative Learning Experience, an empirical research or a substantive public health project with a written report.

#### 1.2. The DrPH Program in the Department of Epidemiology

The DrPH program in Epidemiology is intended to train future leaders in public health looking for a career combining high-level leadership, management, and research skills with a specialization in epidemiology. It is aimed at public health professionals who are invested in applied science and seek to utilize a systems approach to research, program management, and policy development globally or in the USA. We consider that a methods-focused and research-grounded DrPH degree is essential for applying epidemiologic approaches in public health practice. Graduates are equipped with advanced skills in evaluation, organizational management, and epidemiologic expertise needed to advance professionally, while allowing them to maintain careers and leadership positions within their current organizations during the course of study. The program seeks to:

- Provide advanced skills in public health research and epidemiologic methods;
- Reflect a practice-based focus by enabling deployment of these skills with regard to program development, implementation and evaluation:
- Foster advanced critical and innovative thinking rooted in rigorous research and best practices;
- Equip students for advanced academic, leadership and management roles reflecting a strong understanding of systems approaches in health and social welfare; and
- Prepare students to advocate for sustainable public health goals within governments, nongovernmental organizations, and academic institutions.

#### 1.3. The DrPH or PhD in the Department of Epidemiology

In addition to the DrPH degree, the Department of Epidemiology offers doctoral training for the Doctor of Philosophy (PhD) degree. 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 specifically for academic research careers in epidemiology, while the DrPH provides experienced professionals in public health or a clinical field with the skills and competencies to excel as effective leaders grounded in epidemiologic concepts and methods. This document includes guidelines for the DrPH program; guidelines for the PhD are described in a separate document available on the Mailman School website (Columbia Public Health Student Handbooks).

#### Section 2 Admission, Registration and Tuition

#### 2.1. Expected Background and Prerequisites

The DrPH program has been designed to provide opportunities for rich field-based learning and research for early to mid-career professionals. Most applicants to the DrPH program have had several years of professional experience related to the health of the public, and typically hold an MPH degree. Applicants with an equivalent graduate degree that has introduced them to concepts of the health and wellbeing of the public (such as biostatistics, healthcare management, social sciences, and population-based sciences) may also apply.

Prior to beginning their DrPH studies, students are generally expected to have demonstrated competence in the core public health areas, as specified for MPH graduates by the Council for Education in Public Health (CEPH), the core accreditation body for schools of public health. This is generally met by the MPH degree. Students without an MPH degree may fulfill similar coursework at CEPH-accredited outside institutions and submit transcripts and syllabi for review to ensure compatible competencies were met or they may fulfill needed coursework at Columbia. Students who do not have relevant, CEPH-accredited courses from a prior degree are required to do so prior to admission into the program or within the first year of the program. Fulfilling these foundational competencies may extend the time required to complete the degree. If foundational courses are taken during enrollment in the DrPH program, these credits are not counted towards the required credit load for the doctorate. More information on fulfilling these foundational competencies is in Section 4.3.

#### 2.2. Admission Requirements and the Application

Applicants must meet the following admission criteria:

- Two or more years of post-graduate experience in public health, epidemiology, global health, development, or a related area
- A prior master's or doctoral degree, preferably in Public Health or Epidemiology
- At least two methods courses in both Epidemiology and Biostatistics
- A Grade Point Average (GPA) of at least 3.5 in prior graduate study is preferred, though not required.
- Demonstrated leadership potential
- Demonstrated ability to think critically
- Motivation to obtain senior-level positions within organizations committed to public health
- Evidence of excellent writing and communication skills

In addition to the criteria listed above, all students must submit an official transcript showing courses and grades from each prior institution, a statement of purpose, a writing sample that is individually authored (as per SOPHAS instructions), and three letters of evaluation from academic and/or work sources. International students whose native language is not English or whose undergraduate degree is from an institution in a country whose official or instruction language is not English must submit Test of English as a Foreign Language (TOEFL) or IELTS scores.

The statement of purpose within the application should convey a clear understanding of and commitment to the public health field and describe how the student hopes to work within the field. The most effective statement will address many of the following points:

- What interests them within the field of epidemiology;
- What interests them specifically in the DrPH program of the Department of Epidemiology at the Mailman School;
- How the applicant hopes to use training from a DrPH degree to help build on prior public health and related experience and achieve long-term career goals.

The application is available through the online SOPHAS portal (<a href="https://sophas.org/">https://sophas.org/</a>). Applications must follow the SOPHAS requirements and deadlines to ensure full consideration for admission.

#### 2.3. Costs & Funding

Ultimately DrPH students are responsible for all costs associated with the program, including tuition, Mailman School student activity, health services, transcript and document fees, and relevant travel and accommodation costs. The cost of tuition is determined by credits for courses taken. Each course has a set number of credits. Tuition and fees are detailed here.

The funding and tuition coverage for Epidemiology DrPH students have changed in the last 5 years. DrPH students matriculating in and after 2023 are expected to be working professionals in public health or related fields throughout their studies and may complete the DrPH program on a part-time or full-time academic schedule. Scholarships through the Department of Epidemiology may be available to offset tuition cost. Applicants are strongly encouraged to explore employment-based tuition benefits.

<u>The MSPH Financial Aid Office</u> is available to assist students with financial preparation and maintains a website of <u>funding options</u> such as fellowships and outside sources of funding.

A student may not be in arrears with any financial responsibilities to the University or there will be a hold on their subsequent registration and before undertaking the qualifying exam. All financial requirements must be discharged before conferral of the degree.

#### **Section 3 Academic and Administrative Structures**

#### 3.1. Administrative Structure of the Department and the DrPH Committee

The Department of Epidemiology Director of Academic Programs serves as the main administrative contact for the program. Currently this is Ms. Liliane Zaretsky. The Director of Academic Programs supports the Director of the Department's DrPH Program. Dr. Parisa Tehranifar serves as the current Director of the Epidemiology DrPH program and assumes day-to-day leadership over the DrPH program structure and implementation and assists in addressing student needs. Policies of the DrPH program are determined by the Department of Epidemiology DrPH Committee influenced by the Departmental Chair and Vice Chair for Education and the Mailman School of Public Health Doctoral Committee. In 2022, members of the Epidemiology DrPH Committee took on leadership roles for specific aspects of the program, working in partnership with the Program Director. Members of the Epidemiology DrPH Committee and their specific roles are listed on the inside cover of this handbook.

#### 3.2. Faculty Advisors

Students are assigned an **Academic Advisor** upon entry into the program. The Advisor serves as a guide to the student with regards to their academic program. Students and their advisors choose the frequency with which they meet but it is expected that they meet at least once a semester. The advisor also meets with the student to review the Annual Progress Report (see Section 5.1). Students may change their advisors as they further refine their training and research focus and become more familiar with faculty research and expertise. Students are encouraged to reach out directly to the faculty member with whom they wish to work and to inform the DrPH Program Director of any change of advisor.

Students will also work closely with a faculty member as they develop their Integrative Learning Experience (ILE) proposal. This faculty member, referred to as the **ILE Sponsor**, provides key subject-area and/or methodological guidance to students with regard to their ILE. The ILE Sponsor is usually identified as students undertake the qualifying exam. The appointment of an ILE Sponsor and the composition of the ILE committee are reviewed by the Epidemiology DrPH ILE Subcommittee to ensure it meets the requirements outlined in the Department ILE protocol (see Section 4.8.1).

The roles of **Academic Advisor** and **ILE Sponsor** are distinct. However, there is no barrier to an Academic Advisor being chosen by the student as the ILE Sponsor if the Advisor is willing and possesses relevant expertise.

#### 3.3. Membership in Departmental Units

The Department of Epidemiology is comprised of units that organize and reflect the main areas of research and training strength. The <u>Departmental Units</u> are: chronic disease epidemiology, infectious disease epidemiology, violence and injury epidemiology, psychiatric epidemiology, neuroepidemiology, environmental epidemiology, substance use epidemiology, and social and spatial epidemiology. Departmental units offer seminars and other academic resources relevant to DrPH student training and career development. It is recommended that each DrPH student chooses one Departmental unit to join and regularly participates in the unit sponsored seminars and other activities. This provides an academic home for the student and enhances potential for engagement with faculty. DrPH students are welcomed at all departmental seminars regardless of unit membership.

#### 3.4. Representation on Departmental Committees

Many procedures and requirements affecting Epidemiology doctoral students are formulated and implemented by the departmental committees and sub-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 select Committees and their fellow students. Students are encouraged to voice their opinions and to get involved at the department, school and university levels.

#### **Section 4 MSPH Epidemiology DrPH Program requirements**

#### 4.1. Overview

The DrPH program at the Mailman School contains <u>cross-departmental core courses</u> undertaken by DrPH students in all departments as well as required, selective and elective <u>courses specific to the Epidemiology degree</u>. Several of these courses may be taken with Epidemiology PhD students.

