COLUMBIA Mailman School of Public Health
ENVIRONMENTAL HEALTH SCIENCES

MS Student Handbook
2021 – 2022 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 or Dr. Greg Freyer.

For a detailed academic calendar for 2021-22, 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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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. Students must also contact their advisor to discuss the details of their required Thesis.

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 Director of EHS Master’s Programs, Dr. Greg Freyer, and the Academic Director of Academic Programs, Nina Kulacki, are the primary points of contact in the Department for administrative issues related to the academic 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 students are assigned a 2nd year MPH student mentor from the EHS Department. Mentors are available to provide support and assistance to 1st year students by answering questions, offering advice, and recommending resources – academic and otherwise. EHS will host a lunch meeting each semester for peer mentors and mentees to have an opportunity to connect.
Teaching Assistant (TA) Opportunities for EHS Department-based Courses

Any **full-time** EHS student may request to be a TA for an EHS course by contacting Nina Kulacki.

**Please note: Students in their first semester are NOT eligible to TA.**

**Requirements:**
- TA’s must be registered as a full-time student
- TA’s must participate in the assigned CourseWorks/Canvas training session(s)
- TA’s must be able to devote up to 20 hours per week to the TA-ship. This may include, but is not limited to:
  - Time spent in class (students should be available to sit in the course for the duration of the semester).
  - Time spent outside of class for: scheduled office hours, grading, and preparation of teaching materials (which might also include time prior to the semester in which the course is scheduled).
  - **Note:** All students must be available to hold office hours outside of the regular course meeting time if this is required for the course. Use of the EHS Education Space (also called TA) office space should be requested by sending an email to Brandy Coleman.

**Compensation:**
- TA compensation for the 2021-22 academic year is $4,000 for a full TA position and $2,000 for a ½ TA position.

**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.
EHS MS Degree Requirements

1. EHS Department core course requirements
2. Program coursework
3. Required participation in EHS events
4. Thesis Requirement
5. Practicum requirement

This program is designed to be completed in 12 months. There is an option to do this as a part time student. Please discuss the part time option with Nina Kulacki and Greg Freyer.

Course Requirements/Schedule

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Number</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2021</td>
<td>P8308</td>
<td>Molecular Toxicology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>P8312</td>
<td>Principles of Toxicology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>P6300</td>
<td>Environmental Health Sciences</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>P8307</td>
<td>Molecular Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>P8306</td>
<td>Occupational and Environmental Hygiene</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>P8325</td>
<td>Risk Assessment, Comm., and Management</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total Fall Credits</strong></td>
<td><strong>16.5</strong></td>
</tr>
<tr>
<td>Spring 2022</td>
<td>P8320</td>
<td>Applied Environmental and Industrial Hygiene</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>P8323</td>
<td>Laboratory Methods in EHS</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>P8321</td>
<td>Introduction to Data Science for EHS</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>P6360</td>
<td>Analysis of Environmental Health Data</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>P6370</td>
<td>Journal Club in Molecular Epi and Toxicology</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>P8313</td>
<td>Toxicokinetics</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>P8334</td>
<td>Computational Toxicology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total Spring Credits</strong></td>
<td><strong>15</strong></td>
</tr>
<tr>
<td>Summer 2022</td>
<td>P9303</td>
<td>Applied Environmental Public Health Science (Online)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>P9361</td>
<td>Thesis (Master’s Essay)</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total Summer Credits</strong></td>
<td><strong>4.5</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total Credits for MS</strong></td>
<td><strong>36</strong></td>
</tr>
</tbody>
</table>
Attendance at Professional Development, Seminars, and Other Required Student Meetings

Every Wednesday, all master’s students in EHS meet for the Professional Development Series (both in Semesters 1 and 2). This seminar/discussion offers students an opportunity to interact with faculty members and current students in EHS. Additionally, these meetings are used for training in professional development, career development, and networking. 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.

Required Meetings*:

- All master’s student meetings
  - Typically, once per semester
- Casual Conversations attendance*
  - Semester 1 and first half of Semester 2 full-time students
- EHS Speed Networking event *(Spring semester)*
- EHS Alumni Panel *(Spring semester)*

**Thesis**

All EHS MS students are required to complete a thesis. For these students, the thesis is typically related to the research/work done as a part of the practicum. It is critically important that students identify a possible thesis topic and a plan and timeline.

Guidelines for the written thesis provided in the table below.

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

*Note: MS students should use this as a guide to the steps and approvals needed for the thesis. The dates and deadlines must be reviewed and approved by your advisor.*

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Student Submission Deadlines (to Advisor)</th>
<th>Deadlines for Advisor Feedback (to Student)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introduction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Results/ Data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discussion/ Abstract</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Draft to 2nd Reader*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Paper to Advisor for Grade</td>
<td></td>
<td><em>Typically, this is around the 2nd week of August – depending on the academic calendar details.</em></td>
</tr>
</tbody>
</table>

*The final deadline for faculty to submit grades will be shared via email as the Summer semester approaches. In the meantime, please contact **Nina Kulacki** with any questions.*

### Practicum Requirement

MS students are required to complete a practical experience requirement (practicum). This requirement is completed during the summer after the 2 semesters of coursework (part-time students will discuss their specific practicum plans with their Advisor and the Director of Academic Programs). 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. Most MS students opt to do a research project for their practicum and then use this as the basis of their thesis. However there is the option of doing a practicum such as,

- working with a government agency
- working in a community-based organization
- working with an organization or company that does environmental or toxicological work.
MS students must meet all of the following practical experience requirements in order to graduate:

- Obtain approval from a faculty advisor prior to accepting a position
- Work with their advisor on the thesis. The thesis advisor may well be the person with whom you are doing research with. Please discuss this with Dr. Freyer and your mentor.

**EHS Practicum 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.
Graduation Procedures

In order to receive the MS degree, students must:

- Submit an application using the link that is directly emailed from OSA in the Spring semester.

Form submission deadlines set by the School. Note: Full-time students will complete the program in August, so they will receive their degree in October.

- August 1 for October degrees
- December 1 for February degrees
- February 1 for May degrees

The Mailman School of Public Health convenes one commencement ceremony annually. All graduates from that academic year are invited to participate in the May ceremony. However, only those students who have fully completed all degree requirements and are pending the final requirements as reviewed by the Nina Kulacki may march at graduation.

If a student submits an application for graduation but does not meet degree requirements in time, they cannot reapply for graduation until all requirements are fully completed and grades recorded. In this case, the student should request a meeting with Nina to review and confirm the plans for successful program 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 submit a request using this link.