COLUMBIA | MAILMAN SCHOOL OF PUBLIC HEALTH

ENVIRONMENTAL HEALTH SCIENCES

MPH Student Handbook

2024 – 2025 Academic Year

This handbook has been created to ensure EHS students are familiar with Department and School procedures and protocol.

Important resources:
EHS Department website Official
MSPH handbook

Questions should be directed to Nina Kulacki, Director of Academic Programs or Dr. Greg Freyer, Director of EHS Master's Programs.

For a detailed academic calendar for 2024-25, please see the Mailman Academic Calendar.

Academic Honesty & Honor Code: All candidates are expected to adhere to the required standards for academic and scientific integrity, which can be found here.

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MPH In Environmental Health Sciences

The MPH program in Environmental Health Sciences (EHS) is designed to prepare students for employment in settings concerned with environmental and occupational exposures to chemical and physical agents, the impact of climate change on human health, creating, implementing, and assessing environmental health policy, and the population health as it relates to the environment and other related settings.

For 2-year MPH students, the Department offers five specialty Certificates:

- Toxicology
- Molecular Epidemiology
- Environmental Health Policy
- Climate and Health
- EHS Global Health

Students can also complete Certificates offered by other departments. More information about Certificate combination options can be found here.

All EHS MPH students must also complete a field or lab practicum.

Advising and Administrative Resources

Faculty Advisor

Each student is assigned an EHS faculty advisor at the start of the program. Students are expected to ***meet with their advisor at least once per semester*** to review their course plan prior to the end of the add/drop period. It is important for students to be proactive in scheduling these meetings and checking in with their advisor periodically.

Regardless of one's assigned faculty advisor, students are welcomed and encouraged to meet with any faculty member in the Department and with Nina Kulacki. Questions or requests to change an assigned faculty advisor should be directed to Ms. Kulacki.

Academic Programs Office in EHS

The Faculty Director of EHS Master's Programs, Dr. Greg Freyer, and the EHS Director of Academic Programs, Nina Kulacki, are the primary points of contact in the Department for administrative issues related to the EHS master's program. They implement policies established by the Columbia University Mailman School of Public Health (*CUMSPH*) and by the Department of Environmental Health Sciences (*EHS*). Additionally, they can provide information about program requirements and address any questions or concerns.

2nd Year MPH Peer Mentors

All incoming EHS MPH students are assigned a 2nd year MPH student mentor from the EHS Department. Peer Mentors are available to provide support and assistance to 1st year students by answering questions, offering advice, and recommending resources – academic and otherwise. EHS hosts a lunch meeting each semester for peer mentors and mentees to connect.

Writing Center Resource

The Writing Center provides writing support to undergraduate and graduate students. In one-on-one consultations and workshops, our consultants offer feedback and strategies to help you improve at every stage of your writing, from brainstorming to final drafts.

Teaching Assistant (TA) Opportunities for EHS Department-based Courses

Any full-time EHS student in good standing may request to be a TA for an EHS course by contacting Nina Kulacki. ***Please note:*** *Students in their first semester are NOT typically eligible to TA.*

Compensation

- TA compensation for the 2024-25 academic year is based on a $28.65 per hour model. The salary amount in the final offer letter will be the set amount for the position assigned to a student.

To be considered for an EHS TA position

- Respond to the call for applications – sent by Nina Kulacki with the details of the requested course and semester offering.
- Nina Kulacki will confirm all TA appointments via email. Students will then be directed to the EHS Business Office to fill out the proper payroll documents prior to the semester in which they will serve as a TA.

Other TA opportunities in the School

There are also School-wide TA opportunities available in the Core courses. These TA positions are managed by the Office of Educational Initiatives. All students will receive notification of these opportunities through School-wide emails and should reply to that request at that time.

EHS MPH Degree Requirements

1. Core curriculum (*School-wide*)
2. EHS Departmental Core course requirements
3. Certificate coursework (*based on selected Certificate*)
4. EHS Departmental electives
5. Practicum requirement
6. Required participation in EHS events
7. Capstone course requirement

Core Curriculum (School Wide)

For more information on the School Core, use this link.