As students undertake the coursework, they must plan and complete a mentored <u>Applied Practice</u> <u>Experience (APEx)</u> addressing an important public health question or development of public health skills. Students complete a practicum report and present at the DrPH seminar for assessment by faculty and their peers.

As students finish the coursework and the APEx, they compile a <u>portfolio</u> containing evidence of their mastery of each competency, documenting what was achieved and how it was assessed. The portfolio is also used in crafting questions for the <u>oral qualifying exam</u>. This exam is built around both the student's specific expertise and around broad and essential Public Health skills.

After passing the qualifying exam, students undertake the <u>Integrative Learning Experience</u>. This summative project may take many forms but must be relevant to an important public health issue. Each student is mentored by a faculty sponsor within the Department of Epidemiology assisted by a committee of four other faculty and/or public health professionals. Students create and defend a proposal, followed by implementing the ILE aims, producing a written report, and conducting the defense of the project in a public seminar and to their full committee. This is the final step before depositing the ILE report and the conferral of the degree.

#### 4.2. DrPH CEPH Competencies and MSPH Epidemiology Competencies

The Council for Education in Public Health (CEPH) has established a set of competencies that must be met by every accredited program offering the DrPH degree, with allowance for schools and departments to add competencies specific to their program. Below are the 20 DrPH CEPH competencies, divided into five broad areas, followed by 5 competencies specific to the MSPH Epidemiology DrPH degree. The program requirements that follow the list of competencies are designed to deliver training in each of these and to build on the competencies that students bring with them into the program.

#### **Data & Analysis**

- 1. Explain qualitative, quantitative, mixed methods and policy analysis research and evaluation methods to address health issues at multiple (individual, group, organization, community and population) levels
- 2. Design a qualitative, quantitative, mixed methods, policy analysis or evaluation project to address a public health issue
- 3. Explain the use and limitations of surveillance systems and national surveys in assessing, monitoring and evaluating policies and programs and to address a population's health

#### Leadership, Management & Governance

- 4. Propose strategies for health improvement and elimination of health inequities by organizing stakeholders, including researchers, practitioners, community leaders and other partners
- 5. Communicate public health science to diverse stakeholders, including individuals at all levels of health literacy, for purposes of influencing behavior and policies
- 6. Integrate knowledge, approaches, methods, values and potential contributions from multiple professions and systems in addressing public health problems
- 7. Create a strategic plan

- 8. Facilitate shared decision making through negotiation and consensus-building methods
- 9. Create organizational change strategies
- 10. Propose strategies to promote inclusion and equity within public health programs, policies and systems
- 11. Assess one's own strengths and weaknesses in leadership capacities including cultural proficiency
- 12. Propose human, fiscal and other resources to achieve a strategic goal
- 13. Cultivate new resources and revenue streams to achieve a strategic goal

#### **Policy & Programs**

- 14. Design a system-level intervention to address a public health issue
- 15. Integrate knowledge of cultural values and practices in the design of public health policies and programs
- 16. Integrate scientific information, legal and regulatory approaches, ethical frameworks and varied stakeholder interests in policy development and analysis
- 17. Propose inter-professional team approaches to improving public health

#### **Education & Workforce Development**

- 18. Assess an audience's knowledge and learning needs
- 19. Deliver training or educational experiences that promote learning in academic, organizational or community settings
- 20. Use best practice modalities in pedagogical practices

#### **MSPH Epidemiological Competencies**

- 21. Develop skills to evaluate epidemiologic research, from study design through field implementation to analysis and interpretation
- 22. Understand the use of contemporary analytic methods to address issues such as validity, confounding, effect measure modification and mediation
- 23. Conduct and interpret the synthesis of evidence-based knowledge including systematic reviews and meta-analyses
- 24. Demonstrate knowledge of data resources essential to epidemiology their advantages & limitations: vital statistics, national and international population-based surveys, census data, public use databases
- 25. Understand key public health and epidemiologic approaches to population level prevention, control and management of infectious diseases and/or non-infectious diseases, including disease epidemics.

#### 4.3. Foundational Prerequisites for students without an MPH

Columbia University's Mailman School of Public Health, in line with CEPH, requires entering DrPH students to have completed or to complete coursework covering the five core areas of public health knowledge. These foundational courses include Biostatistics, Epidemiology, Environmental Health Sciences, Social and Behavioral Sciences, and Health Policy and Management. For students entering the doctoral program without an MPH or completion of these courses through a CEPH-accredited program, options to meet these requirements are detailed below.

a. Fulfilling foundational pre-requisites before matriculation: Foundational course requirements may be satisfied prior to matriculation through one of many CEPH-accredited programs at other institutions. This option may be a flexible way to complete individual courses and can potentially be done through intensive sessions or online courses. Students who consider that prior coursework may potentially satisfy one or more of the five foundational courses required should contact the Epidemiology Director of Academic Programs and provide

- 1) the name of the course; 2) the institution at which the course was taken; 3) a copy of the syllabus; and 4) documentation of the final grade received. This documentation may also need to be submitted to, and evaluated by, faculty in other departments within the Mailman School of Public Health on a per-case basis. This will enable adjudication of potential substitution. Courses in other departments within the Mailman School of Public Health may also be considered for substitution, using the same process.
- b. Fulfilling foundational pre-requisites after matriculation Components of the MPH Core Curriculum: In order to fulfill pre-requisites for students who matriculate without an MPH, students may enroll in one or more studios within the Columbia MPH Core. Studios meet for various lengths of time in the fall semester. Some are thirteen weeks in length and others eight. All Core lectures are recorded and available for review as a supplement to lectures. Contact the Epidemiology Director of Academic Programs and the Office of Educational Programs (msphoep@cumc.columbia.edu) for more detailed information on the days of classes for various MPH Core studios.

#### 4.4. DrPH Course Requirements and Recommendations

The required and recommended courses for Epidemiology DrPH program are listed in Table 1. Course descriptions can be found at <u>MSPH Course Directory</u>.

#### 4.4.1. The DrPH Core Curriculum

The DrPH Core curriculum is designed to provide a base of knowledge and skills that students will use as a foundation for their departmental-specific coursework and other degree requirements. The Core curriculum comprises five courses that must be completed in the first two years of enrollment into the program. These courses cover the following competency areas 1) Policy & Programs, 2) Leadership, Management & Governance, and 3) Education & Workforce Development.

Case Studies in Public Heath Practice and Leadership Part I sets the stage for your role as a public health practitioner at an advanced level. The course presents foundational theoretical lenses that can help students to understand, accommodate, and shift these risks, interests, and values. Students will apply these lenses to case studies of actual events that exemplify the complex facets of public health practice. Moving from the practice of public health through a program and stakeholder lens to the organizational level, the seminars in Managerial and Organizational Behavior and Strategic Management focus attention on both micro and macro levels of leading innovative health systems. Students will apply their own personal work experience and challenges to course assignments and discussions. Case Studies in Public Health Practice Part II then asks students to build on this content by thinking broadly about public health systems, interventions, and how to build consensus around policies and interventions. Lastly, throughout a public health career, the ability to educate and communicate effectively with a wide range of audiences and stakeholders is essential for public health professionals. The Essentials of Teaching & Communication course is designed to build capacity to communicate with distinct constituencies, taking into account individual needs, goals, and priorities.

#### 4.4.2. Courses Required by the Department of Epidemiology

These courses build on prior master's level courses and are intended to provide students with a solid foundation in epidemiologic methodology and quantitative skills. Through prior coursework and professional experience, entering students are expected to have training and skills in introductory to intermediate epidemiology and biostatistics, including the use of statistical software for data analysis. Students can determine whether they have mastered the required materials prior to taking the required Epidemiology courses by obtaining the syllabi from the Director for Academic Programs. Incoming students lacking the pre-requisite coursework in epidemiology or biostatistics should plan to take additional courses prior to matriculation or in their first year. Epidemiology III (P8400) is required if an

equivalent course has not been previously completed and may be counted towards the fulfillment of selective courses. This course is offered in the summer and fall semesters and may be taken before matriculation in the summer. Required Epidemiology courses cannot be taken pass/fail.

4.4.3. Menu of Selective Courses Required by the Department of Epidemiology
Students should choose six credits of courses in the list of selective courses in Table 1 (see

MSPH Course Directory for course description). Students may suggest other courses to fulfill up
to 3 credits of the selective course credits outside of the listed courses if there is a direct
connection to meeting CEPH or Epidemiology competencies. They should consider courses that
will enable them to achieve the competencies and to further their own career interests. If a
student has not taken the equivalent of Epi III, they must include Epi III in their first year before
taking Epi IV, Critical Thinking. To opt to take Epi V or Epi VI, the student must have achieved a
grade of B or above in Epi IV.

