



University at Buffalo

Department of Epidemiology and Environmental Health

School of Public Health and Health Professions

GRADUATE STUDENT HANDBOOK

2025-2026



[Department Website](#)

Updated 11.19.2025

Students: This is your handbook; please read it and use it. It is interactive. Click on any title in the Table of Contents to be taken directly to the corresponding section in the document. Please refer to it often as you progress through your academic career. Please contact the Graduate Programs Coordinator with any questions. Thank you.

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INTRODUCTION

WELCOME!

This handbook is a guide for students in the Department of Epidemiology and Environmental Health (EEH). These guidelines are meant to highlight important Departmental and University procedures and policies. Note: Department policies take precedence over Graduate School policies. Please use this important document, read it through and refer to it often. If you have questions about any of the procedures or the regulations, contact your EEH faculty advisor or the Graduate Program Coordinator for assistance.

All students are responsible for knowing the rules and procedures described in this EEH *Graduate Student Handbook* and also in the University's [Graduate School Policy Library Manual](#).

It is the student's responsibility to ensure that all requirements are met and all necessary paperwork has been completed and filed in a timely manner. Generally, the procedures, policies and course requirements in effect at the time of matriculation will apply throughout a student's degree program. However, the department reserves the right to amend its regulations and procedures when necessary and grant students the right to petition regarding the amendments in individual cases. Students will be notified if and when regulations and procedures are changed.

All students should activate and check frequently their university email for university-related correspondence. Students are responsible for all information distributed via email. Important notices are routinely posted through the Department's email listserv.

Items of general interest are posted on the bulletin board outside the Farber 265 Student Room. Inside the 265-student room, near the main entrance, you will find mailboxes organized by last name (A–F, G–L, M–R, S–Z). Faculty and staff may use these to return forms, assignments, or other materials, and you will be notified by email if items are waiting for you.

Checklist:

- ✓ **STUDENTS ARE RESPONSIBLE FOR ALL INFORMATION DISTRIBUTED VIA EMAIL, CONTAINED IN THE GRADUATE SCHOOL POLICY AND PROCEDURES MANUAL, AND EEH GRADUATE STUDENT HANDBOOK.**
- ✓ **Check your UB email daily and notify the Department if there is a change in your email address.**
- ✓ Notify both the Department and update your Student HUB when there is a change in your home address and/or telephone number.
- ✓ Notify the Department when there is a change in your work address and/or telephone number.
- ✓ International students should report their social security number to the Department as soon as a number is assigned by the Social Security Administration.

HISTORY & BACKGROUND OF THE DEPARTMENT

Epidemiology and public health have a long and rich history at the University at Buffalo (UB) and in western New York. As far back as 1843, one of the founding faculty members of UB, Austin Flint, did epidemiologic research, publishing a description of an outbreak of fever in the Western New York region. The first mention of a formal course in public health in the UB medical school catalog was in 1891, a course focusing on infectious disease prevention, hygiene and sanitation. In 1913, a division of the medical school was formed, Hygiene and Sanitation, and in 1919, the department was first established, then called the Department of Hygiene and Public Health. The department was among the first departments of public health in the country. In 1946, the name was changed to the Department of Preventive Medicine and Public Health and in 1967 to the Department of Social and Preventive Medicine (SPM). In April 2014, the department's name was changed to Epidemiology and Environmental Health (EEH). This new name better reflects the department's current focus in terms of the teaching and research programs in epidemiology, environmental health and health services administration.

Until 2003, EEH was part of the School of Medicine and Biomedical Sciences (SMBS). During that time, the focus of the department was on teaching and research in epidemiology but also included faculty with research focused in other areas of public health. In 1997 a partnership was formed with the State University of New York at Albany making it possible for students to obtain a Master of Public Health Degree (MPH) from Albany with coursework at UB. In 2001, an MPH degree program was created at UB in the Department of EEH offering two concentrations, epidemiology/biostatistics and health services administration.

In 2003, EEH became part of a newly formed School of Public Health and Health Professions (SPHHP), joining with School of Health Professions' colleagues in Exercise and Nutritional Sciences, and Rehabilitation Sciences and with colleagues in new departments of Biostatistics, and Community Health and Health Behavior. In 2009, SPHHP was accredited as a School of Public Health by the Council on Education for Public Health (CEPH) and was reaccredited in the summer of 2015. In 2019, the department celebrated its 100th anniversary. [| Epidemiology and Environmental Health 100th Anniversary Celebration - Epidemiology and Environmental Health - University at Buffalo](#)

In addition to the graduate programs housed in EEH, our department and faculty are involved in the undergraduate program in public health, as well as in programs combining the BS in public health with master's degree programs in our department. More information on the undergraduate programs can be found on the school's website: [Undergraduate Student Services](#).

Within EEH we have a Division of Environmental Health Sciences (established in 2010), and a Division of Health Services Policy and Practice (established in 2014). The current graduate programs offered by EEH cover a number of disciplines and include an MS and PhD in Epidemiology and MPH degrees. There is an MS in Environmental Health Sciences. Three of the seven MPH concentrations offered at UB are housed in EEH: epidemiology (EPI), environmental health (EH) and health services administration (HSA). In addition to these two-year MPH programs, we also offer one-year, accelerated MPH programs in all three concentrations and now offer an online MPH program in Health Services Administration.

MISSION OF THE DEPARTMENT

The Mission of the department is three-fold:

1. Conduct research in epidemiology, environmental health, health services administration and preventive medicine that will contribute to improvements in population health status in our community, our nation and the world.
2. Educate and develop scientists and practitioners for careers in epidemiology, environmental health, health services administration, preventive medicine, clinical research and public health. Utilize the expertise of the department for training in other departments in the School of Public Health and Health Professions (SPHHP) and in the University at Buffalo (UB).
3. Serve the public health needs of our communities by applying our resources and expertise to implement best practices in public health education, disease prevention and health promotion.

Training in epidemiology is offered at the PhD, MS and MPH levels and includes the study of epidemiologic research methods, biostatistics, and survey methods. Training also focuses on understanding the biological, behavioral, social, and organizational determinants of disease and outcomes. Epidemiologists work in a variety of settings such as academic and government research, public health agencies at the local, state, national, or international level, health care delivery systems such as hospitals and managed care organizations, private research firms, community organizations and industry. Students can focus their epidemiologic research for the MS or the PhD degree on disease and exposure focus areas as well as on environmental health or on health services administration.

In addition to epidemiology, the Department provides graduate training (MPH) in environmental health and health services administration. Training in environmental health focuses on an understanding of the sources and physiologic effects of physical, chemical, and biologic agents that affect the environment, such as air pollution, water pollution and food toxicology. The MPH-Environmental Health concentration prepares students to work in public health in governmental agencies, academic settings, and non-profits and industry focused on the environment and health. The MPH-Health Services Administration concentration prepares students in program planning and health policy who wish to focus on careers in health policy development or administration and evaluation of health programs in government, health agencies, as well as a variety of other settings such as non-profit health agencies, public health advocacy organizations, hospitals, or health maintenance organizations.

An undergraduate program in public health is also offered by the SPHHP; EEH contributes to that program as well.

DEPARTMENT PROGRAM STRUCTURE

Department of Epidemiology and Environmental Health

Chair - Dr. Pauline Mendola

I. MPH Program

Director of MPH Programs – Dr. Heather Ochs-Balcom

- i. MPH Epidemiology Concentration Director – Dr. Heather Ochs-Balcom
Including combined degrees
 - a. BS in Public Health/MPH
 - b. MPH/MD
 - c. MPH/PharmD
- ii. MPH Environmental Health Concentration Director – Dr. Meng Wang
Including combined degrees
 - a. BS in Public Health/MPH
 - b. MPH/MD
 - c. MPH/MUP
- iii. MPH Health Services Administration Concentration Director – Dr. Dennis Daniels
Including combined degrees
 - a. BS in Public Health/MPH
 - b. MPH/JD
 - c. MPH/MBA
 - d. MPH/MD
 - e. MPH/MSW
 - f. MPH/PharmD
 - g. MPH-MUP

II. MS in Epidemiology

- a. Director of MS Program – Dr. Michael LaMonte
 - i. MS in Epidemiology
 - ii. Combined degree (3+2)
 1. BS in Public Health/MS in Epidemiology

III. MS in Environmental Health

- a. Director of the MS Program – Dr. Xuefeng Ren
 - i. MS in Environmental Health
 - ii. Combined degree (3+2)
BS in Public Health/MS in Environmental Health

IV. PhD in Epidemiology

- a. Director of PhD Program – Dr. Michael LaMonte
 - i. Available Track
 1. PhD in Epidemiology, Cancer Epidemiology Track
 - ii. Combined degree
 1. MD/PhD in Epidemiology

Footnote: JD=Juris Doctor, MBA=Masters of Business Administration, MD=Doctor of Medicine, MSW=Masters of Social Work, MUP=Masters of Urban Planning, PharmD=Doctor of Pharmacy

SOURCES OF INFORMATION

Below are the websites for forms referred to in subsequent sections and checklists.

[Graduate School Web Site](#)

Links

[Graduate School Policy Library](#)
[Graduate Faculty Membership Roster](#)
[Guide for Electronic Thesis/Dissertation Preparation and Submission](#) :

[Graduate School Forms](#)

Application to Candidacy Form (ATC)
Certification of Full-Time Status Form for Doctoral Students
Certification of Full-Time Status Form for Masters Students
Change Expected Conferral Date/Amend ATC
Extension of Time Limit for Degree Completion
Leave of Absence
Use of Prior Coursework
Transfer Credits Petition

[Epidemiology and Environmental Health web site](#)

[Epidemiology and Environmental Health Forms](#)

Independent Study Form
Directed Research Form
Abstract Form MS and PHD
Thesis Committee Approval Form
Dissertation Committee Approval Form

[MPH Program Field Training Web Site](#)

[MPH Student Resource Web Site](#)

[1 CAPEN](#)

[Academic Calendar](#)

[Class Schedule](#)

[MyUB](#) (requires login)

STUDENT SERVICES

Health and Well-being

As a student you may experience a range of issues that can cause barriers to learning or reduce your ability to participate in daily activities. These might include strained relationships, anxiety, high levels of stress, alcohol/drug problems, feeling down, health concerns, or unwanted sexual experiences. Counseling, Health Services, and Health Promotion are here to help with these or other issues you may experience. You can learn more about these programs and services by contacting:

Counseling Services:

120 Richmond Quad (North Campus), phone 716-645-2720
202 Michael Hall (South Campus), phone: 716-829-5800

Health Services:

Michael Hall (South Campus), phone: 716-829-3316

Health Promotion:

114 Student Union (North Campus), phone: 716-645-2837

Crisis Services 24 Hour Addiction Hotline: 716-831-7007

Sexual Violence

UB is committed to providing a safe learning environment free of all forms of discrimination and sexual harassment, including sexual assault, domestic and dating violence and stalking. If you have experienced gender-based violence (intimate partner violence, attempted or completed sexual assault, harassment, coercion, stalking, etc.), UB has resources to help. This includes academic accommodations, health and counseling services, housing accommodations, helping with legal protective orders, and assistance with reporting the incident to police or other UB officials if you so choose. Please contact UB's Title IX Coordinator at 716-645-2266 for more information. For confidential assistance, you may also contact a Crisis Services Campus Advocate at 716-796-4399 or the Crisis Services (<http://crisisservices.org/>) hotline: 716-834-3131.