EHS Departmental Course Requirements

All EHS students, regardless of Certificate selection, are required to take the following core classes associated with the field of Environmental Health Sciences:

Semester 2

- P8322 Environmental Determinants of Human Health II (3 Cr)
- P6360 Analysis of Environmental Health Data (3 Cr)
- P8321 Introduction to Data Science for Environmental Health (1.5 Cr)

Semester 3

- P6320 Fundamentals of Toxicology for Health-related Disciplines (3 Cr)
  OR P8312 Principles of Toxicology (3 Cr)*
- P8325 Risk Assessment and Communication (1.5 Cr)

Semester 4

- P9300 Capstone: Critical Thinking and Analysis in Environmental Health Sciences (3 Cr)

Any Semester EHS Elective:

- Any EHS course not in the Departmental Core or required for their Certificate (3 Cr)

**Students take EITHER P6320 OR P8312 – but not both.* (P8312 is r*equired for students in the Toxicology Certificate, but other students can opt to take P6320 Fundamentals of Toxicology for Health-related Disciplines instead.*)

Certificate Coursework

Please refer to this site for the official and most up-to-date coursework requirements for your selected Certificate.

EHS Departmental Electives

All EHS Certificates list departmental elective credits. These requirements can be fulfilled by taking any EHS course **not** already listed as a Departmental or Certificate core course requirements.

Practicum Requirement (Applied Practice Experience – APEx)

Master of Public Health students are required to complete an applied practical experience (practicum/ APEx). This requirement is typically completed during the summer between the first and second year. However, some students request approval to fulfill this requirement during the school year. **The range of completed hours must fall between 150 – 300 hours total.** The practicum may take a variety of forms, depending on the student's area of interest, such as: participation in an ongoing research or evaluation project; working with a government agency; or working in a community-based organization. There are multiple sources from which to find APEx opportunities.

MPH students must meet all the following practical experience requirements to graduate:

- Obtain approval from a faculty advisor prior to accepting a position.
- Follow all required processes for the Scope of Work and Practicum Completion documentation.
    - This is shared with all students directly from the APEx Office and support is offered to all students during this process when the deadlines approach.
- Present at a formal EHS practicum experience event (*this takes place in Fall of Year 2*).
    - Submit formal deliverables at the end of the practicum. This will be discussed with all students in APEx-specific meetings, so all students understand the requirement.

EHS Practicum/APEx Competencies

The EHS practicum experience should meet one or more of the following competencies:

- Apply the principles of exposure assessment to evaluate human exposures to environmental and occupational hazards.
- Apply and synthesize content learned through coursework in environmental health sciences that can be applied to practice in a professional setting.
- Demonstrate an understanding of the complexities of the EHS field and how major stakeholders collaborate with the goal of informing public and private constituency groups of environmental outcomes.
- Involve a topic that is relevant to EHS, such as exposure assessment, climate change, environmental policy, or toxicology. They can include laboratory studies, field studies, data analysis, or study design. The practicum can take place in academia, a government agency, private companies, or non-government agencies.
- Identify biological mechanisms whereby environmental and/or occupational agents adversely affect human health.
- Identify factors that affect susceptibility to adverse human health effects of environmental and/or occupational agents.
- Recommend interventions for reducing human exposures to environmental and occupational hazards.
- Communicate effectively, in writing and orally, knowledge of environmental hazards to other professionals and the public, including effective risk communication.
- Knowledge within the area of Molecular Epidemiology, Toxicology, Occupational Health, Industrial Hygiene, Climate Change, or Environmental Policy.

Attendance at Professional Development, Seminars, and Other Required Student Meetings

Every Wednesday, in both Fall and Spring semesters of year 1, all full-time first-year master's students in EHS attend a required meeting. This seminar/discussion offers students an opportunity to interact with faculty members and current students in EHS and to address important professional development topics. Attendance is taken each week.

All first-year students must attend at least 3 of these meetings per month. If it is necessary to miss a seminar, the student must email Nina Kulacki prior to that date.