#### 4.4.4. Tutorials

After discussion with their academic advisor, students may register for a tutorial with a member of MSPH faculty. Students may take up to six credits of tutorial. Based on agreement between the student and their Academic Advisor and the faculty member, a plan will be specified for the tutorial. Such tutorials may be in residence or abroad, and will typically involve a structured program of communication, supervised reading and/or practical fieldwork and a writing assignment. Unless it is an elective, the tutorial must address at least one of the CEPH or Epidemiology competencies. An outline of the tutorial plan must be submitted to the DrPH Program Director for review and approval at least one month prior to the registration period.

#### 4.4.5. Cross Registration Policies

Students interested in cross-registration at another Columbia University school need two types of permission. First, the advisor must confirm approval to apply a course from another school to their degree program. Then, the student must obtain permission from the school that offers the course in order to secure a space in the course. The process of obtaining permission to enroll in a course as a cross-registrant is overseen by the other school (not the Mailman School). The other school may provide a form that tracks permission granted either by the instructor or the student affairs office at that school, or both. The student must contact the Director of Academic Programs as well as the other school about the cross-registration process and how to obtain permission to enroll in a course. Unless it is an elective, such courses must address at least one of the CEPH or Epidemiology competencies.

Additional information on registration policies and procedures may be found in the Mailman School of Public Health Doctoral Student Handbook (<u>Student Handbooks</u>).

In instances where content from the Mailman School of Public Health Doctoral Student Handbook differs from the content of this departmental handbook, information found in the most recent Epidemiology DrPH Handbook takes precedence.

Table 1. Summary of the Epidemiology DrPH Program Requirements

Course listing	MSPH DrPH Core Course Requirements (7.5 credits)	Credits
P9070 Fall Yr 1	Leadership in Public Health 1*	1.5
P9071 Fall Yr 2	Leadership in Public Health 2*	1.5
P9060 Spring	Essentials of Teaching and Communication in Public Health*	1.5
P9040 Spring	Seminar in Management and Organizational Behavior*	1.5
P9050 Spring	Seminar in Strategic Management*	1.5
	Epidemiology DrPH Course Requirements (15 credits)	
P8430 Fall	Surveillance	3
P9410 Fall	Pathophysiology*	3
P9400 Spring	Epidemiology IV Critical Thinking*	3
P8110 Spring	Applied Regression II	3
P9494 Spring	Publications and Presentation*	3
	Epidemiology DrPH - Selective Courses (choose ≥ 7.5 credits)	
P8499 Fall/summer	Epidemiology III (required if student has not taken it)	3
P9485 Fall	Epidemiology V Causal Thinking*	3
P9487 Spring	Epidemiology VI Advanced Methods in Epidemiology*	3
TBD Fall	Advanced Study Designs in Epidemiologic Research*	3
P9405 Fall	History of Epidemiology	3
P8416 Fall	Spatial Epidemiology	3
P8601 Spring	Public Health Program Planning	3
P8772 Spring	Designing Public Health Interventions	3
P8640 Spring	Methods in Program Evaluation	
P8705 Spring	Evaluation of Health Programs	3
P8479 Fall	Epidemiologic Methods in Global Mental Health Research	
P8792 Spring	Dissemination and Implementation Science	3
P9620 Spring Implementation Science in Low- and Middle-Income Countries		1.5
P8450 Fall	Clinical Epidemiology	3
P8449 Fall	Optimization for Interventions	1.5
	Epidemiology DrPH- Electives (≤ 6 credits) (may include courses from the selective course list)	6
	Total credits required to complete the degree	36.0
	Non-Course Requirements	
	Completion of Applied Practice Experience and the Report - Linked to DrPH seminars	
	Completion of the Portfolio	
	Qualifying Oral Exam	
	Integrative Learning Experience	

<sup>\*</sup> Denotes courses for doctoral students only

#### 4.5. Applied Practice Experience (APEx)

#### 4.5.1. Overview of MSPH APEX

All DrPH students are required by CEPH to complete an Applied Practice Experience. The APEx, also known as the <u>practicum</u>, includes at least one project deliverable that advances students' skills and contributes to the activities of an organization and advancing public health practice. <u>The APEx cannot be waived</u>. The APEx may not be undertaken in the first semester of enrollment and ideally not before completion of the first year of coursework. On occasions, the APEx may require a contract to be signed; if this is likely, students must start planning early in the first year.

The APEx is not solely an academic exercise, but rather the application of learning in a "real world" setting. The practicum settings and the acceptable content of the practicum are flexible to meet diverse student interests, educational needs, professional objectives, and career goals. Practicum sites can be identified in several ways, including through students' personal networks or faculty recommendations, and ongoing initiatives and centers. The Office of Careers and Practice lists opportunities that may be of interest to DrPH students. Students usually work with their advisors to identify practicum sites and projects and receive guidance on the objectives and scope of work of the APEx.

The APEx generally cannot be completed within the student's own work setting. If the practicum site is at the student's place of employment, the practicum proposal and report should make clear that the project was not part of the student's job responsibilities nor was overseen by their supervisor. Practica can be conducted either within the United States or in another country, with relevant organizations including research institutions, other non-profit organizations, government agencies, or for-profit settings.

Students must submit an approved Scope of Work (SOW) to the MSPH Office of Field Practice. The SOW form can be accessed through the Field Practice CourseWorks site. Students will automatically be invited to accept the invitation for this site. All relevant materials and forms will be available through this site. The most recent SOW form and the APEx SOW site can be found <a href="https://www.sac-cu.org/MSPH/PracTrac/">https://www.sac-cu.org/MSPH/PracTrac/</a>. For more information, please contact <a href="msph-ofp@cumc.columbia.edu">msph-ofp@cumc.columbia.edu</a>. The APEx may be undertaken during or after completing the program coursework but the required report and presentation stemming from the APEx (described below) must be successfully submitted and assessed before the student may request review of the portfolio and scheduling of the qualifying exam.

#### 4.5.2. Department of Epidemiology APEx ("Practicum") Protocol

- a. Competency Requirements: The APEx must meet a minimum of two departmental competencies and three foundational CEPH competencies, one of which must reflect skills from the leadership, management and governance domain. These competencies must be agreed upon by the APEx mentor.
- b. Practicum Mentor(s): Mentors will include a public health professional appropriate to the practicum project goals and approaches. In general, a mentor is external to MSPH, though it is possible to undertake a practicum related to MSPH activities working with an internal mentor. Additional potential mentors are those who can bring specialist expertise to the area addressed by the practicum project or colleagues who will utilize the practicum product. The mentor cannot be the supervisor of a student at his/her/their job. A primary mentor should be identified if there is more than one mentor on the APEx project.
- **c. Topics**: There is a wide range of possible practicum projects. A DrPH practicum might include, but is not limited to, the following activities:
  - Interpreting epidemiology surveillance data for a non-profit or government entity;
  - Analyzing data from a national or local health survey:
  - Creating a report (paper/web-based) for the public addressing an important public health issue;

- Developing evidence-based practice guidelines for a professional organization;
- Developing a protocol for applied research or program implementation and/or evaluation;
- Preparing a public health policy statement utilizing epidemiologic evidence;
- Designing a community program;
- Creating an action plan to achieve a public health goal;
- Drafting a plan for a public health training component such as designing a syllabus or developing a teaching case;
- Crafting a public health blog on an aspect of public health practice.
- d. Process: Each student will identify a site for the practicum, one or more mentors and an idea for a project. If needed, the academic advisor, Epidemiology DrPH Practicum Lead (currently Dr. Delivette Castor) or the Mailman School lead for the APEx office may assist the student to identify a partner organization and appropriate mentor(s). The student will develop a one-to-two page outline for the practicum project that will serve as a basis for discussion with the mentor(s), eventually leading to development of a detailed proposal and will be reviewed by the Epidemiology DrPH Practicum Lead. This proposal is then distilled in a SOW, completed online with the MSPH Office of Field Practice (OFP) to document their APEx plan and receive their APEx stipend. This office maintains MSPH practicum records. Both the primary APEx mentor and the Epidemiology DrPH Practicum Lead must approve the SOW. Information on how to access and complete this form will be available through the Field Practice CourseWorks site. For more information, please contact <a href="majoreted">msph-ofp@cumc.columbia.edu</a> with the subject line: "DrPH Student Info Request".

If the APEx includes human subject research, the student and a faculty member should submit a protocol to the Columbia University Irving Medical Center Institutional Review Board (IRB; see Section 4.8.3 for information on Columbia IRB process and resources). Additional IRB approval at the site of the APEx must also be secured. All the necessary IRB approvals must be obtained prior to commencing the practicum.