In cases of emergency or if you feel you are in danger please contact the University Police: 716-645-2222.

Racial/Ethnic, Gender, Sexual Orientation and Other Forms of Discrimination

The Office of Equity, Diversity and Inclusion (EDI) will speak with students confidentially to discuss concerns about classroom or workplace situations if you have experienced discrimination or harassment, phone: 716-645-2266; website: <https://www.buffalo.edu/equity/support/obtaining-assistance.html>

EDI website has a contact sheet that can be used anonymously:

<https://www.buffalo.edu/equity/about/contact.html>

Confidential or anonymous reporting can also be made through ethics point:

www.buffalo.ethicspoint.com (844-678-0455).

UB's harassment and discrimination policy:

<http://www.buffalo.edu/administrative-services/policy1/ub-policy-lib/discrimination-harassment.html#:~:text=Retaliation%20against%20anyone%20who%20reports,is%20prohibited%20by%20this%20policy>.

UNIVERSITY AFFIRMATIVE ACTION PLAN

The University at Buffalo is committed to ensuring access to its programs and activities. The entire notice of non-discrimination can be viewed at: <https://www.buffalo.edu/equity/support/data--reports-and-information.html>

GENERAL POLICIES

ADVISEMENT

All students are assigned an academic advisor before their first semester to assist in planning their course schedules, and to provide guidance for meeting specific educational goals and long-term career goals. The academic advisor will assist the student until all course work is completed or until the student identifies a major professor to chair their PhD dissertation committee, MS thesis committee, or MPH culminating project. All administrative questions should be directed to the Graduate Program Coordinator.

Students are expected to consult with their advisor prior to registration each semester. Failure to do so could result in a student not fulfilling the requirements in a timely manner for their anticipated degree conferral. Students should schedule regular appointments with their advisor, taking into consideration faculty's availability and university deadlines.

- MPH students use the Academic Advising Report (AAR). These reports should be updated regularly and discussed regularly with advisors.
- MS students also use the Academic Advising Report (AAR). These reports should be updated and discussed regularly with advisors. MS students are also required to complete a yearly progress report. First-year MS students also do an additional progress report and meet with their advisor after completing their first semester.
- PhD students are required to complete a yearly progress report. First-year PhD students do an additional progress report after completing their first semester.

The MPH and MS & PhD Graduate Directors will oversee the completion and review of the Academic Advising Report and/or the Progress Reports in consultation with the Graduate Program Coordinator and any faculty mentors of these students.

If, for any reason, a student wishes to change advisors, they must obtain permission from the selected faculty and submit a request in writing to the MS/PhD or MPH Graduate Director (a copy must also be sent to the selected faculty advisor). Changes will be made only with the approval of the new advisor. The department will try to accommodate all student requests.

REGISTRATION

The registration timetable, course offerings and class schedules are posted on the Office of the Registrar Website: <https://www.buffalo.edu/registrar.html>

All students are required to consult their advisor prior to registration, and to register for a minimum of 1 credit hour each Fall and Spring semester until degree conferral according to the procedures and within the deadlines established by the Student Response Center. This continuous registration requirement includes semesters in which formal courses are taken, as well as semesters in which a student is working on their thesis/dissertation/project. Students who are unable to be registered need to apply for an official leave of absence (see procedures below). Summer registration is not required unless a student has been on an official Leave of Absence in the Spring semester and intends to have their degree conferred on August 31. No credit will be allowed for work done without proper registration. It is important that students verify their registration each semester before the Add/Drop deadline. Courses dropped after the deadline will be assessed a tuition penalty.

Students who do not maintain continuous registration (without explicit approval for a leave of absence) are considered to have left the University and will be dropped from the program and would need to re-apply if they wanted to re-enter (see section on Leave of Absence and Re-Entry to the Program).

Registration Deadlines

Continuing students may take advantage of early registration by registering in November for the Spring semester and April for the Fall semester. Registration is continuous through the last day of Add/Drop. In order to avoid a late registration penalty, continuing students should check the [Office of the Registrar](#).

Registration Checklist:

- ✓ Verify registration before the Add/Drop deadline each semester

Online Study Limitations for International Students

Effective Fall 2023 only three credits of online coursework per semester can count towards the full course study requirement. Please visit International Student Services website for more information. <https://www.buffalo.edu/content/www/international-student-services/admin-pw/online-study-limitations.html>

Auditing Courses

A student wishing to audit a course must officially register and pay tuition for the course. A tuition scholarship does not cover courses taken for audit. The student must also submit a written request to the instructor by the fourth week of class requesting an 'Audit' grade. The instructor's decision will be final and will be transmitted to the student in writing. A copy of the approval must also be forwarded to the department for the student's file. A student may re-register for the course at a later date and receive a grade and academic credit for work completed in the re-registered course.

Course Resignations

All course resignations processed *within the official deadlines* will be indicated as officially resigned by the notation 'R' on grade reports, transcripts, and other official University documents. There are no quality points attached to an 'R' designation. Resignation from all courses should be done by filing a Request for Exception Registration. This form can be obtained from the Graduate Program Coordinator.

Course Resignation Checklist:

- ✓ Complete the **Request for Exception Registration**
- ✓ Obtain signature of course instructor(s) indicating approval of the resignation(s)
- ✓ Forward to the Graduate Program Coordinator (do not send directly to the Graduate School)

Requirements for Full-Time Status

Students must be registered for a minimum of 12 credit hours each Fall and Spring semester (or a minimum of 9 credit hours per semester if appointed as a graduate, teaching or research assistant) to be considered full-time.

- Full-time registration is a necessary condition of appointment for an assistantship and/or tuition scholarship.
- International students must maintain full-time registration as a condition for their student visa.

Certification of Full-Time Status

Students who are required to maintain full-time status for the purpose of tuition assistantship/scholarship, loan deferral or immigrant status may be certified as full-time when registered for less than 12 graduate credit hours (or 9 credit hours if appointed as a graduate, teaching or research assistant) **ONLY** if the conditions on the appropriate form below have been met:

[Certification of Full-Time Student Status for PhD Students](#)

[Certification of Full-Time Student Status for Master's Students](#)

The appropriate form should be completed **electronically** and submitted prior to the term the student is requesting full-time certification for. If you need assistance completing the form, please contact the Graduate Program Coordinator. Do not send the fully executed form directly to the Graduate School. Departments must be the ones to submit the final forms.

PhD students who have an ATC form on file with the Graduate School automatically receive full-time certification through the expected conferral date listed on their form. **Doctoral Candidates are responsible for contacting the Graduate Program Coordinator to confirm their full-time status for the upcoming semester upon registration for that term.**

Should doctoral candidates need to change their expected graduation term or amend their ATC, they must [file the appropriate form](#) to do so.

Please note, the preliminary exam for doctoral students has implications on the certification of full-time status process. [See that section for further details.](#)

MS/MPH students can only be approved for a maximum of two semesters. If additional time is needed, the student must submit a new form along with a written request and progress update from their advisor/major professor.

Certification of Full-time Status Checklist:

- ✓ Complete the appropriate **Certification of Full-Time Status Form**
- ✓ Ensure the fully executed form gets submitted to the Graduate School

Continuous Registration

Both full-time and part-time students must register each Fall and Spring semester for a minimum of one credit hour until all degree requirements are met (including the final defense of the thesis/dissertation/project). A zero-credit course does not fulfill the requirement for continuous registration. If a student is not on an approved leave of absence and fails to register for a semester, they are considered to have left the University and must reapply to the program in order to re-enter. A **student reactivation fee** will be required to be paid by the student, prior to course registration, in order to activate their student record and remove the Service Indicator. Re-applications must include a detailed timeline for completion of the degree. The Department reserves the right to accept or deny readmission, and to determine what prior course work can be applied to the degree. Re-admitted students are subject to all policies in effect at the time of re-application.

- Students must register for a minimum of one credit hour in the semester following an approved leave of absence and in the semester of degree conferral. (Note: registration is not required in the Spring semester for a February 1 degree conferral and is not required in the Summer session for an August 31 degree conferral).
- Students must be registered in the semester they defend their thesis/dissertation or present their culminating project. They may not be on a leave of absence in the semester during which the degree is conferred.

NOTE: No credit will be allowed for work done without proper registration.

LEAVE OF ABSENCE

Requests for a leave of absence must be negotiated through the MS/PhD or MPH Graduate Director using the [Leave of Absence form](#). After review and approval from the MS/PhD or MPH Graduate Director, the form should be given to the Graduate Program Coordinator to forward to the Graduate School at least two weeks prior to the start of the semester in which the leave is to begin. Typically, a leave of absence is approved for a maximum of one year but may be extended for up to one additional year if circumstances warrant.

- The Graduate School will not approve a leave of absence for 'personal reasons,' you must be specific and present strong justification for your request.
- The Graduate School will not approve a leave of absence if a student is not in good academic standing.
- Students may not petition for a leave of absence after the leave has occurred.

NOTE: If a student is not on an approved leave of absence and fails to register for a semester, they are considered to have left the University and must reapply to the program in order to re-enter. Re-entering students are subject to all policies in effect at the time of re-application. A **student reactivation fee** will be required to be paid by the student, prior to course registration, in order to activate their student record and remove the Service Indicator. Re-applications must also include a detailed timeline for completion of the degree. The Department reserves the right to accept or deny re-admission, and to determine what prior course work can be applied to the degree.

Leave of Absence Checklist:

- ✓ Complete **Leave of Absence** form after approval to complete form is given by the program specific Graduate Director. Form should include student and major advisor signatures.
- ✓ Forward form to the Graduate Program Coordinator (do not send directly to the Graduate School) at least two weeks prior to the start of the semester.

Re-Entry in the Program After a Leave of Absence. When a student returns from an approved leave of absence, they must notify the Department in writing of their intention to be reinstated in the academic program. This request should be made a minimum of two weeks before the start of the semester. The Graduate School will automatically create a new student record allowing the student to register for courses.

Re-entry Checklist:

- ✓ Request in writing to have status reinstated by the Department.

GRADUATE COURSE CREDIT

Graduate Course Credit

Graduate course credit is granted only for 500, 600, 700, 800 and 900 level courses provided proper registration requirements are met.

Undergraduate Courses for Graduate Credit

Undergraduate courses for graduate credit require prior petition and approval by the Dean of the Graduate School. Undergraduate courses may be taken by graduate students as appropriate prerequisites to their chosen field of study but may not be used to satisfy graduate program requirements or carry graduate credits. Exceptions may be made for some 400-level courses. A [Petition for Course Outside of Your Primary Academic Career](#) must be filed at the time of registration and before the end of the Add/Drop deadline. A maximum of two undergraduate courses at the 400 level may be taken for graduate credit. All 400 level undergraduate courses that carry four or more credit hours will receive a maximum of three credit hours of graduate credit.