Examples of required meetings:

- All master's student meetings
- Casual Conversations and Professional Development workshops
- Practicum experience presentations
- EHS Speed Networking event
- EHS Alumni Panel

EHS Capstone Course Requirement

All EHS MPH students are required to take P9300: Capstone Course Critical Thinking & Analysis in EHS in semester 4 (*Year 2, Spring semester*).

Thesis (Optional)

In *addition* to the required Capstone course, EHS students have the option of completing a thesis. It is critically important that students begin their thesis work as soon as possible. Typically, the major work is accomplished in the Fall of Year 2, with the final written thesis being completed in the Spring of Year 2.

In addition to the Capstone requirement and other coursework in the spring, students typically begin the process of applying for jobs and graduate programs. All these activities combined are time-consuming and should be considered when planning a possible thesis, additional work and/or TA positions, etc.

Students interested in receiving official credit for their Master's Thesis must meet with their advisor prior to registering for this. ***Note:*** *Not all students who complete a thesis are required to formally register for this, as it's not a requirement of the program.*

Guidelines and Expectations for the Written Thesis

- All papers *must* have a second reader. This can be a faculty member in Mailman or someone the student worked with on this paper/the practicum.
- The final reader/final approval must come from the student's EHS advisor and follow the deadlines listed on the academic calendar. If the student signed up for a grade, the faculty will work with Nina Kulacki to post the final thesis grade.

SAMPLE Thesis Course registration details:

(Students must work with their faculty advisor to identify the best course of action for this process.)

P9361 Research Master's Thesis I in Environmental Health Sciences
P9362 Research Master's Thesis II in Environmental Health Sciences

The following deadlines are associated with these courses for students to meet appropriate deadlines and for advisors to assign a grade:

- P9361: Fall draft thesis deadline – end of October
    - This will be an outline of the thesis project with a timeline of completion of specific targets such as data collection and writing deadlines.
- P9362: Spring draft proposal deadline – beginning of the mid-term break
    - The abstract and introduction should be completed and in final form. The methods section should be near the final, and the results should be well along. A final complete thesis needs to be presented to your mentor two weeks before the end of the semester. You should be working with your mentor on your written thesis throughout the semester.

Section	Content	Pages
Abstract	• A hypothesis should be included in the abstract section that states the problem and results from the study	1 – 2 pages
Table of Contents	• Include major sections and subsections	1 page
Introduction	• A review of current relevant literature	10 – 15 pages
Methods	• A detailed description of methods used in the study	5 – 8 pages
Results	• This reveals relevant data generated from the study	10 – 15 pages
Discussion	• A discussion of how the data supports or contradicts the stated hypothesis and future directions	5 – 10 pages

Suggested MPH Thesis Timeline*

Milestone	Student Submission Deadlines (to Advisor)	Deadlines for Advisor Feedback (to Student)
Outline	Friday, February 7, 2025	Wednesday, February 12, 2025
Introduction	Friday, February 14, 2025	Wednesday, February 19, 2025
Results/ Data	Friday, February 28, 2025	Wednesday, March 5, 2025
Methods	Friday, March 14, 2025	Wednesday, March 19, 2024
Discussion/ Abstract	Friday, March 21, 2025	Wednesday, April 2, 2025
Final Draft to 2nd Reader	Friday, April 11, 2025	Wednesday, April 23, 2025
Final Paper to Advisor for Grade	Friday, May 2, 2025	Wednesday, May 7, 2025

***Note:** *This is the required timeline if a student registers for a grade. If the student opts to complete a thesis without registering, this is a suggested timeline for completion.*

Alumni Information

Contact with the Department

Upon completion of the program, we request that students provide the following information to Nina Kulacki (*typically requested via a survey/form*):

- Forwarding US mailing address
- Forwarding (*non-Columbia*) email address
- Details of next position (*if known*)

Important information about your Columbia email address upon graduation

Upon graduation, email addresses are slated for termination. If students would like to continue using their Columbia email address after graduation, they should review the details found at this link.