Questions on developing the approach to the APEx should be addressed to the Epidemiology Department DrPH Practicum Lead. Questions on submitting the SOW should be addressed to the Director of Field Practice, currently <u>Ana Jimenez-Bautista</u>.

e. Practicum Report and Presentation: After completion of the practicum, the student must produce a written report that: 1) describes the public health significance of the project, the organization or group they worked with, and the project activities and impact; 2) documents how the project contributed to deepening exposure to, or mastery of, the targeted competencies listed in the SOW, and 3) includes a reflective component that contains the student's expression of personal and/or professional reactions to the APEx (see Appendix A for guidelines and timeline for submitting the practicum report). The report should also include as appendices any tangible products, such as a survey questionnaire, planning documents, interviews, or policy guidelines. The final APEX report must be included in the student's Portfolio, where its contribution to mastery of the program competencies will be described.

The report, excluding references and any appendices, must be <u>5 to 10 pages</u>, <u>single spaced</u>, font Ariel 11 (or an equivalent font and size) with margins of 1 inch.

Students must present an overview of their practicum report at a DrPH seminar for faculty and peer review and feedback in the semester following completion. Students must contact the Seminar Lead (currently Dr. Tehranifar) at the conclusion of their practicum to schedule their seminar presentation in the fall or spring semester. Four weeks prior to this scheduled seminar, the practicum report should be submitted to the DrPH Practicum Lead and the DrPH Seminar Lead to provide general feedback and to ensure that all the required elements are appropriately

included. Students will receive written and verbal feedback from the DrPH students and faculty attending the DrPH seminar presentation of their practicum.

#### f. Deliverables:

- Initial practicum proposal, 1-2 pages to be reviewed by mentor
- The SOW, approved by APEx department lead and primary practicum mentor
- The practicum report as described above
- Any practicum products, attached as appendices to the report
- Presentation of the project report at a DrPH seminar the semester following completion
- Any revision of the report based on feedback from the students and the Epidemiology DrPH Seminar and Practicum lead.

#### 4.6. The Epidemiology DrPH Portfolio

The Portfolio is a structured, personalized electronic record that the student maintains and updates throughout the program. It serves both as an administrative tool to manage and organize work, and an assessment tool to track progress towards achieving program requirements and meeting the degree competencies. Its catalog of student's key skills and accomplishments developed previously and during the program will facilitate faculty guidance and serve as a structured mechanism for the student's reflection on personal growth and progress. It also provides benchmarks and evidence of adequate preparation for the qualifying exam and is used as the foundation for several questions in the qualifying exam focused on the student's areas of expertise. As the student nears the end of the DrPH program, it can also become a resource for career development and planning and job placement.

The format of the Portfolio is flexible and tailored to the individual student's needs but is organized according to the twenty CEPH competencies and the five Epidemiology competencies. Each competency will be illustrated by one or more explanations of how it has been met, or what additional steps or skills are needed to arrive at this goal. Each competency will include a description of how the competency was assessed (a course grade, a research project whose completion required evidence of the competency, a product of an APEx adopted by a stakeholder). An entry may consist of listings of courses taken, projects completed or skills developed, augmented by inclusion of specific assessment materials such as papers, presentations, and projects, often included as hyperlinks to electronic documents such as graphic, audio, and video files, or published journal articles. It may also document courses that the student has taught or assisted in teaching which contribute to specific competency objectives. Students are encouraged to annotate entries with reflections on how the listed items specifically contributed to their academic and professional growth. Students can email the Epidemiology DrPH Qualifying Exam Lead (Dr. Jeremy Kane) for previous Portfolio examples.

Students should receive feedback and approval on their portfolio from their advisor. Once the advisor has approved, the student may email the portfolio to the DrPH Qualifying Exam Lead who will review and provide comments and request any modifications. Once the portfolio has been approved by the DrPH Qualifying Exam Lead, the student may proceed to the Qualifying Exam stage.

#### 4.7. The Epidemiology DrPH Qualifying Exam

The Oral Qualifying Exam (hereafter the Exam) for the Epidemiology DrPH degree is designed to assess whether the student has met the required competencies (see Section 4.2 for an outline). A successful outcome in the Exam qualifies the DrPH student to advance to the Integrative Learning Experience, which is the final phase of the degree process.

a. **Objective**: The specific purpose of the Exam is to demonstrate to the DrPH program leadership in the Department and the School that the student has met all of the academic requirements and competencies that apply to the DrPH degree, and that the accomplishments and progress

documented in the student's portfolio are consistent with the student's career development and post-graduation goals, which are themselves founded on widely accepted public health vision, values and approaches.

- b. **Eligibility**: A DrPH student may apply to schedule their Exam after the following criteria have been met:
  - All course and credit requirements have been completed or will be completed in the same semester that the student is scheduling to take the exam.
  - The Practicum has been completed and the practicum report has been submitted and presented in a DrPH seminar.
  - The Portfolio has been submitted to and approved by the DrPH Qualifying Exam Lead.

The request should be made in writing by email to the DrPH Qualifying Exam Lead (Dr. J. Kane) and the Director of Academic Programs (Ms. Zaretsky). They will review the student's record to confirm whether the student has met the required criteria before taking the Exam. The DrPH Qualifying Exam Lead will then work with the student to schedule the Exam.

- c. **Examiners:** The Oral Exam will be conducted by a committee of three examiners. These will include:
  - A public health professional with content expertise in the student's area of interest (This member may be the student's advisor/mentor)
  - The DrPH Qualifying Exam Lead
  - An additional faculty member in the MSPH Epidemiology Department

The Committee members will be given access to the student's Portfolio at least four weeks in advance of the Exam so that they may become familiar with the student's career objectives, academic record, and accomplishments in the DrPH program and their work experiences.

d. Exam Structure: Committee members will focus question elements on the first four content headings of the CEPH competencies and any of the five Epidemiology competencies. Emphasis will be given to leadership and management skills, application of epidemiological principles and methods, and public health values including inclusion and equity, communication, and education.

There will be six questions in the exam, two proposed by each examiner.

- Two questions will be grounded in areas of <u>the student's expertise</u>, including their practicum experience and the portfolio. One week before the exam, the student will be provided with any applicable readings for these questions.
- Two questions will address a <u>current important public health issue (hot topic)</u>. One week before the exam, the student will be provided with the hot topic and a brief reading list related to the topic. This reading list can include both scientific and popular media articles.
- Two questions will be derived from articles published in <u>recent issues of AJPH</u>. One week before the exam, the student will be provided with the two articles that will serve as the basis of these questions.

Each exam question may be preceded by a paragraph setting the context for the question, followed by the question. To facilitate the assessment of criteria for passing, the examiners will have created an assessment rubric containing aspects of a good answer. The examiners will fill

this out during the exam and add relevant notes. Examiners will also have identified for faculty use an assessment the DrPH competencies called for in answering the question appropriately.

#### e. Preparation:

- Students will have access to copies of prior exams.
- Students should review their portfolio carefully with particular emphasis on the competencies.
- As with all interviews and exams, prior practice with the student advisor/mentors and colleagues is helpful.
- Students should carefully read the papers on the reading list of the "hot topic".
- Students should give themselves time to read through the AJPH articles. It is helpful to
  consider potential competency-based questions arising from the AJPH papers. Students
  may request a practice session to review one of the prior exams with a faculty member.
  Interested students should contact the DrPH Qualifying Exam Lead.
- f. **Exam Procedure**: The Exam may be conducted in person or via videoconferencing. The student may discuss their preference with the DrPH Qualifying Exam Lead. The only persons present at the exam besides the student will be the three-person Exam Committee. The Exam will be scheduled for a 90-minute session.

On the day of the Exam, two hours before the scheduled start of the Exam, the student will meet with the DrPH Qualifying Exam Lead. The student will be given a copy of the Exam questions and can use the two hours to prepare in any way they choose. The student cannot discuss the Exam with anyone. The DrPH Qualifying Exam Lead will be available during this time to answer any clarifying questions.

The student may bring a few printed or electronic materials thought to be potentially relevant or useful. This includes the hot topic and AJPH readings sent to the student the week prior or any notes the student has taken. However, the student may not create and use PowerPoint slides to present material during the Exam.

Before the Exam begins, the student will be advised of the procedures. The student may have 1-2 minutes at the start for any question. Then each examiner in turn will ask their questions. Students may request clarification and examiners may add probes. The student will have up to 12 minutes to respond to each question. Committee members may ask probes following the initial response from the student and there can be some back and forth between the student and committee (e.g., the student can ask the committee to clarify a point or question for the initial response and any probes). The student does not have to use all 12 minutes; if they have finished their response and the committee has no follow-up questions, the examiners will move on to the next question. After the questions have been answered, the student will have five minutes at the end for any follow-up points they wish to add. Students for whom English is a second language may request accommodation for additional time. This accommodation should be requested from the DrPH Committee Lead in advance of the Exam.