Undergraduate Courses for Graduate Credit Checklist:

- ✓ Complete ***Petition for Class Registration Outside Your Primary Career***
- ✓ Be sure to sign form
- ✓ Provide justification for request
- ✓ Obtain signature of course instructor
- ✓ Include description of extra work required provided by the course instructor

TRANSFER CREDIT

The applicability of previously completed graduate courses for transfer credit is determined by either the MPH Graduate Director or the MS & PhD Graduate Director. Only those graduate courses completed at an accredited or recognized institution of higher education with a minimum grade of 'B' (3.0) are eligible for consideration for transfer credit. Courses with 'S' or 'P' grades are not transferable unless the transcript specifically states they are equivalent to a 'B' or higher grade.

International transcripts with numerical grades or grades of 'excellent' or 'good' must also include an official grading scale documenting that the grade is equivalent to a B or higher grade. This documentation should be obtained from the university where the courses were taken. Transcripts must also include the number of credit hours earned for each course.

Requests for transfer credit should be made at the first opportunity after admission to the program and within the first year of study. Students requesting approval for transfer credit must complete a [Transfer Credits Petition](#), and provide a justification of how the course(s) relate to the student's program and training. A copy of the course syllabus and a brief description of each course must also be provided to the relevant Graduate Program Director.

A maximum of 6 credit hours of graduate work may be transferred for the MS (no more than 20%), a maximum of 9 credit hours may be transferred for the MPH (no more than 20%), and a maximum of 36 credit hours acquired in a relevant master's degree program may be transferred to the PhD (no more than 50%). Thesis and dissertation guidance and research credits are not transferable. The University's 10-year time limit for each course will be considered for each course request (see next section on Time Limit for Prior Coursework).

Transfer Credit Checklist:

- ✓ Complete **Transfer Credits Petition**
- ✓ Be sure to sign form
- ✓ Provide a brief rationale of applicability for each course
- ✓ Provide course syllabus
- ✓ If the request is made for courses taken at an international university, include an English translation with letter grades and credit hours, and a grading scale if no letter grades are available

Policy on Transfer of Credit for Required Courses

Students requesting transfer credit for required courses taken outside the University (e.g., EEH 501, EEH 502, STA 527) must gather syllabi and discuss with and receive approval from appropriate Graduate Director.

Time Limit for Prior Coursework

All coursework (whether transfer or UB credits) taken more than 10 years ago must be approved by the MS/PhD or MPH Graduate Director and petitioned to and approved by the Graduate School at the time of admission to the program in order to apply to completion of a degree. If these credits are included in an approved extension of time limit petition, they are valid only until the expiration date of that petition. Any further extension of the approved time limit for degree completion will require, concurrently, a re-petition for approval of these older courses. Requests for approval of courses more than 10 years old must be petitioned through the Graduate School by completing the ([Use of Historical Coursework](#) form. Appropriate justification of how the course(s) relate to the student's program and how the student has kept current with the subject matter of each course must be provided.

Prior Coursework Checklist:

- ✓ Complete **Use of Prior Coursework**
- ✓ Be sure to sign form
- ✓ Attach original official transcript for courses not completed at UB
- ✓ Attach letter explaining how you have kept current the knowledge gained from the course(s)
- ✓ Attach up-to-date CV or resume
- ✓ Obtain signature of advisor/major professor
- ✓ Forward to the EEH Graduate Program Coordinator (do not send directly to the Graduate School)

INFORMAL COURSES

Graduate School Definition

Informal courses include registration in independent study, project, thesis, or dissertation guidance, directed or supervised reading, and directed research. Informal courses associated with final project, portfolio, thesis, research, or dissertation completion do not require the establishment of formal agreements. For independent studies and for directed research, an agreement should be completed and approved.

Use of undergraduate courses below the 400 level, as the criteria for creating an informal graduate course, is strictly prohibited.

Informal courses of Independent Study (EEH 597 or EEH 697) and Directed Research (EEH 698) are offered in EEH.

Independent Study (EEH 597, EEH 697)

Independent Study (IS), a type of informal coursework, is intended for PhD students with special interests not satisfied through the formal course work; it is pursued under the direction of a faculty member. This course is available as an elective when appropriate to the student's educational goals. Students must receive approval from both their supervising faculty and the MS/PhD or MPH Graduate Director. Although IS is intended for PhD students (EEH 697), MS or MPH students can petition to take IS in EEH 597 if the need is relevant to their future career plans and they obtain permission of the course instructor and the MS/PhD or MPH Graduate Director.

Students must provide their supervising faculty with a copy of the [Independent Study Form](#).

This form is signed by both the student and supervising faculty and forwarded to the MS/PhD or MPH Graduate Director for approval a *minimum of two weeks prior to the drop/add deadline*. When approved, the student will be force registered into the course by the Department. A copy of the approved agreement form is returned to the student.

- Doctoral students are limited to 9 credit hours total of IS (EEH 697).
- Master's students are limited to 6 credit hours total of IS (EEH 597).
- Students can register for a maximum of 6 IS credits per semester.

It is the responsibility of the student and the instructor to see that all IS agreements are maintained in the student's file in EEH. IS agreements become part of the student's permanent academic record. It is recommended that the student register with their major advisor and/or committee members for IS.

A letter grade is given for IS.

Directed Research (EEH 698)

The purpose of Directed Research (DR), a type of informal coursework, is to engage PhD students in **research** under the mentorship of a faculty member. This course is available as an elective when appropriate to the student's educational goals. Students must receive approval from both their supervising faculty and the MS & PhD Graduate Director. Students must provide their supervising faculty with a copy of the [Directed Research Form](#)

The form is signed by both student and supervising faculty and forwarded to the MS & PhD Graduate Director for approval a minimum of two weeks prior to the drop/add deadline. When approved, the student will be force registered into the course by the Department. A copy of the approved agreement form is returned to the student.

- Doctoral students are limited to 15 credit hours total of DR.
- Master's students cannot register for DR.
- Students can only register for a maximum of 6 DR credits per semester.

It is the responsibility of the student and the instructor to see that all DR agreements are maintained in the student's file in EEH. DR agreements become part of the student's permanent academic record. It is recommended that the student register with their major advisor and/or committee members for DR.

An S/U grade is given for DR.

STUDENT GENERAL PROGRESS REPORTS

All MS and PhD students are required to schedule a meeting with their advisor at the end of each academic year (during the month of May/June) to review their academic progress and complete their Student General Progress Report. This review is designed to develop the program for each student, to discuss their coursework and plans for upcoming registration, and to advise a student of any deficiency in their progress toward degree conferral. All first-year students also have their academic progress evaluated after their first semester of enrollment in the program. Students prepare their progress reports prior to meetings with the respective Graduate Director (MS & PhD) who will review and sign off on their progress reports in consultation with any faculty mentors of these students. MPH students will prepare their AAR (Academic Advisement Report) available in HUB before meeting with their advisor. Students who fail to meet with the Graduate Director to complete their General Program Report will have a check stop issued and will not be able to register for the following semester.

ACADEMIC PROGRESS

Students must maintain at minimum an overall B average (3.0) and achieve a grade of B or better in each **required** course. **NOTE:** B- (2.67) is below the minimum grade for required courses.

CLARIFICATION NOTE:

- MPH students must obtain a B or better in all required courses, including electives, since they are considered required courses.
- For MS & PhD programs, required courses are those specifically listed in the handbook under a heading of "required". Students do not have to obtain a grade of B in other courses necessary for degree completion (see curriculum sections for each degree); however, it is expected by the department that they do so. Please note that not obtaining B grades in all coursework may put a student at risk for not having an overall cumulative GPA of 3.0 and may impact any funding or assistantship.

Academic Probation

If a student is placed on academic probation they will be notified via a letter from the program specific Graduate Director. Students may continue to take courses, including required courses, but only with permission of the instructor.

The following would qualify a student to be put on academic probation:

- **Scenario #1.** A student who achieves a grade of B- or lower in **one or more** required courses.
 - If a student receives a grade of B- or lower in a course(s) specifically listed in the handbook under a heading of "required" they will be put on academic probation.
 - The student must retake the required course(s) within one year and achieve a grade of B (3.0) or higher. Assuming that they do not qualify for academic probation for other reasons, they would then no longer be on academic probation.
- **Scenario #2.** A student who receives a grade of U, D or F in any course.
 - If the course is a required course, the steps in academic probation scenario #1 must be followed.
 - If the course is not a required course the student has one year to address their academic probation as outlined by the departmental faculty with agreement from the program specific Graduate Director for the student's degree program.
- **Scenario #3.** A student whose cumulative GPA falls below 3.0.
 - The student is given one year to bring their cumulative GPA to 3.0 or above.
- **Scenario #4.** A student making unsatisfactory academic progress, as determined by the departmental faculty and the program specific Graduate Director.
 - The student must address deficiencies outlined by the departmental faculty (with agreement from the program specific Graduate Director for the student's degree program) in order to be removed from academic probation.
 - The student has one year to address the noted deficiencies in order to be removed from academic probation.

Academic Dismissal

The following would qualify a student for academic dismissal:

- **Scenario #1.** A student receives three grades of B- or lower in **any courses** (either required or not), including courses which have been repeated.
- **Scenario #2.** A student has two consecutive semesters with lower than an overall B average (3.0).
- **Scenario #3.** A student is put on academic probation and fails to achieve a B or higher grade in the required class(es) that need to be repeated or does not achieve an overall GPA of 3.0 or greater at the end of their probation period.
- **Scenario #4.** A student is put on academic probation and does not adequately address the outlined deficiencies as noted by the departmental faculty and the program specific Graduate Director of their degree program by the end of their probation period.

Repeating Required Courses

- Students who retake a course must officially register for it. Students are allowed only one opportunity to retake a course.
- Students are responsible for the tuition for repeated courses even if they are currently receiving a tuition scholarship.
- The grade and semester from the repeated course will be reported on the [Application to Candidacy Form](#) for PhD students and AAR for master's students and will be used to certify that a student has met the minimum B grade requirement.
- The initial grade will remain on the student's transcript and all courses registered for (including repeated courses) will be used in calculating the student's GPA.

ACADEMIC INTEGRITY

Students are required to read and be familiar with the Graduate School's Policy Library found at <https://www.buffalo.edu/grad/succeed/current-students/policy-library.html>

Academic integrity is a fundamental university value. Through the honest completion of academic work, students sustain the integrity of the university while facilitating the university's imperative for the transmission of knowledge and culture based upon the generation of new and innovative ideas.