- g. **Exam Result**: At the close of the Exam, the student will be asked to leave the room if the Exam takes place in-person or be placed in the waiting room on Zoom. The committee will discuss the student's performance and conclude by voting on whether the student merits a grade of pass, conditional pass or fail. The student will return to the room and the committee will communicate the Exam result. The committee will send the Exam evaluation form with the results of the vote to the Director of Academic Programs and the appropriate MSPH administrators. The student's record will also include the rubrics completed by each committee member for each Exam question.
  - Pass: All 3 Exam Committee members vote 'pass' or two members vote 'pass' and

- one votes 'conditional pass'
- Conditional pass: At least two members vote 'conditional pass'. Should the Committee deem
  that a student was a near pass, but several questions were not fully addressed, the student will
  be given feedback and assigned a written exercise to complete within a month. This will be
  graded by at least two members of the Exam Committee. The student will either pass (with at
  least two votes for pass) or fail.
- Fail: All three members vote fail. In the case of a failing grade, the student will be given summary feedback and a plan made for a member of the Committee to support the student as they address the deficiencies identified through the Exam process. Between two and six months later, the student will be eligible to schedule a re-take of the Exam. A second failure will result in termination of the student's degree eligibility. In the event of a second failure, the student may appeal to the Vice Chair for Education and Chair of the Epidemiology Department, and, failing a positive response, to the Vice Dean of Education at the Mailman School of Public Health, who may at their discretion grant another opportunity.

#### 4.8. Epidemiology Integrative Learning Experience (ILE)

The ILE is the culminating requirement for the DrPH degree. The ILE demonstrates the student's competence and capacity to undertake original projects and research, synthesize and present findings in a scholarly manner, and demonstrates student's understanding of public health practice and leadership.

The ILE offers some flexibility in focus and structure and could include any or a combination of empirical epidemiologic research and/or pragmatic work, including but not limited to design or evaluation of an intervention, policy, guidelines, or surveillance systems; an empirical paper addressing a research question; or a systematic or scoping review expanding the evidence base or understanding of a chosen public health challenge or intervention strategies. There is no exclusion on the area or level of inquiry (e.g., clinical, healthcare, policy, community health questions) as long as the rationale and application of the work for public health theory and practice are included.

#### 4.8.1. Elements and steps of a DrPH ILE in Epidemiology

- a. Choosing a sponsor and developing an ILE Concept Note: The student will select a sponsor for the ILE project and agree on a topic and goals for the ILE. The student will develop this into a Concept Note, which will contain the following components: a) Background and significance of an important domestic or global public health challenge which will be the focus of the ILE, b) draft of specific aims and a brief description of the proposed methods and c) at least two CEPH competencies and at least one Epidemiology competency that will be addressed through undertaking the ILE. Following approval by the student's sponsor, the student will submit the concept note to the Epidemiology ILE Subcommittee (currently, Drs. Mary Ann Chiasson and P. Tehranifar) for review and approval. The expected length of the concept note is 2-3 single-spaced pages, excluding references.
- b. Forming the ILE Committee: The ILE sponsor, a member of the faculty of the MSPH Department of Epidemiology, will, in consultation with the student, establish an interdisciplinary committee of five members. The responsibility for selecting the committee members rests with the sponsor. Students may not select their own committees. Furthermore, students should not be placed in the position of having to ask faculty members to serve on their committees. It is the responsibility of the sponsor—not the student—to obtain the agreement to serve from the committee members. The sponsor will introduce the student to any committee members they may not know.
- c. **Composition of the ILE Committee**: The composition of the committee should reflect the needed expertise to support the student in accomplishing the ILE goals. In addition to the sponsor, a *committee chair* will be selected (see Table 2 for roles and responsibilities). Both the

sponsor and the chair must have a faculty appointment in the MSPH Department of Epidemiology and be on the GSAS approved faculty list of dissertation sponsors. The chair must have previously served as a member of an Epidemiology doctoral student's dissertation or ILE committee. Adjunct Epidemiology Department faculty may serve as the sponsor or the chair with special request to the Department ILE subcommittee.

The overall composition of the committee must meet the following requirements: 1) In addition to the sponsor and the chair, there must be one more member who is an epidemiologist; 2) a member must be drawn from a discipline outside of epidemiology; and 3) at least one member must be a public health specialist whose primary work is outside of a university setting. The public health specialist could be one of the three required epidemiologists. For example, the committee could be three Columbia University-based epidemiologists, a sociologist or statistician and a public health professional. Another example could include a committee of two academic epidemiologists, a public health professional who is an epidemiologist, a biostatistician and a demographer.

The list of committee members must be submitted by the ILE sponsor (not by the student) to the Departmental DrPH ILE Subcommittee to review and ensure that the committee members meet the criteria outlined above. The sponsor must obtain CVs for any committee members not on the Columbia Faculty and submit them to the DrPH ILE Subcommittee and the Director of Academic Programs (Ms. Liliane Zaretsky).

d. Committee Member Roles: The sponsor and the chair are expected to be actively involved in the process of developing and implementing the ILE and its reporting and defense. The sponsor will work closely with the student to develop the goals and proposal for the ILE although the student must shape their own questions, aims and design. The ILE sponsors will typically read and provide feedback on multiple drafts of ILE materials. The ILE committee will provide advice and support as the student develops and implements the ILE proposal and the final ILE report. The chair is responsible for ensuring that the ILE steps and processes proceed smoothly and in accordance with MSPH and Department guidelines; this includes coordination and communication pertinent to the ILE proposal and full ILE defense phases. It is expected that students seek input as appropriate from other committee members, facilitated by the sponsor as needed. The degree of involvement of committee members varies substantially depending on the student, the sponsor, the composition of the committee and the ILE topic. Table 2 summarizes the responsibilities of committee members.

#### 4.8.2. ILE Format

Two ILE format options are available for Epidemiology DrPH students. They may choose one of the following formats:

- a. <u>A single scholarly "book"-like or monograph format</u> that contains an integrated set of chapters presenting the ILE specific aims, background and significance, methods, findings and discussion and interpretation: or
- b. <u>A "manuscript"-like format</u> that would present a series of three publishable papers covering the above elements for each paper.

Both formats must include an initial brief introductory chapter that presents the connecting theme and rationale for the overall ILE and a final concluding chapter that presents overall conclusions and implications of the ILE and makes recommendations for future public health research, policy and/or practice. The choice of the format does not affect other ILE or degree requirements. Students may change the choice of ILE format after the ILE proposal has been approved, provided the sponsor and the chair approve the change. A "hybrid" format that combines these two options is not permissible.

**Table 2. Responsibilities of ILE Committee Members** 

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	Sponsor	Chair	Other committee members
Functions	Works with the student to define	Chairs the Committee; works	Contributes in areas of
	project and identify the necessary	with the sponsor to determine	expertise to the project and
	resources; identifies and invites	when student can proceed to	provides feedback, as
	committee members; coordinates	proposal and final defense;	needed and for evaluation
	feedback to student; determines	signs off on and submits all	milestones (e.g., proposal
	when student is ready to proceed	required paperwork	and final defense)
	to the next stage		
Feedback	Primary faculty providing ongoing	Reviews and offers timely	Reviews and offers timely
	feedback; determines timeline	feedback as the proposal and	feedback in area of
	and process; coordinates the	final ILE report are developed;	expertise; provides guidance
	review and feedback by other	provides guidance and	and resources to facilitate
	committee members	resources to facilitate and/or	and/or strengthen the
		strengthen the project, as	project, as appropriate
		appropriate	
Evaluation	Ensures student meets the	Summarizes committee	Provides feedback to ensure
	expectations identified by	feedback; Prepares written	student meets the criteria
	committee members; coordinates	documentation of outcomes of	defined and expected by the
	final evaluation in accordance	proposal and final ILE and	committee
	with CEPH and departmental	submits to the Director of	
	competencies.	Academic Programs	

#### 4.8.3. Institutional Review Board (IRB) Review and Approval of the ILE Research

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, and must complete the necessary Human Subjects Training modules (see *Training Center* at <a href="https://www.rascal.columbia.edu/">https://www.rascal.columbia.edu/</a> for a list of modules). Columbia Policy on students as researchers is set out in <a href="https://www.gsas.columbia.edu/sites/default/files/content/docs/StudentresearchPolicy.pdf">https://www.gsas.columbia.edu/sites/default/files/content/docs/StudentresearchPolicy.pdf</a>.

Even research that will be using data covered by existing IRB protocols, or that does not involve direct contact with human participants must be submitted for IRB review; the determination of whether any research is exempt is the responsibility of the IRB, not the student researcher. Students should develop the IRB protocol at the same time as they begin to write the proposal as the process of IRB application development, submission and review may take several weeks. The proposal defense can be scheduled prior to IRB approval, but students must have IRB approval before commencing research.

The research conducted by MSPH students is submitted to the Columbia University Irving Medical Center IRB. Students are encouraged to familiarize themselves with the IRB review process by accessing information online (<a href="www.cumc.columbia.edu/dept/irb/">www.cumc.columbia.edu/dept/irb/</a>) and/or seek advice on preparation of their protocols by attending IRB's office hours. The IRB application must be submitted by the student's sponsor (not the student) through an online system, RASCAL (<a href="https://www.rascal.columbia.edu/">https://www.rascal.columbia.edu/</a>). The student is responsible for preparing the application in RASCAL and should be listed as an investigator. Additional IRB reviews at other institutions involved in the human subjects research component of the ILE may also be necessary and must be obtained before conducting any research.

#### 4.8.4. ILE Process

**a. Developing and Writing an ILE Proposal:** Following approval of the Concept Note, the student will develop a proposal of up to <u>25 single-spaced pages</u> (exclusive of references and any appendices if applicable) that describes the ILE project. The project may be fulfilled though a

range of approaches, using, at least in part, epidemiological methods. Examples include using evidence to design and pilot an intervention, to evaluate an intervention, and/or to prepare an empirical paper or papers. These could for example be combined with a systematic review to advance understanding of the chosen public health challenge or putative intervention.

Key questions for the student to ask themselves as they develop an ILE proposal:

- Why this question?
- What is the public significance or potential impact of the project?
- Does the project reflect gaining competence in at least three of the DrPH competencies (at least two of the CEPH competencies and at least one of the Epidemiology competencies)?
   Is it made clear in the submitted proposal how these will be addressed?
- Do the aims and the project plan hold together and complement each other? Will it become a coherent body of work?
- Are the methods sound?
- Do aspects of the work reflect epidemiologic thinking and approaches?

The proposal must include information on the following areas with references cited throughout the proposal and organized in a bibliography: 1) overall goal and specific aims; 2) significance and relevance of the problem/question to public health; 3) Literature review and background; 4) Methods used including data and other sources to be used, analytic plan, research design and any preliminary work; 5) ethics and IRB considerations and plans.

- b. Defending the ILE Proposal. The student's ILE committee must review and provide feedback on the draft proposal considering the questions outlined for the student above. At a minimum the sponsor and the chair must agree that the proposal is ready for defense. The proposal defense will be a <u>closed session</u> during which the student will briefly present the proposal to the committee, raise any issues they wish to discuss with the committee and respond to questions from the committee. The committee members are expected to have reviewed the proposal and therefore the student presentation does not need to be detailed or long; rather more time should be devoted to the discussion of the ILE. The entire process usually lasts about 60 to 90 minutes. Sometimes the discussion during the internal defense meeting raises important issues to be addressed and revisions to the proposal may be recommended or required. The committee must approve the proposal with or without amendment before the student proceeds with the ILE project. The chair will complete a form to be filed with the Director of Academic Programs when the proposal defense has been completed.
- c. Implementing and Reporting on the ILE Project. Once the student's ILE proposal, and IRB protocol if needed, have been approved, the student can begin implementing the project, and upon completion, prepare a written summary report. The student will maintain regular communication with the ILE sponsor with regards to their progress; the ILE sponsor will provide ongoing and/or as-needed guidance. The report must summarize relevant background information, the aims, the design of the project, any data or measures used, the analytic approach, statistical results and description of any products arising from the project (such as a new instrument, development of a public health program, or an intervention), and an interpretation of the results followed by conclusions drawn from the findings. Extensive descriptive or analytic materials and other ILE products may be included as appendices in addition to the main findings and/or products arising from the project. The report should include a section on the implications of the ILE for improving public health and propose a strategy to move forward to act on the findings of the project. This might include a dissemination plan or strategy for change (See Section 4.8.2 for format options).
- **d.** Planning for the ILE Defense. With approval from the sponsor and the chair, the student will submit a draft of the final ILE report to the full ILE committee for review. At this time, the student

must also submit to the sponsor a report from Turnitin on the final ILE report. No less than four weeks should be allowed for committee members to read the final ILE report. Simultaneously, the chair will notify the Director for Academic Programs when the final draft is distributed in order to schedule the defense and confirm completion of degree requirements.

- **e. Conducting the ILE Defense**. The student will present a public seminar on the findings of the ILE and then undertake a private defense before the members of the committee.
  - The open public seminar: The seminar will include the student presentation of the ILE project and findings and is presided over by the student's sponsor. The seminar will not last more than an hour and will include the student's oral presentation of 40-45 minutes and about 15-20 minutes for discussion. The student does not need to include all aspects of the project; rather they may craft and deliver an informative seminar designed for a public health audience who may not necessarily be experts in the area of ILE work. The goal is to communicate well and share the background, approach and findings and contextualize the contribution of the ILE to epidemiologic knowledge and public health. Members of the ILE committee may not ask questions at the public seminar.
  - The closed defense: On the same day as the public seminar, the student will undertake a closed defense not lasting more than 2 hours, attended by all five committee members. The chair of the committee runs the defense meeting. First, there is a short discussion by the committee without the student present to determine the key questions central to the defense discussion. As the student will have just presented the project in the public seminar, the final defense does not require another presentation by the student. The student returns and the 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 the result of the defense (continued in the next paragraph).
- f. ILE Result: At the close of the ILE internal defense, the committee will discuss the student's performance and conclude by voting on whether the student merits a grade of pass, passed with minor revisions, approved pending major revisions or fail. The student will return to the room and the committee will communicate the ILE result. It is the responsibility of the sponsor to communicate with the student about required revisions. Minor revisions should be submitted within one month. Depending on the level of revision needed, the sponsor and/or additional members of the committee will review any revised portions and determine whether the revisions are acceptable. The ILE Committee will complete a form with the results of the vote, which the chair will submit to the Director of Academic Programs (L. Zaretsky) who will in turn notify the Departmental DrPH ILE Subcommittee.

The committee may vote as follows as on the ILE Defense Form:

- Passed as submitted.
- Passed with minor revisions. The committee may ask that minor revisions or corrections be
  made before the ILE is deposited. The sponsor will provide the student with a written
  description of the required revisions. These minor revisions should be completed to the
  satisfaction of the sponsor within one month and approved by the sponsor. A one-month
  extension is possible following approval by the Departmental DrPH ILE Subcommittee.
- Approved pending major revisions. The committee may ask that more extensive revisions
  be made before the ILE is deposited. The sponsor will provide the student with a written
  description of the required revisions. These major revisions should be completed to the
  satisfaction of the sponsor and, as appropriate, a relevant committee member within six
  months. A two-month extension is possible following approval by the approval by the sponsor
  and the DrPH ILE Subcommittee.

• **Fail**. The committee believes that the ILE is not acceptable, and the student will not be recommended for the degree.

#### 4.8.5. Suggested Timeline for the ILE Completion

The initial Concept Note should be submitted three to six months after the Qualifying Exam is passed. The proposal should be submitted about 12 months later. The final project report, including any products generated as part of the project, are expected to be completed and submitted for defense within 24 months of approval of the proposal to start the ILE.

#### 4.8.6. Depositing the ILE Report

Once the student has successfully defended the ILE (i.e., passed as submitted or with minor revisions), the only remaining academic requirement beyond these revisions is the final ILE deposit. The ILE deposit, not the defense, is the final requirement for the DrPH degree. The digital version of the ILE is uploaded to both ProQuest and Academic Commons. The availability of the ILE to interested scholars and public health practitioners is an integral part of the requirements for the degree. There are specific formatting requirements for the student's dissertation that applies to the ILE. It is the student's responsibility to see that the ILE text, tables, etc. comply with the required GSAS format which is used for the DrPH as well as the PhD. If the student does not follow all the regulations concerning format, the Director of Academic Programs will ask the student to correct the ILE before accepting the final deposit. The student is eligible to receive the degree on the next conferral date following completed deposit. Visit the GSAS Electronic Deposit FAQs for further information.

#### 4.9. Filing for Graduation and Participating in Commencement Ceremonies

Degrees are awarded in October, February, and May of each year. Students may file an application for graduation for an anticipated graduation date based on when they anticipate they will fulfill all the degree requirements. Graduation application date deadlines for Columbia University Mailman School of Public Health can be found <a href="https://example.com/here">here</a>. The degree conferral date and application deadlines vary by calendar year and can be found on the school's <a href="https://example.com/here">Academic Calendar</a>.

Commencement for the three conferral dates of the academic year is held once each year in May only. There are no conferral ceremonies held in October or February. Students may choose to participate in May Commencement Ceremonies if they have distributed their final ILE report to their committee before the date named as the deadline to be included in the Commencement or Convocation Program.

#### 4.10. Teaching Competency and Experience

DrPH students must demonstrate competency in teaching. In addition to completing the P9060 course - Essentials of Teaching and Communication in Public Health, students are required to participate in two teaching rotations in courses offered by the MSPH Epidemiology Department. Additional opportunities for teaching rotations are available to students interested in additional teaching experience.