Students are held to a high level of accountability and are expected to uphold our standards of honesty to sustain a fair learning environment. Academic dishonesty comes in many forms, including but not limited to:

- **Aiding in academic dishonesty.** Taking action that allows another student to engage in an act of academic dishonesty, including completing an examination or assignment for another student, failing to protect academic work by leaving it unattended, or collaborating without instructor permission.
- **Cheating.** Use of unauthorized resources, including sources not permitted by the course instructor, or tools such as calculators, smart watches, phones, or other students' work.
- **Falsifying academic materials.** Altering, fabricating, forging, or submitting: any course-related materials, including laboratory reports, notes, or any forms of data; an instructor's name or initials; an examination or assignment for re-evaluation; an assessment (in whole or in part) prepared by any person or technology (e.g., artificial intelligence) other than the student responsible.
- **Misrepresenting documents.** Altering, fabricating, forging, or submitting any non-course-related materials, including any university or official document, instrument of identification, or medical record.
- **Plagiarizing.** Representing the ideas or work (e.g., written text, computer code, artwork) of another as one's own or improperly referencing original authors.
- **Purchasing academic assignments.** Buying assignments intended for submission in fulfillment of any course or academic program requirement.
- **Selling academic assignments.** Offering for sale and/or receiving compensation for any academic assignment intended to fulfill any course or academic program requirement.
- **Submitting previously submitted work.** Also called self-plagiarism, re-submitting academic material (in whole or in part) that has been previously submitted by the same student without prior and expressed consent of the instructor.

Additional information on plagiarism can be found at: [Dartmouth Writing Program](#)

STUDENT CODE OF CONDUCT

SUNY and the University at Buffalo have mandated standards for behavior to establish a just, safe, orderly and positive climate on UB's campuses. These standards are described in the [\[Student Code of Conduct\]](#) webpage on the UB website. The MPH, MS, and PhD programs in the EEH department further ascribes to and enforces standards of professional conduct and ethics adapted from the American Public Health Association Code of Ethics, which are summarized on our School's webpage [\[Public Health Code of Ethics\]](#). All programs in the EEH department ascribe to and enforce the University at Buffalo policies and standards for academic integrity [\[Office of Academic Integrity webpages\]](#) which all students should be familiar with regardless of degree program or academic concentration.

GRADES

All students are responsible for verifying their grade reports each semester and reporting any discrepancy to their course instructor.

Grade Options

S/U (Satisfactory/Unsatisfactory): students electing to receive an 'S/U' grade must inform the instructor in writing by the fourth week of the semester, or the letter grade system will prevail. If the instructor approves the request, a copy of the approval must be sent to the Department for the student's file. An 'S' grade will be awarded only in those instances where a student's letter grade would be 'B' or better.

S: Not allowed for required courses. 'S' grades are assigned for directed research, thesis/dissertation guidance, MPH field training, and MPH culminating project.

N: Denotes an **audit** grade.

R: Indicates the student officially **resigned** from the course within the official University deadline. There are no quality points attached to an 'R' designation.

Incomplete Grades (I/default letter grade)

- May be assigned only when the student has been unable to complete all the assigned projects and/or examinations in a course due to illness or other unforeseeable and compelling circumstance. Such circumstance must be communicated to the instructor as soon as known, but no later than the last day of class of the semester during which the course is taken.
- Cannot be assigned when a student has not attended the class.
- Is not an option for students who have not satisfactorily completed other academic requirements of the course.
- Cannot be assigned for thesis/dissertation guidance/culminating project.

If an 'I' is assigned, a default grade must be assigned with the "I". A default grade is the letter grade the student will receive if no additional coursework is completed or a grade change form is not filed by the instructor. The default grade shall become the grade of record within 12 months. (May 31 of the following year for the Spring semester, August 31 of the following year for the summer semester, and December 31 of the following year for the Fall semester.)

Individual instructors may set their own conditions for removing 'I' grades providing the time limit is no longer than specified by the University. Each instructor must clearly state such policy if it differs from that of the University. If there is a valid reason for waiving the deadline for removing an 'Incomplete' grade, the student may petition the Graduate School prior to the deadline using the ([Extension of I/U Completion Deadline](#)).

Incomplete Grade Checklist:

- ✓ Be sure to verify the change of grade has been made on your transcript.

ABSTRACT SUBMISSION TO PROFESSIONAL MEETINGS

Students intending to submit abstracts to professional meetings must obtain written approval from their advisor PRIOR to submission. All abstracts must include a full citation of authorship. Students must acknowledge the Department, School, and the University as well as any funding sources, scholarships, or fellowships that supported their work.

COMMENCEMENT

In order to participate in the commencement ceremony, students must have completed ALL degree requirements and submitted all necessary paperwork (including oral defense of thesis or dissertation) by the required date and to the required person(s), department, and/or school. Students who do not complete within the time limits will be eligible to participate in commencement the following year, once they have completed the requirements (i.e., September and February degree conferral students walk in the following June commencement ceremony).

MPH students who completed all their coursework may walk in the May ceremony if they are completing the culminating project during the summer. Their conferral date will be August 31.

STUDENT HEALTH INSURANCE

The EEH Department does not require domestic students to have health insurance for our programs, but students are encouraged to, as some field placements and other community experiences may require coverage. UB requires that all intercollegiate student athletes have health insurance. All international students must also carry health insurance (coverage available through SUNY or comparable coverage) for the duration of their academic registration at UB. Please visit the below link for more information on student health insurance.

<https://www.buffalo.edu/studentlife/life-on-campus/health/medical-care/health-insurance.html>

POSTER PRINTING

For each EEH student, the Department will cover the printing cost for one poster per year THROUGH UNIVERSITY PRINT SERVICES.

GRADUATE STUDENT ASSISTANTSHIPS AND AWARDS

TYPES OF ASSISTANTSHIPS

Assistantships, which provide a stipend and may include a full or partial tuition scholarship for students in the PhD program, complement learning experiences by providing the opportunity to apply the skills and knowledge students have gained.

All current and eligible PhD students are considered for assistantships at the time of admission by the Admissions Committee. Appointments are for one year with the possibility of renewal for additional years.

Graduate Assistantships (GA) for Doctoral Students

A limited number of graduate assistantships are available for full-time PhD students. The assistantships are competitive and awarded on the basis of merit. Students will be assigned as research assistants or teaching assistants to faculty. They provide:

- A full tuition scholarship
- A stipend for the year of funding
- PhD Excellence Initiative covers broad-based fees for full-time and fully funded
- Health insurance/benefits
 - Any allotted personal leave must be approved by your supervisor in advance.

If you are a state-funded graduate assistant, you are generally expected to provide 20 hours of service per week. Employees in this bargaining unit are engaged in professional activities of such a nature that the output produced or the result accomplished often cannot be precisely measured in relation to a given period of time. In general, this work should be performed on campus unless your assistantship duties involve field research or have been otherwise approved for remote work.

Research Assistantships (RA) for Graduate Students (Masters or Doctoral)

Faculty in the Department of Epidemiology and Environmental Health and at Roswell Park Comprehensive Cancer Center can support students to work with them on their funded research projects or on research projects supported by other funds available to the faculty member. Responsibilities vary depending on the project. Research assistantships can provide all or some of the following:

- A full or partial tuition scholarship
- A stipend
- Health insurance/benefits may be provided, depending on the funding source

Other Teaching Assistantships (TA) for Master's Students

In some cases, there may be availability of TA positions for master's level (MS or MPH) students. The funding is generally for assisting with courses as a TA and is generally based on an hourly pay scale.

EXPECTATIONS FOR EEH STATE TEACHING ASSISTANTS AND GRADUATE ASSISTANTS (TA/GAS)

DUTIES & HOURS

- State Teaching Assistants (TAs) and Graduate Assistants (GAs) are generally required to provide **20 hours of work per week** throughout their appointment period. For 12-month appointments, this includes weeks between semesters and during the summer.
- It is expected that TA/GAs do not hold any additional jobs beyond their assistantship when classes are in session.
- Your assistantship assignment will be communicated to you by email from the Graduate Director for the fall, winter, spring, and summer.

WORK LOCATION

- **EEH TA/GAs are expected to perform their work duties on campus.** The only exception to this policy applies when the duties of the TA/GA appointment specifically require fieldwork to be conducted at an off-

campus location, or if the University is officially closed due to weather or emergency. Weather and emergency closures are announced through [UB Alert](#).

- If you are unable to perform your work duties on campus and don't meet the above exception criteria, you must use your personal leave accruals to cover your time away. If you do not have sufficient leave to cover your time away, you may need to resign from your position, which will result in loss of pay, and possible loss of tuition and fee scholarships, and health insurance coverage.
 - *example scenario (a): A TA/GA is assigned to assist a faculty member with research. The research project requires the TA/GA to travel internationally to collect data in the field. Because the assigned TA/GA duties involve fieldwork, they may perform their work off-campus at the field site.*
 - *example scenario (b): A TA/GA is assigned to assist a faculty member with research. The research project requires the TA/GA to perform data analysis and a literature review. The TA/GA wishes to travel internationally for personal reasons while performing these duties. Because the travel is personal and not related to field research, the TA/GA is not permitted to work remotely and must either perform their duties on campus or use personal leave time during the travel period.*

PERSONAL LEAVE

- State TA/GAs earn a lump sum of [five \(5\) personal leave days](#) after your first semester or at the end of ten (10) pay periods.
- Thereafter, you accrue five (5) personal leave days on your reappointment date or at the beginning of the following fall semester.
- Unused personal leave days cannot be carried from one appointment year to the next.
- You must charge your personal leave accruals for any time that you are expected to work and do not work. One (1) day is charged for each workday absence (8 hours = 1.0 personal days). Use ¼ increments for partial day absences (2 hours = 0.25 personal days; 4 hours = 0.5 personal days; 6 hours = 0.75 personal days).
 - *example scenario: A TA/GA wishes to take a week off work and typically works 8 hours Monday, 8 hours Wednesday, and 4 hours Friday (= 20 hours total). The TA/GA will need to charge 2.5 personal leave accrual days. They will have 2.5 personal leave accrual days remaining for use until the end of their appointment period.*
- TA/GAs must communicate with their assignment supervisor in advance about planned personal leave. In the event of an unanticipated illness or emergency resulting in absence, notify your assignment supervisor as soon as possible.
- Personal leave days are recorded on your monthly and semiannual attendance and leave reports, therefore failure to upload your reports in a timely manner may result in incorrect leave accrual tracking.

HOLIDAYS

- Holidays occurring when classes are not in session (New Year's Day, Martin Luther King Jr. Day, Memorial Day, Juneteenth, Independence Day, Labor Day, Thanksgiving Day, Christmas Day) are treated as a holiday with pay for State TA/GAs, if the holiday falls on a day the TA/GA is scheduled to work. If classes are in session for any holiday, the TA/GA is expected to work as normally scheduled.
- TA/GAs do not receive the holiday if they are not normally scheduled to work on the holiday.
- Holidays cannot be "banked" for future use.

ATTENDANCE & LEAVE REPORTS

- TA/GAs must submit [monthly](#) and [semiannual](#) attendance and leave reports (aka time sheets).
- Monthly reports are due within one week of the last day of the month. Semiannual reports are due in the first week of January and the first week of July.
- Complete all fields in the monthly and semiannual attendance and leave reports, with the exception of the supervisor signature section, and upload the reports to the UB Box link provided in your appointment/reappointment letter. Supervisor's signature will be obtained by a member of the EEH administrative staff after your reports have been uploaded.

BENEFITS

- State TA/GAs are eligible for [GSEU negotiated benefits](#), including health insurance. Enrollment in the Student Employee Health Plan (SEHP) is not automatic, and it is your responsibility to enroll within the deadlines in order to receive coverage. Questions regarding benefits enrollment can be addressed to UB HR State Benefits: ub-hr-benefits@buffalo.edu (716-645-7777).

- Please note that international students will be automatically enrolled in the international student health insurance plan, which is different than the above-mentioned Student Employee Health Plan (SEHP). The cost for the international student health insurance plan is charged directly to your student account. If you are enrolling in the graduate student employee health plan, you are responsible for submitting an [online waiver](#) to have the international student health insurance plan removed from your student account. Failure to submit the waiver prior to the deadline may result in you becoming personally liable for the cost of the international student health insurance plan.

NOTE ON OTHER APPOINTMENT TYPES

- The expectations and policies outlined above apply specifically to State Teaching Assistants (TAs) and Graduate Assistants (GAs) within the Department of Epidemiology and Environmental Health. Students employed under different appointment types, such as Research Foundation (RF) Research Project Assistants (RAs), or State Student Assistants (SAs), or in other departments should be aware that different policies and expectations may apply to their positions. Individuals are responsible for following the policies established by their employer and appointing department.

TUITION SCHOLARSHIPS

PhD students who are awarded a graduate assistantship may also be eligible for a tuition scholarship.

- A University tuition scholarship is limited to a maximum of 72 credit hours (minus any approved transfer credits); and/or up to eight semesters for PhD students. The limit also includes those semesters/credits of tuition support a student may have received while enrolled in another degree program or department at UB, regardless of whether or not those credits are applied to their current degree program.
- The tuition scholarship may not be used to offset the tuition costs associated with any course that will not be applied to the degree. A tuition scholarship does not cover courses taken as audit.
- Credit hour limits do not represent entitlements to tuition scholarship support for the specified number of credit hours. The limits refer to the total number of credit hours applied to the degree regardless of whether those credit hours consist of transfer credits, unsupported credit hours, credit supported from other sources, or any combination thereof.
- The scholarship does not cover credit hours taken during the summer semester or courses that are repeated.
- Comprehensive and Activity Fees: If a student is in a PhD program full-time and is fully funded as a TA, RA, or GA with a tuition scholarship and stipend, the University will cover the cost of the following fees (the fees will be credited from their account): Comprehensive Fee, Academic Excellence and Success Fee, Student Activity Fee; and if an international student, International Student Fee. If a PhD student does not meet these criteria, they are responsible for covering the cost of these fees themselves.
- If covered by an outside health insurance carrier, students are responsible for waiving the University health insurance.

It is expected that all students who receive stipends and tuition scholarship awards do not hold jobs outside of the University.

PhD students who are not New York State residents but are eligible to become residents for purposes of the tuition rate, are required to do so as soon as possible, but no later than one year after their initial appointment.

GRADUATE STUDENT TRAVEL AWARD (ROBERT O'SHEA AWARD)

The *Robert O'Shea Student Travel Award* was established in honor of Robert O'Shea, PhD, associate professor emeritus, who served from 1977-1997 as the first Director of Graduate Studies in the Department of Epidemiology and Environmental Health (then Social and Preventive Medicine). Dr. O'Shea was known for his caring commitment to all the students in the graduate program.

The *Robert O'Shea Student Travel Award* provides funds for students traveling to present their research at professional meetings. Presentations must be related to their EEH dissertation/thesis research.

Students interested in applying for this award should submit a written request to the Department's finance committee chair (see below for what should be included in the request). Letters should be addressed and emailed to the attention of the finance committee chair and cc'd to the faculty member with whom the student is working on the research. Mentors need to send verification that the research is related to EEH work and that they support the application.

Because funds for student travel are limited, students are *strongly* encouraged to submit for approval of the Robert O'Shea Travel Award prior to submitting an abstract to a conference in order to verify funding availability.

- Applicants should be current EEH PhD or MS students, with PhD students having successfully passed their preliminary examinations and MS students must be in the final year of their program.
- Research presented at the meeting must be directly related to the applicant's EEH dissertation/thesis.
- Funds are limited to support students who have an accepted presentation (poster or oral presentation) at a meeting.
- Submission for approval of the *Robert O'Shea Travel Award* ideally occurs prior to abstract submission however submission can also occur after the abstract is submitted but before travel to the conference.
- Submission for this travel award after the abstract presentation has occurred is not allowed.
- Students can apply for the *Robert O'Shea Travel Award* for a conference occurring up to 6 months after graduation for work done during their graduate studies. Applications must be submitted prior to conferral and include a clear justification for the use of travel funds for a post-graduation conference.
- PhD students are eligible to receive the award up to twice, and MS students may receive it once.

Please note that receipt of the award is contingent on the quality and relevance of scientific work, and availability of departmental funds.

Important: Students who receive the award will be provided with information regarding UB travel guidelines and the travel reimbursement process by an EEH department administrator, which includes obtaining official pre-approval for travel BEFORE making travel arrangements. It is the awardee's responsibility to familiarize themselves with the policies and processes, receive travel pre-approval, and submit travel expenses for reimbursement. The department cannot cover items such as tax, liquor, or upgrades (hotel, air, transportation). Failure to follow travel guidelines may result in expenses not being reimbursed. Questions regarding travel guidelines should be directed to an EEH department administrator prior to incurring expenses.

Funding is NOT guaranteed and depends on availability of funds in the Department and the number of requests received in any one year.

Student Travel Request Application Checklist

- ✓ PhD students must have passed prelims and are eligible to receive the award up to twice; MS students must be in the final year of their program and may receive the award once.
- ✓ Eligible students may submit one award application per academic year (July 1 – June 30).
- ✓ Maximum allowable amount per award: PhD - \$800; MS - \$400.
- ✓ To receive a travel award, students must present either a poster or oral presentation at the meeting directly related to their EEH dissertation/thesis.
- ✓ Mentors must verify the research is related to the applicant's EEH dissertation/thesis and confirm support of the application.
- ✓ Students must submit an application by email to the finance committee chair.
- ✓ The application must include:

- ✓ Name
- ✓ Names of co-authors
- ✓ Title and abstract
- ✓ Mentor's name
- ✓ Meeting details (conference, location, dates)
- ✓ Meeting/abstract information website
- ✓ List of expected expenses
- ✓ Funds can be used for meeting registration, transportation, hotel accommodations and per diem according to the rules/regulations set forth by the University at Buffalo.
- ✓ All presentations and posters funded by the department must include the UB logo. The department, EEH, should be the primary affiliation listed (along with Roswell Park Comprehensive Cancer Center (RPCCC) or others when applicable).
- ✓ Students must acknowledge any funding sources, scholarships, or fellowships that supported their work.
- ✓ Posters and presentations must be approved by the student's EEH advising faculty member before presentation.
- ✓ A copy of the final presentation or poster will be given to the department for posting (PDF color version).

SAXON GRAHAM RESEARCH AWARD

The *Saxon Graham Research Award* provides funds to PhD students to support research activities undertaken toward the completion of a doctoral dissertation. The amount of the award may vary depending on the year; typically, one award is funded annually in the amount of approximately \$2,500. The call for applications typically comes out during the summer each year.

Eligible students are doctoral students in their 2nd year or higher of the PhD in epidemiology and are in good academic standing. Awarded funds may be applied towards research activities such as participant recruitment, clinical specimen analysis, travel to meet with collaborators, or other justifiable research needs.

Funds must be spent according to University guidelines. A lump sum of funds will not be given to the awardee. Instead, staff from the department will work with the awardee to procure items or plan travel, as needed, and according to the awardee's proposed budget. If the awarded student must change the plan for an unexpected reason, the student has a one-time opportunity to propose a revised plan and budget to the committee.

Call for Applications Materials Checklist

- ✓ Specific aims (NIH format): one single-sided page detailing study rationale and aims
- ✓ Biosketch (NIH format)
- ✓ Budget and budget justification: maximum of two single-sided pages detailing proposed expenditure of award funds

SAXON GRAHAM DISSERTATION AWARD

This annual award to a recent PhD in epidemiology graduate was established in 1997 to honor the excellent leadership provided by the late Saxon Graham, PhD, professor emeritus and chair of the Department of Epidemiology and Environmental Health from 1981 to 1991 (then Social and Preventive Medicine). The award is for overall excellence as a doctoral student.

Eligible students are those who defended their dissertation by February 1 of the academic year. To be eligible, students must have gathered epidemiologic data extensively during their career either for their dissertation or for another epidemiologic purpose.

Nominations come from the student's major professor, committee member or other departmental faculty, and are due around February 1. Selection for the award is made by the Education Committee. The award is given at the SPHHP Annual Saxon Graham Lecture, during the spring semester (usually in April).

Call for Applications Materials Checklist

- ✓ One or more nomination letters
- ✓ Biosketch (NIH format) or resume

OTHER FUNDING RESOURCES

[Scholarships, Fellowships and Awards](#)

[UB Office of Financial Aid](#)

[UB Graduate School Fellowships & Scholarships](#)

Conference Travel Funding

In addition to the Robert O'Shea Travel Award, students are encouraged to explore additional sources of funding for academic travel, including the EEH Graduate Student Association, UB's Graduate Student Association, the Art Goshin Global Health Fieldwork Award through OGHF, conference-sponsored travel awards, and support coordinated through their faculty mentor.

MASTER OF PUBLIC HEALTH (MPH)

MASTER OF PUBLIC HEALTH (MPH)

DEGREE REQUIREMENTS

The MPH degree concentrations require a minimum of **49 credit hours for the Epidemiology MPH, 45 credit hours for the Environmental Health MPH**, and **47-48 credit hours for the Health Services Administration MPH** (33 of these credits for each concentration must be from UB).

Up to 6 credits may be waived and up to a maximum of 9 credits may be transferred based on previously completed graduate coursework (no more than 20%). Regardless of any waivers/substitutions/transfers, a minimum of 43 credit hours must be completed to graduate from the School of Public Health and Health Professions.

Students must maintain a minimum overall GPA of 3.0 and a minimum grade of B (3.0) in all required courses. Note: B- (2.67) is below the minimum grade for **required courses (this includes required MPH electives)**.

Students enrolled in an online MPH program are not permitted to register for seated (in-person) courses. All coursework must be completed in the online format.

Foundational Courses for All MPH Concentrations - Required

- CHB 501 Study of Health Behavior (3 credits)
- EEH 501 Principles of Epidemiology (4 credits)
 - EH and HSA concentrations can take EEH 500 Introduction to Epidemiology (3 credits) instead
- EEH 530 Introduction to Health Care Organization (3 credits)
- EEH 550 Environmental Health (3 credits)
- EEH 590 Leadership, Collaboration and Negotiation in Public Health (2 credits)
- CHB 507 Public Health Interprofessional Teamwork and *Practice* (2 Credits, IPE:Interprofessional Education)

Statistics Requirement

- All concentrations
 - STA 527 (LEC) Statistical Analysis I (3 credits)
 - STA 527 (REC) Statistical Analysis I (1 credit)
 - EEH 505 Application of Biostatistics to Epidemiology I (3 credits) not required but highly recommended for students who do not have experience with SAS software (MPH elective course)

*STA 527 must be completed in the first semester.