#### 4.11. Mailman School of Public Health Continuous Registration Policy

#### The Continuous Registration Policy

DrPH students must be continuously registered until the semester in which they are depositing their completed ILE. The continuous enrollment policy begins with the semester in which the student first enrolls in the DrPH program and continues through the semester the ILE is defended. Further information on the Mailman School's continuous registration policy is described below and can be found in the Mailman School Handbook. This handbook can be found at <a href="https://www.publichealth.columbia.edu/people/current-students/academics/student-handbooks">https://www.publichealth.columbia.edu/people/current-students/academics/student-handbooks</a>.

To be continuously enrolled after completing the required 36 credits of coursework, DrPH students

must register for one of the following in all spring and fall semesters:

- RSRH P0001 charged one credit of tuition full time status.
- RSRH P0003 must have department approval charged one credit of tuition part time status

**Failure to register.** If a student fails to register for at least one continuous point of credit during a particular fall or spring semester without having been granted a waiver or leave of absence (personal or medical), the Office of Student Affairs will notify the student and the student's department at the start of that semester. Failure to register can result in a hold on student accessing resources or on approval to undertake program components.

#### 4.12. Waivers and Exemptions

#### 4.12.1. Obtaining Waivers and Exemptions

#### **Required Courses**

The MSPH DrPH core courses addressing CEPH foundational competencies cannot be waived (see Table 1, top panel). For other required courses, students who believe they have already passed an equivalent doctoral level course (with a grade of B+ or higher) at another institution may apply for a waiver. Requests must be addressed to the Director of the DrPH Program and include a clear rationale, a course syllabus, and transcript from the institution where the course was taken; requests must be submitted at least four weeks prior to the registration period for the semester in which the course is offered. Prior to submitting their requests, students are strongly encouraged to discuss this with their academic advisor, the DrPH Curriculum Committee Liaison (currently Dr. Lauren Houghton) and the instructor of the course for which the waiver is requested.

Students with a prior medical or clinical degree or extensive experience in biological sciences (including at least one graduate level course in human physiology and pathology) can apply for a waiver from P9410, Biology and Physiology/Pathophysiology for Epidemiologists, upon providing documentation. The Director of Academic Programs will be notified and maintain documentation of any granted waiver. The request must include a clear rationale, a course syllabus and transcript from the institution where the course was taken.

Students receiving a waiver for a course must still complete 36 credits in the DrPH program to obtain the degree. They may take any such credits as selective or elective courses to fulfill gaps in their expertise with regards to the competencies.

#### **Other Program Requirements**

Though such exemptions are unlikely to be awarded, students seeking an exemption from any other program requirement should send an email to the Director of Epidemiology DrPH program explaining the justification for the request for exemption. Requests for waivers will be reviewed by the full Epidemiology Department DrPH Committee, Epidemiology Department Vice Dean of Education, and possibly by the MSPH Doctoral Committee.

#### Waivers to the Continuous Registration Policy and Requests for a Leave of Absence

Waivers to the continuous registration requirement will be rare and considered on a case-by-case basis. A request for such a waiver should begin through a petition for a leave of absence to the student's academic department with a recommendation from the department made to the Mailman School's Office of Student Affairs. Reasons for requesting a waiver would include maternity/paternity leave, serious personal illness, or other serious life events. Such a petition should include the reason for requesting the waiver and a proposed plan for completing the remaining DrPH degree

requirements. For all students, after two years' leave of absence, the student must reapply to the Mailman School.

#### 4.12.2. Grandfathering Students when Requirements Change

In general, the applicability of program changes depends on the stage within the program that the student has reached. All Epidemiology DrPH students matriculating from 2018 onwards must fulfill the requirements for the DrPH Professional Degree at Columbia, as outlined here. DrPH students who matriculated before 2018 may undertake the ILE in place of the Doctoral Dissertation described in the 2017 Guidelines if this decision is supported by their sponsor and the Director of the Epidemiology DrPH Program. The procedures and requirements before taking the qualifying exam described in these guidelines apply to all doctoral students entering in 2019 and later. Students who have undertaken the qualifying examination are not affected by subsequent changes in course requirements or the examination protocol. Those who have successfully defended their ILE proposal similarly are not affected by changes in requirements pertaining to coursework, qualifying exam or the ILE proposal defense. Changes in ILE format or content will be in effect for students who have not yet defended their proposal. 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 the Epidemiology DrPH Program. Those wishing to seek an exemption should send a letter by e-mail to the Director of Epidemiology DrPH Program and the Vice Dean of Education outlining the request and offering a cogent justification.

#### 4.12.3. Academic Honesty, the Honor Code and Expectations for Conduct

All students enrolled at Columbia are expected to adhere to the required standards for academic and scientific integrity expectations and policies for conduct. The Mailman School Honor Code of Academic Integrity can be found <a href="here">here</a>. Suspected breaches of the honor code must be reported to the Office of Student Services who will follow up and investigate as per the MSPH protocol.

#### **Section 5 Satisfactory Progress and Getting Help**

#### 5.1. Annual Review of Progress

The University, MSPH and the Epidemiology Department require that students create a written annual progress report including a summary of progress towards meeting the competencies. The purpose of this report is to monitor student progress, troubleshoot potential problems, provide support and allow for student input.

All Epidemiology DrPH students and their academic advisors or ILE sponsors are asked to review their progress against the DrPH program requirements and competencies. An email containing the instructions, the necessary forms and a specified deadline for return of materials will be sent to all current students and their advisors/sponsors in the Spring semester. Students complete an Annual Progress Report, consisting of Requirements Completion Form and a CV, updated every year. Alongside these documents, students will include documentation of their mastery of the competencies and a thoughtful evaluation of the progress made in the previous year, including a discussion of any barriers faced. A plan for the coming year must be included with measurable and specific milestones.

Students are required to share their progress report and supporting materials with their advisor or sponsor. The advisor or sponsor provides written feedback as part of the progress report after the discussion with the student. The student may reply to this feedback, which should be shared with the advisor. The student will then submit signed copies of the report, an updated CV to the Manager of Academic Programs (currently, Elizabeth Ferrari) who will share these with the Director of the Epidemiology DrPH Program and the Director of Academic programs. The completed forms will be reviewed and included in students' records maintained by the department.

The Director of the Epidemiology DrPH Program reviews these reports and students' progress throughout their training, including annual reviews of transcripts, performance on qualifying examinations, and progress on completing the APEx and the ILE. 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, ILE sponsor) to discuss progress and formulate a plan for moving forward. 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.

Instructions for completing the Annual DrPH Progress Report 2022:

- 1. Draft the report as outlined in the progress report form distributed to students annually
- 2. Meet to discuss the progress report with your advisor/sponsor
- 3. Obtain your advisor's/sponsor's comments and signature
- 4. Add your signature and any reply to your advisor's/sponsor's comments
- 5. Submit all sections of the report and your advisor's or sponsor's comments to the Manager of Academic Programs

#### 5.2. Criteria to Remain in Good Academic Standing and Satisfactory Progress

Consistent with CEPH guidelines for award of the DrPH, students are required to complete a minimum of 36 credits of coursework with a combined average grade point average of B+ (3.3), and pass all *required* and selective courses with a B or above. Students must meet the MSPH continuous registration policy, successfully complete a mentored Applied Practice project, and complete the competency-based portfolio. Only students in good standing may sit for the qualifying exam and proceed to undertaking an Integrative Learning Experience. Students not achieving these requirements are placed on academic notice and must develop a remediation plan in consultation with their advisors.

The satisfactory progress of doctoral students is assessed annually through the Annual Progress Report on the basis of academic performance. A student who fails to maintain satisfactory progress will be alerted to their deficiencies, advised of the means to remedy them, and told the consequences of his or her failure to do so. This may include academic probation. Academic probation is set by the Office of Student Affairs in collaboration with the Epidemiology Department. The student is informed that they are on probation and notified of any conditions set. A student who fails to maintain satisfactory progress after such a probationary period will have their candidacy terminated.

In cases of egregious failure to achieve progress, a breach of the honor code or other serious misconduct, a student may be dismissed from the degree program without a probationary period.

#### 5.3. Allowable Time for Completion of All Degree Requirements

Students who enter the DrPH program after 2020 are allowed up to 9 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 that time 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 time limit, students working to complete an ILE must submit their most recent progress report and indicate all the steps they will take, with a timetable and specific milestones, in order to complete the ILE 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 the DrPH Program on behalf of the DrPH committee and if appropriate, the Vice Chair for Education. If approved, the student must have successfully defended the ILE 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 (official leaves of absence granted by MSPH are not counted in the number of semesters in the program). 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.

#### 5.4. Available Resources and 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 academic advisor or sponsor. Below is a list of resources that may prove useful for a range of issues.

#### 5.4.1. Within the Department of Epidemiology

#### **Contacts**

**Doctoral Student Representatives.** The doctoral student representatives are a good resource for peer advice. It is often true that other students have had similar experiences and have found ways to solve similar problems. The current representatives are listed on the inside cover of these guidelines.