Biology Requirement

- MPH Epidemiology and Environmental Health concentrations
 - EEH 520 Biological Basis of Public Health (3 credits)

Students with college-level coursework in human biology, or anatomy and physiology may request to replace this course with a different elective with MPH Graduate Director approval.

CREDITS FOR REQUIRED FOUNDATIONAL COURSES FOR ALL CONCENTRATIONS = 24-25 CREDITS

Culminating Project Overview

All MPH students must complete a culminating project (EEH 630). The project will take the form of a written document and presentation completed during the concluding semester of the student's program. Examples of culminating projects include analysis of a public health problem/issue, a data analysis, designing implementation of a program, or writing a research grant, community service grant, or program evaluation proposal. Students present their culminating project as either (1) a poster at the Perry Poster Day or another academic poster session (available in the spring semester only) or (2) as an oral presentation held in the department at the end of the semester.

Apply for Graduation

Students preparing to graduate must log into My Academics in their student HUB record, click on “Apply for Graduation” and select the MPH program and anticipated graduation semester before the [appropriate deadline](#).

Graduation Information Form

The [EEH Graduation Information Form](#) should be submitted before MPH program completion.

Professional Conduct

SUNY and the University at Buffalo have mandated standards for behavior to establish a just, safe, orderly and positive climate on UB's campuses. These standards are described in the [Student Code of Conduct](#) webpage on the UB website.

The MPH program also upholds and enforces standards of professional conduct and ethics adapted from the American Public Health Association Code of Ethics. These standards are described in our [Public Health Code of Ethics](#), adapted from the American Public Health Association.

Finally, the MPH program upholds and enforces academic integrity according to the UB Graduate Academic Integrity policies and procedures within and across all UB classes and extracurricular activities. These are described in the [Office of Academic Integrity webpages](#) on the UB website.

Abstract Submission to Professional Meetings

MPH students involved in research may present the findings of that research at research conferences. Students intending to submit abstracts to professional meetings must obtain written approval from their advisor PRIOR to submission. All abstracts must include a full citation of authorship.

Time Limit to Complete the Degree

The time limit for obtaining the MPH degree is FOUR years from the date of first registration in the degree program, excluding official leaves of absence, regardless of full- or part-time status.

Extension of Time to Complete the Degree

Students unable to complete the MPH program within the time limit must petition the Graduate School for an extension of time to complete the degree provided there exists an adequate reason to justify such a request. The Graduate School will not approve an extension for ‘personal reasons’; the petition must be specific and provide strong justification for the request. Students must provide a detailed description of work completed to date, a detailed month-to-month timeline for completion of the project/degree, and a written endorsement from the advisor/major professor. Requests for Completion must be made at least two weeks prior to the start of the semester.

Checklist for MPH Degree Conferral

- ☐ 43-49 graduate credit hours, depending on the concentration, completed with an overall GPA of ‘B’ (3.0) average. A minimum grade of ‘B’ (3.0) in all required course work (including required electives).
- ☐ Continuous registration from the date of matriculation (unless on an approved leave of absence).
- ☐ If beyond the four-year time limit for completion of degree, an approved ([Extension of Time Limit for Degree Completion](#)) is on file in the Graduate School.
- ☐ Review unofficial transcript and address any ‘I’ grades.
- ☐ Successful completion of MPH field training (EEH 544), including the required slides set showing how competencies were met.
- ☐ Successful completion and presentation of the culminating project.
- ☐ An electronic copy of the culminating project and [Graduate Information Form](#) must be submitted to the Department and the MPH Coordinator.

ALL required materials must be received in the Graduate School by the official deadline posted on the ([Graduation Requirements & Deadlines](#))

It is the student's responsibility to review their academic record in HUB using the AAR. You will see any uncompleted requirements and incomplete grades. These must be taken care of before applying for graduation in HUB. Please check with the Graduate Department Coordinator to review the AAR.

Epidemiology MPH Field Training Experience – Required

EEH 544 MPH Field Training (3 credits)

Field training hours may be completed throughout the program, including summer and winter sessions. Three credits of Field Training are required but an additional 3 credits of Field Training (EEH 547 MPH Field Training Elective) can be completed and counted as a concentration area elective. Field Training forms are submitted electronically through the online system (link shown in “Sources of Information” at the end of the Handbook).

Field Training Waiver Request

If you are a public health professional with relevant prior experience, you can request a field training waiver by completing Waiver Request for Field Training based on previous public health experience. To be eligible for a waiver, your prior experience must have been:

- A public health experience. This may include assessing, monitoring or conducting surveillance of health problems or services in a population; establishing health objectives and priorities for populations/groups; conducting research on population-based health problems; developing policies and intervention strategies to meet public health needs; participating in disease prevention and health promotion programs; or studying the natural history of disease or health-related effects in a population. Individual patient care in a hospital, clinic or physician office setting is not sufficient to be considered public health experience.
- Relevant to your MPH concentration.
- A cohesive, focused experience of appropriate quality as determined by your MPH concentration director.
- Of sufficient duration—at least 120 hours in a single cohesive experience for a three-credit waiver, and 240 clock hours in one or two cohesive experiences for a six-credit waiver.
- For a waiver to be approved, students must still complete the required forms, paperwork and documentation, and the final MPH field training PowerPoint slide set based on the experience that allowed them to waive this requirement to ensure requirements for a practice experience have been met.

Epidemiology MPH Culminating project - Required

- EEH 630 MPH Culminating project (3 credits)

MPH-Epidemiology students may complete EEH 630 over multiple semesters (*e.g.*, 1 credit each in summer, fall, and spring) or 2 semesters (1 credit in fall, 2 credits in spring) with discussion and permission from the concentration director.

Students completing their project in any semester can elect to do a standard 15-minute oral presentation, or an academic poster presentation when offered.

Students completing their project in the Spring semester have the option to present a poster in person at the School's [Perry Poster Day](#) instead of delivering an in-person presentation to the department. The poster day is typically held in late April.

CREDITS FOR FIELD TRAINING AND CULMINATING PROJECT = 6-9 CREDITS

Epidemiology MPH Concentration Courses - Required

- EEH 502 Advanced Methodology (3 credits)
- EEH 573 Epidemiology of Infectious Diseases (3 credits)
- STA 528 Statistical Analysis II (4 credits)

Epidemiology MPH Elective Courses – 3 courses required from this list

- EEH 505 Application of Biostatistics to Epidemiology I (highly recommended elective)
- EEH 521 Global Health (annual)
- EEH 547 MPH Field Training Elective (additional 3 credits beyond the required 3 credits)
- EEH 570 Cancer Epidemiology (annual)
- EEH 571 Epidemiology of Cardiovascular Disease (annual)

- EEH 572 Nutritional Epidemiology (biennial)
- EEH 574 Epidemics and Outbreaks (biennial)
- EEH 575 Epidemiologic Applications to Environmental Health (annual)
- EEH 577 Perinatal Epidemiology (biennial)
- CHB 500 Special Topics: Public Health Pandemics
- CHB 513: A Public Health Perspective on Aging
- CHB 524: A Public Health Approach to Understanding and Reducing Sexual Risk Behaviors
- CHB 525/625: Health Equity
- CHB 529: Cannabis
- CHB 535: Indigenous Health Disparities

Note: Electives vary each semester. Please check current class schedule for course offerings (frequency and semester). All courses are 3 credits.

CREDITS FOR EPIDEMIOLOGY MPH CONCENTRATION AND ELECTIVE COURSES = 19 CREDITS

NOTE FOR ALL MPH STUDENTS: Students can petition to take courses outside their concentration if the course is relevant to their future career plans and they obtain permission from the course instructor and the concentration director.

Recommended Two Year Course Sequence for Epidemiology MPH Concentration

(Course offerings may change and some courses are offered biennially; actual program tailored to student)

EPIDEMIOLOGY (49 credits)	
Year 1: Fall Semester	Year 1: Spring Semester
CHB 501 Study of Health Behavior (3) EEH 501 Principles of Epidemiology (4) EEH 505 Application of Biostatistics to Epidemiology I (3)# STA 527 (LEC) Statistical Analysis I (3) STA 527 (REC) Statistical Analysis (1) Total credits=14	CHB 507 Public Health Interprofessional Teamwork and Practice (2) EEH 502 Advanced Methodology (3) EEH 550 Environmental Health (3) STA 528 (LEC) Statistical Analysis II (3) STA 528 (REC) Statistical Analysis II (1) Total credits=12
Year 2: Fall Semester	Year 2: Spring Semester
EEH 530 Introduction to Health Care Organization (3) EEH 544 MPH Field Training (3)* EEH 573 Epidemiology of Infectious Diseases (3) EEH 590 Leadership, Collaboration and Negotiation in Public Health (2) One epidemiology concentration course elective (3) Total credits=14	EEH 520 Biological Basis of Public Health (3) EEH 630 MPH Culminating project (3) One epidemiology concentration course elective (3) Total credits=9

#EEH 505, Application of Biostatistics to Epidemiology is a highly recommended elective.

***EEH 544, MPH Field Training** hours may be completed throughout the course of the program, including summer and winter sessions. Three credits of Field Training are required but an additional 3 credits of Field Training can be completed (EEH 547, MPH Field Training Elective) and counted as a concentration area elective.

Planning for work on the culminating project should begin in the fall semester of Year 2.

EPIDEMIOLOGY (49 credits) Spring Pathway	
Year 1: Spring Semester	Year 1: Fall Semester
CHB 501 Study of Health Behavior (3) CHB 507 PH Interprofessional Teamwork and Practice (2) EEH 520 Biological Basis of Public Health (3) EEH 550 Environmental Health (3) One epidemiology concentration course elective (3) <div style="text-align: right;">Total credits=14</div>	EEH 501 Principles of Epidemiology (4) EEH 505 Application of Biostatistics to Epidemiology I (3) EEH 530 Introduction to Health Care Organization (3) STA 527 (LEC) Statistical Analysis I (3) STA 527 (REC) Statistical Analysis I (1) <div style="text-align: right;">Total credits=14</div>
Year 2: Spring Semester	Year 2: Fall Semester
EEH 502 Advanced Methodology (3) STA 528 (LEC) Statistical Analysis II (3) STA 528 (REC) Statistical Analysis II (1) EEH 544 MPH Field Training (3)* One epidemiology concentration course elective (3) <div style="text-align: right;">Total credits=13</div>	EEH 573 Epidemiology of Infectious Diseases (3) EEH 590 Leadership, Collaboration and Negotiation in Public Health (2) EEH 630 MPH Culminating Project (3) <div style="text-align: right;">Total credits=8</div>

Environmental Health MPH Field Training Experience - Required

- EEH 544 MPH Field Training (3 credits)

Field training hours may be completed throughout the course of the program, including summer and winter sessions. Three credits of Field Training but an additional 3 credits of Field Training can be completed (EEH 547 MPH Field Training Elective) and counted as a concentration area elective. Field Training forms are submitted electronically through the online system (link shown in “Sources of Information” at the end of the Handbook).