**Director for Academic Programs**. Liliane Zaretsky (Iz3@cumc.columbia.edu) can assist with solving many administrative problems that students face over the course of their doctoral training.

**Director of DrPH Program.** Parisa Tehranifar, DrPH (pt140@cumc.columbia.edu) is Chair of the DrPH program in Epidemiology and Director of DrPH Committee. 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 academic 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.

*Vice Chair for Education.* Lisa Bates, ScD (lb2290@cumc.columbia.edu), Vice Chair for Education, has oversight over policy and practice for all department educational programs. If after working with the Director for Academic Programs and the Director of DrPH Program, attempts to resolve a conflict remain unsuccessful, a student may approach her.

**Chair of the Department.** If after working with the Vice Chair for Education, attempts to resolve a conflict remain unsuccessful, a student may approach the department chair, Professor Charles Branas, at cbranas@cumc.columbia.edu.

#### The episummer@columbia Fund

The <a href="mailto:episummer@columbia Fund">episummer@columbia Fund</a> was created to provide graduate students with an opportunity to access resources to help advance their educational agenda, using the revenue generated by the episummer@columbia. The episummer@columbia fund is a funding source for students pursuing research and training opportunities beyond those covered by their standard tuition (see Appendix B for details).

#### **5.4.2. 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 (for more information, visit <a href="Mailman Office of Student Affairs">Mailman Office of Student Affairs</a>). OSA also maintains several funding streams for student travel and other initiatives described at <a href="https://www.mailman.columbia.edu/people/current-students/student-opportunities/beyond-classroom/student-travel-fund">https://www.mailman.columbia.edu/people/current-students/student-opportunities/beyond-classroom/student-travel-fund</a>.

#### The Office of Disability Services (ODS)

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 <a href="https://www.health.columbia.edu/content/disability-services">https://www.health.columbia.edu/content/disability-services</a> 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 this later as needed.

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 . The liaison with Disability Services for the Mailman School of Public Health in Office of Student Affairs (OSA) is Sarah Tooley (email: <a href="mailto:st3146@cumc.columbia.edu">st3146@cumc.columbia.edu</a>).

#### **Center for Student Wellness**

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 Columbia University Irving Medical Center (CUIMC) students. For more information, contact CSW at 212.304.5564 or studentwellness@columbia.edu) or visit Well-Being at Columbia | University Life.

#### **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 <a href="Ombuds">Ombuds</a>
<a href="Office">Office</a>. The office has drop-in hours Wednesdays from 10:30am–2:30pm or an appointment can be made by emailing ombuds@columbia.edu.

#### Student Services for Gender-based and Sexual Misconduct

The Student Services for Gender-based and Sexual Misconduct are designed to support students facing inappropriate behavior based on sex and/or gender discrimination that may or may not be sexual in nature. Their <u>website</u> contains information on resources, on policy and on how to get advice.

#### Appendix A: Suggested Guidelines for Epidemiology DrPH APEx Report

#### Section 1: Background

Background information regarding both the organization/agency/group and the project with which you were working. Discuss the project within a broader public health context. Current literature should be reviewed. This section could include:

- Brief history of the agency/project/group: Vision and/or mission, social, demographic, political, and/or cultural issues that have shaped your project historically and, in the present, and how the project reflects or contributes to broad public health objectives and challenges.
- Describe practicum site: geographic location, population served including sociodemographic characteristics.
- This section should also include the specific goal(s) of your practicum project, how they relate not only to the mission of the agency/group, and to the broader context you described.

#### Section 2: Methodology (as applicable to the APEx)

- Project design, sample, instrument development, data collection and management, and data analysis procedures.
- Describe the strengths and weaknesses of the methods, including any methodological problems
  encountered and the strategies you used to minimize them. Discuss how and what you would modify
  to improve the methodology, if appropriate.
- If Apex involves designing a program or education curriculum, describe the theoretical framework, as well as the methods utilized to develop, implement, and assess the activities or materials.

#### Section 3: Findings and Deliverables (as applicable to the APEx)

- Research Project: describe your methodology, analysis plan, and main findings. Are there
  unanswered questions raised by your study findings that should be followed up with further
  research?
- Program/Educational Project: Describe the deliverables completed. Was there (or could there be) an
  effect or outcome among the population you were attempting to serve? Were there (or will there be)
  organizational or activity changes because of your work?

#### **Section 4: Reflections and Conclusions**

- Classroom Learning and the APEx: Please discuss the APEx within the context of classroom learning and reflect upon the following issues: How did your classroom learning compare/contrast with your field learning and experience? What specific classroom based theoretical approaches were most relevant to your field learning and experience? Based on this APEx experience, how might the DrPH curriculum be enhanced?
- Professional and career reflections and plans: Discuss if and how the practicum experience influenced the development of your ILE plans and priorities as well as your career plans and expectations.

#### **Section 5: Public Health Competencies**

Select and describe how the APEx reinforced/developed at least 3 CEPH competencies and 2 additional Departmental competencies (see Handbook for a list).

#### **Timeline Considerations**

- 1. The draft report should be submitted for pre-review to DrPH Practicum and Seminar Leads at least 4 weeks before DrPH seminar presentation date
- 2. Comments will be shared within 10 days of receipt
- 3. A revised report will be circulated to the seminar class one week prior to the seminar presentation date for peer review and feedback at the presentation
- 4. Qualitative feedback provided on presentation through written and verbal comments



# ©columbia Fund in the Department of Epidemiology

#### **WHAT**

The episummer@columbia Fund was created to provide our graduate students with an opportunity to access resources to help advance their professional educational agenda, using the revenue generated by the Columbia University's Department of Epidemiology summer institute called episummer@columbia.

#### WHY

The episummer@columbia Fund is a funding source for Department trainees presenting their research at professional conferences. Examples of potential uses for the episummer@columbia Fund include:

- travel for conferences to trainees who are presenting findings at professional meetings
- registration for conference to trainees who are presenting findings at professional meetings
- tuition for specific training needs, such as short courses, workshops, and training in software packages or lab techniques that are offered pre-, during and post-conferences
- We do not fund expenses accrued while completing degree requirements

### **HOW**

Students seeking funding will complete a brief one-page application, providing the following information:

- **description**, including, as applicable, date(s), location.
- cost, including, as applicable, a detailed listing of each element. It is anticipated that applications will be for amounts less than \$1,000 for any one professional conference. Lump sum costs without explanation will not be considered.
- rationale, as in, why this conference/pre- or post- course is vital to the student's education and research goals
- brief description of other funding avenues the student has pursued prior to, or concomitantly with, seeking episummer@columbia Funds.

All things being equal, priority for funding will be given to students who demonstrate that they have exhausted all other available avenues of funding.

All applications should be submitted to Ms Liliane Zaretsky ( ${\bf Iz3@columbia.edu}$ ).

The episummer@columbia Fund committee will adjudicate applications.

### WHEN

There are two episummer@columbia Fund funding cycles: applications will be accepted on October 31st and April 30th each year. Applicants will be notified of the committee's decision within a month of the request. Applicants who are funded will be reimbursed, an amount up to the award amount, upon conclusion of the event and after applicant has submitted (a) all receipts and (b) a brief summary of how the episummer@columbia Fund award was used.

## **WHO**

All master's or doctoral students enrolled in a degree program in the Department of Epidemiology are eligible. Alumni are not eligible unless an application was submitted while they were still a student. All things being equal, priority for funds will be given to students who have demonstrated active engagement in the Department.

Excerpt from episummer@columbia fund recipient: "Attending the annual meeting of the Society for Epidemiologic Research 50th meeting was a fantastic opportunity for me to not only present my newly published research examining the impact of ridesharing on alcohol-related assaults, but also to learn from both early career and established researchers in topics of violence and injury." Christina A. Mehranbod, Doctoral Candidate



Instructions						
Applications deadlines: October 31st and April 30th						
Submit completed application to Liliane Zaretsky, Director for Academic Programs (Iz3@columbia.edu).						
Add extra lines as necessary. Make sure the total amount requested is in <b>bold</b> or otherwise highlighted. Applicants are encouraged to use additional pages as necessary to justify why this opportunity is congruent with their educational and/or research goals. Please ensure that you attach relevant documentation (for example, if you are presenting an abstract, attach the abstract as well as evidence that it has been accepted to the conference). You are welcome to attach other supplementary material that the Committee may find helpful in their deliberations.						
STUDENT NAME	UNI	PREFERRED EMAIL				
All information must be filled in b	oelow. Only attach pr	oof of conference presentation.				
Funding is requested for the following:						
ITEM DESCRIPTION	COST	DATE/LOCATION				
TOTAL						
Please briefly describe your request.						
Please briefly describe the other funding avenues you have pursued prior to applying to the episummer@columbia Fund.						
r lease briefly describe the other runding avenues you have pursued prior to applying to the episummer@columbia rund.						
SIGNATURE OF STUDENT	Date	<u> </u>				