Field Training Waiver Request

If you are a public health professional with relevant prior experience, you can request a field training waiver by completing Waiver Request for Field Training based on previous public health experience. To be eligible for a waiver, your prior experience must have been:

- A public health experience. This may include assessing, monitoring or conducting surveillance of health problems or services in a population; establishing health objectives and priorities for populations/groups; conducting research on population-based health problems; developing policies and intervention strategies to meet public health needs; participating in disease prevention and health promotion programs; or studying the natural history of disease or health-related effects in a population. Individual patient care in a hospital, clinic or physician office setting is not sufficient to be considered public health experience.
- Relevant to your MPH concentration.
- A cohesive, focused experience of appropriate quality as determined by your MPH concentration director.
- Of sufficient duration—at least 120 hours in a single cohesive experience for a three-credit waiver, and 240 clock hours in one or two cohesive experiences for a six-credit waiver.
- For a waiver to be approved, students must still complete the required forms, paperwork and documentation, and the final MPH field training PowerPoint slide set based on the experience that allowed them to waive this requirement to ensure requirements for a practice experience have been met.

Environmental Health Culminating project - Required

- EEH 630 MPH Culminating project (3 credits)
- MPH-Environmental Health students may, with the concentration director’s permission, complete EEH 630 over 3 semesters (e.g., 1 credit each in summer, fall, and spring) or 2 semesters (1 credit in fall, 2 credits in spring).
- Students completing their project in any semester can elect to do a standard 15-minute oral presentation, or a poster presentation in person or virtually.
- Students completing their project in the Spring semester have the option to present a poster in-person at the School’s [Perry Poster Day](#) instead of delivering an online presentation. The poster day is typically held in April.

CREDITS FOR FIELD TRAINING AND CULMINATING PROJECT = 6 CREDITS

Environmental Health MPH Concentration Courses - Required

- EEH 551 Advanced Environmental Health Sciences (3 credits)
- EEH 575 Epidemiologic Applications to Environmental Health (annual) (3 credits)
- PMY 626 Toxicology Principles and Practices (3 credits)

Environmental Health MPH Elective Courses – 2 courses required from this list

- EEH 505 Application of Biostatistics to Epidemiology I (annual) (3 credits) *highly recommended for students who do not have experience with SAS software*
- EEH 521 Global Health (annual) (3 credits)
- EEH 547 MPH Field Training Elective (additional 3 credits beyond the required 3 credits)
- EEH 555 Exposure Assessment in Environmental Health Research (annual) (3 credits) *highly recommended*
- EEH 573 Epidemiology of Infectious Diseases (annual) (3 credits)
- CHB 522 Refugee Health for Populations

- CHB 625 Health Disparities
- CIE 563 Air Pollution (annual) (3 credits)
- CIE 569 Hazardous Waste Management (annual) (3 credits)
- GEO 506 Geographical Information Systems (annual) (3 credits)
- GEO 512 Geography of Health
- STA 528 (LEC) Statistical Analysis II (annual) (3 credits)
- STA 528 (REC) Statistical Analysis II (annual) (1 credit)
- URP 604 Community Food Systems Planning (annual) (3 credits)
- URP 605 Built Environment and Health (annual) (3 credits)

Note: Check current class schedule for course offerings (frequency and semester) and credits per course.

CREDITS FOR ENVIRONMENTAL HEALTH MPH CONCENTRATION AND ELECTIVE COURSES = 16 CREDITS

NOTE FOR ALL MPH STUDENTS:

Students can petition to take courses outside their concentration area if the course is relevant to their future career plans and they obtain permission of the course instructor and the MPH Graduate Director.

Students interested in global environmental health are encouraged to take elective courses from global population health and from global environmental health topics. In addition, students would choose field placement sites which have a strong global environmental health component.

Recommended Two Year Course Sequence for Environmental Health MPH Concentration

(Course offerings may change and some courses are offered biennially; actual program tailored to student)

ENVIRONMENTAL HEALTH (44-45 credits)	
Year 1: Fall Semester	Year 1: Spring Semester
CHB 501 Study of Health (3) EEH 500 Introduction to Epidemiology (3) or EEH 501 Principles of Epidemiology (4) EEH 590 Leadership, Collaboration and Negotiation in Public Health (2) STA 527 (LEC) Statistical Analysis I (3) STA 527 (REC) Statistical Analysis I (1) Total credits=12-13	EEH 520 Biological Basis of Public Health (3) EEH 550 Environmental Health (3) CHB 507 PH Interprofessional Teamwork and Practice (2) EEH 530 Introduction to Health Care Organization (3) One EH concentration course elective (3) Total credits=14
Year 2: Fall Semester	Year 2: Spring Semester
EEH 555 Exposure Assessment in Environmental Health Research (3) <i>highly recommended EH elective</i> EEH 575 Epidemiological Applications to Environmental Health (3) PMY 626 Toxicology Principles and Practice (3) EEH 544 MPH Field Training (3) * Total credits=12	EEH 551 Advanced Environmental Health Sciences (3) EEH 630 MPH Culminating Project (3) Total credits=6

***EEH 544, MPH Field Training** hours may be completed throughout the course of the program, including summer and winter sessions. Three credits of Field Training are required but an additional 3 credits of Field Training can be completed (EEH 547, MPH Field Training Elective) and counted as a concentration area elective.

Health Services Administration MPH Field Training Experience – Required.

We now offer both a seated and online MPH-Health Services Administration program. The requirements and number of credits required are the same.

EEH 544 MPH Field Training (3 credits)

Field training hours may be completed throughout the course of the program, including summer and winter sessions. Three credits of Field Training are required but an additional 3 credits of Field Training can be completed (EEH 547 MPH Field Training Elective) and counted as a concentration area elective. Field Training forms are submitted electronically through the online system (link shown in “Sources of Information” at the end of the Handbook). Please note that EEH 544 A and EEH 547 A are for seated students.

Field Training Waiver Request

If you are a public health professional with relevant prior experience, you can request a field training waiver by completing Waiver Request for Field Training based on previous public health experience. To be eligible for a waiver, your prior experience must have been:

- A public health experience. This may include assessing, monitoring or conducting surveillance of health problems or services in a population; establishing health objectives and priorities for populations/groups; conducting research on population-based health problems; developing policies and intervention strategies to meet public health needs; participating in disease prevention and health promotion programs; or studying the natural history of disease or health-related effects in a population. Individual patient care in a hospital, clinic or physician office setting is not sufficient to be considered public health experience.
- Relevant to your MPH concentration.
- A cohesive, focused experience of appropriate quality as determined by your MPH concentration director.
- Of sufficient duration—at least 120 hours in a single cohesive experience for a three-credit waiver, and 240 clock hours in one or two cohesive experiences for a six-credit waiver.
- For a waiver to be approved, students must still complete the required forms, paperwork and documentation, and the final MPH field training PowerPoint slide set based on the experience that allowed them to waive this requirement to ensure requirements for a practice experience have been met.

Health Services Administration Culminating project - Required

- EEH 630 MPH Culminating project (3 credits)
 - MPH-Health Services Administration students may complete EEH 630 over two semesters if they wish, beginning in the Fall semester, upon completion of at least **two prior semesters** of required courses.
 - To complete EEH 630 for 1 credit hour in the summer, after taking this course during a prior fall or spring semester, students must receive approval from the concentration director by May 1, before that desired summer.
 - Students completing their project after having completed two semesters, unless permitted otherwise by the concentration director, can elect to do a standard 15-minute oral presentation, or a poster presentation.
 - Students completing their project in the Spring semester have the option to present a poster in-person at the School’s [Perry Poster Day](#) instead of delivering an online presentation. The poster day is typically held in April during the spring semester.

CREDITS FOR FIELD TRAINING AND CULMINATING PROJECT = 6 CREDITS

Health Services Administration MPH Concentration Courses - Required

- EEH 536 Health Policy in the United States (3 credits)
- EEH 538 Introduction to Health Economics (3 credits)
- EEH 532 Financial Management for Public Health Professionals (3)

Health Services Administration MPH Elective Courses – 3 courses/9 credits required from the below list.

- BMI 504 Data Analysis, and Research Methods in Biomedical Informatics
- BMI 506 Clinical Population Research and Public Health Informatics

- CHB 500 Special Topics courses:
 - Cannabis, A Review
 - Food Access Disparities
 - Harm Reduction from PH Perspective
 - Indigenous Health Disparities
 - Public Health Pandemics
- CHB 505 Applied Statistics for Public Health
- CHB 513 A Public Health Perspective on Aging
- CHB 516 Creating Media for Public Health
- CHB 523 Introduction to Program Planning and Evaluation
 - *Online section may be available for students in the online MPH-HSA program*
- CHB 525 Health Equity
 - *Online section may be available for students in the online MPH-HSA program*
- CHB 530 Public Health Perspectives on Addiction
 - *Online section may be available for students in the online MPH-HSA program*
- CHB 533 Corporations and Public Health
- EEH 505 Application of Biostatistics to Epidemiology I (highly recommended for students who do not have experience with SAS software)
- EEH 510 Principles of Measurement in Public Health
- EEH 521 Global Health
- EEH 531 Administrative Theory and Practice for Public Health Practitioners
 - *Online section may be available for students in the online MPH-HSA program*
- EEH 533 Understanding Culturally Responsive Health Care
 - *Online section may be available for students in the online MPH-HSA program*
- EEH 537 Public Health: Legal and Ethical Perspectives
- EEH 539 The Business of Health Care
- EEH 545 Applied Data Analysis for Population Health Research
- EEH 547 MPH Field Training Elective (additional 3 credits beyond the required 3 credits)
 - *Online section may be available for students in the online MPH-HSA program*
- EEH 611 Analysis of Health Data (4 credits)
- IE 564 Lean Enterprise and Applications
- LAW 545 Energy & Environmental Law
- LAW 819 Climate Change: Interdisciplinary Perspectives & International Law
- MGB 666 LeaderCore Foundations I (1.5 credits)
- MGB 667 LeaderCore Foundations II (1.5 credits)
- MGG 605 Social and Entrepreneurial Leadership
 - *Online section may be available for students in the online MPH-HSA program*
- MGH 642 Innovators in Health Care
- MGH 644 Healthcare Delivery Models
- MGH 645 Transformative Applications in Health Care Management
- PHM 730 Topics in Pharmacy Law
- PHM 736 Pharmacoeconomics and Pharmacoepidemiology
- RSC 604 Disability and Rehabilitation
- STA 528 Statistical Analysis II

Note: Check current class schedule for course offerings (frequency and semester) and credits per course.

CREDITS FOR HEALTH SERVICES ADMINISTRATION MPH CONCENTRATION AND ELECTIVE COURSES = 18 CREDITS

NOTE FOR ALL MPH STUDENTS: Students can petition to take courses outside their concentration area if the course is relevant to their future career plans and they obtain the permission of the course instructor and the MPH Concentration & Graduate Directors.

Recommended Two Year Course Sequence for Health Services Administration MPH Concentration by program format

(Course offerings may change and some courses are offered biennially; actual program tailored to student)

SEATED HEALTH SERVICES ADMINISTRATION (47 credits)	
Year 1: Fall Semester	Year 1: Spring Semester
EEH 530 Introduction to Health Care Organization (3) EEH 536 Health Policy in the United States (3) EEH 590 Leadership, Collaboration and Negotiation in Public Health (2) STA 527 (LEC) Statistical Analysis I (3) STA 527 (REC) Statistical Analysis I (1) <div style="text-align: right;">Total credits=12</div>	EEH 500 Introduction to Epidemiology (3)^ EEH 532 Financial Management for Pub Health Prof (3) EEH 538 Introduction to Health Economics (3) EEH 550 Environmental Health (3) CHB 507 Public Health Interprofessional Teamwork and Practice (2) <div style="text-align: right;">Total credits=14</div>
Year 2: Fall Semester	Year 2: Spring Semester
CHB 501 Study of Health Behavior (3) EEH 544 MPH Field Training (3) * Two concentration course electives (6) @ <div style="text-align: right;">Total credits=12</div>	EEH 630 MPH Culminating project (3) Two concentration course electives (6)# <div style="text-align: right;">Total credits=9</div>

^Students can take EEH 501 Principles of Epidemiology (4) in the Fall semester instead of EEH 500 Introduction to Epidemiology if their faculty advisor approves.

ONLINE HEALTH SERVICES ADMINISTRATION (47 credits)	
Year 1: Fall Semester	Year 1: Spring Semester
EEH 530 Introduction to Health Care Organization (3) EEH 536 Health Policy in the United States (3) EEH 590 Leadership, Collaboration and Negotiation in Public Health (2) STA 527 (LEC) Statistical Analysis I (3) STA 527 (REC) Statistical Analysis I (1) <div style="text-align: right;">Total credits=12</div>	EEH 500 Introduction to Epidemiology (3)^ EEH 532 Financial Management for Pub Health Prof (3) EEH 538 Introduction to Health Economics (3) CHB 501 Study of Health Behavior (3) CHB 507 Public Health Interprofessional Teamwork and Practice (2) <div style="text-align: right;">Total credits=14</div>
Year 2: Fall Semester	Year 2: Spring Semester
EEH 544 MPH Field Training (3) * EEH 550 Environmental Health (3) Two concentration course electives (6) @ <div style="text-align: right;">Total credits=12</div>	EEH 630 MPH Culminating project (3) Two concentration course electives (6)# <div style="text-align: right;">Total credits=9</div>

^Students can take EEH 501 Principles of Epidemiology (4) in the Fall semester instead of EEH 500 Introduction to Epidemiology if their faculty advisor approves.

*EEH 544, MPH Field Training hours may be completed throughout the course of the program, including summer and winter sessions. Three credits of Field Training are required but an additional 3 credits of Field Training can be completed (EEH 547 MPH Field Training Elective) and counted as a concentration area elective.

@EEH 505, Application of Biostatistics to Epidemiology I: highly recommended for students who do not have experience with SAS software.

EEH 531 Administrative Theory and Practice for Public Health Practitioners (3) is offered during the summer session. Can reduce the final semester to one elective.

ACCELERATED AND COMBINED MPH DEGREE PROGRAMS

Accelerated MPH

Please refer to the website for information on the [One-Year Accelerated MPH - Epidemiology and Environmental Health - University at Buffalo](#) in Epidemiology, Environmental Health, and Health Services Administration.

Example: One Year Course Sequence for Accelerated Epidemiology MPH

(Course offerings may change and some courses are offered biennially; actual program tailored to student)

EPIDEMIOLOGY ACCELERATED (49 credits)	
Year 1: Fall Semester	Year 1: Spring Semester
CHB 501 Study of Health Behavior (3) EEH 501 Principles of Epidemiology (4) EEH 530 Introduction to Health Care Organization (3) EEH 573 Epidemiology of Infectious Diseases (3) EEH 590 Leadership, Collaboration and Negotiation in Public Health (2) STA 527 (LEC) Statistical Analysis I (3) STA 527 (REC) Statistical Analysis 1 (1) One epidemiology concentration course elective (3)@ Total credits=22	EEH 502 Advanced Methodology (3) EEH 520 Biological Basis of Public Health (3) * EEH 550 Environmental Health (3) CHB 507 Public Health Interprofessional Teamwork and Practice (2) STA 528 Statistical Analysis II (4) Two epidemiology concentration course electives (6) Total credits=21
Summer Session	
EEH 544 MPH Field Training (3) ** EEH 630 MPH Culminating project (3) Total credits=6	

@EEH 505, **Application of Biostatistics to Epidemiology I**: highly recommended for students who do not have experience with SAS software.

*EEH 520, **Biological Basis of Public Health**: It is the assumption that most students will replace the EEH 520 requirement with another concentration elective due to prior training.

EEH 544, **MPH Field Training hours may be completed throughout the course of the program, including summer and winter sessions. Three credits of Field Training are required but an additional 3 credits of Field Training can be completed (EEH 547, MPH Field Training Elective) and counted as a concentration area elective.

Example: One Year Course Sequence for Accelerated Environmental Health MPH

(Course offerings may change and some courses are offered biennially; actual program tailored to student)

One-Year Accelerated MPH

ENVIRONMENTAL HEALTH ACCELERATED (46-47 credits)	
Year 1: Fall Semester	Year 1: Spring Semester
CHB 501 Study of Health Behavior (3) EEH 500 Introduction to Epidemiology (3) or EEH 501 Principles of Epidemiology (4) EEH 575 Epidemiological Applications to Environmental Health (3) EEH 590 Leadership, Collaboration and Negotiation in Public Health (2) PMY 626 Toxicology Principles and Practice (3) STA 527 (LEC) Statistical Analysis I (3) STA 527 (REC) Statistical Analysis I (1) Total credits= 18-19	EEH 520 Biological Basis of Public Health (3) * EEH 530 Introduction to Health Care Organization (3) EEH 550 Environmental Health (3) EEH 551 Advanced Environmental Health Sciences (3) CHB 507 PH Interprofessional Teamwork and Practice (2) Two EH concentration course electives (6) Total credits=20
Summer Session	
EEH 544 MPH Field Training (3) ** EEH 630 MPH Culminating Project (3) Total credits=6	

***EEH 520, Biological Basis of Public Health:** It is the assumption that most students will replace the EEH 520 requirement with another concentration elective due to prior training.

****EEH 544, MPH Field Training** hours may be completed throughout the course of the program, including summer and winter sessions. Three credits of Field Training are required but an additional 3 credits of Field Training can be completed (EEH 547 MPH Field Training Elective) and counted as a concentration area elective.

Example: One Year Course Sequence for Accelerated Health Services Administration MPH

(Course offerings may change and some courses are offered biennially; actual program tailored to student)

One-Year Accelerated MPH

HEALTH SERVICES ADMINISTRATION ACCELERATED (47-48 credits, EEH 501 Option)	
Year 1: Fall Semester	Year 1: Spring Semester
CHB 501 Study of Health Behavior (3) EEH 501 Principles of Epidemiology (4) or EEH 500 Introduction to Epidemiology (3) EEH 530 Introduction to Health Care Organization (3) EEH 536 Health Policy in the United States (3) EEH 590 Leadership, Collaboration and Negotiation in Public Health (2) STA 527 (LEC) Statistical Analysis I (3) STA 527 (REC) Statistical Analysis I (1) One concentration course elective (3) @ Total credits=21-22	EEH 532 Financial Management for Pub Health Prof (3) EEH 538 Introduction to Health Economics (3) EEH 550 Environmental Health (3) CHB 507 Public Health Interprofessional Teamwork and Practice (2) Three concentration course electives (9) Total credits=20
Summer Session	
EEH 544 MPH Field Training (3) ** EEH 630 MPH Culminating project (3) Total credits=6	

HEALTH SERVICES ADMINISTRATION ACCELERATED (47 credits, EEH 500 Spring Option)	
Year 1: Fall Semester	Year 1: Spring Semester
CHB 501 Study of Health Behavior (3) EEH 530 Introduction to Health Care Organization (3) EEH 536 Health Policy in the United States (3) EEH 590 Leadership, Collaboration and Negotiation in Public Health (2) STA 527 (LEC) Statistical Analysis I (3) STA 527 (REC) Statistical Analysis I (1) Two concentration course electives (6) @ Total credits=21	EEH 500 Introduction to Epidemiology (3) (online) EEH 532 Financial Management for Pub Health Prof (3) EEH 538 Introduction to Health Economics (3) EEH 550 Environmental Health (3) CHB 507 Public Health Interprofessional Teamwork and Practice (2) Two concentration course electives (6) Total credits=20
Summer Session	
EEH 544 MPH Field Training (3)** EEH 630 MPH Culminating project (3) Total credits=6	

***EEH 544, MPH Field Training (FT)** hours may be completed throughout the course of the program, including summer and winter sessions. Three credits of FT are required but an additional 3 credits of FT can be completed (EEH 547, MPH Field Training Elective) and counted as a concentration area elective.

@ EEH 505 Application of Biostatistics to Epidemiology I is a highly recommended elective for students that do not have experience with SAS software.

Combined MPH Degree Programs

It is possible for graduate students to complete a program leading to two master's degrees at the same time. The integrity of each degree must be observed by completing a minimum of 24 credit hours uniquely applied for each degree. No more than 10% of credit hours may be applied to both programs. In some programs, the curriculum may contain required courses that are common to both programs. Such required courses may be counted for both degree programs. In cases where one or more specific courses are explicitly required by both programs (i.e., not merely as acceptable electives), such course(s) are considered "shared courses" under policy definitions and will be the first course(s) counted toward the 10 percent limit. If those specific courses explicitly required by both programs exceed the normal 10 percent "shared courses" limit, the 10 percent limit is waived and all such courses may be counted toward both degrees. Each degree will be conferred separately upon completion of program requirements.

Please see the EEH website for more information regarding individual combined degree programs.

For the Health Services Administration MPH, the following combined degrees are offered:

[Public Health BS/MPH-HSA \(3+2\)](#)

[MPH-HSA/JD](#)

[MPH-HSA/MBA](#)

[MPH-HSA/MD](#)

[MPH-HSA/MSW](#)

[MPH-HSA/MUP](#)

[MPH-HSA/PharmD](#)

For the Epidemiology MPH, the following combined degrees are offered:

[Public Health BS/MPH-EPI \(3+2\)](#)

[MPH-EPI/MD](#)

[MPH-EPI/PharmD](#)

For the Environmental Health MPH, the following combined degrees are offered:

[Public Health BS/MPH-EH \(3+2\)](#)

[MPH-EH/MD](#)

[MPH-EH/MUP](#)

MPH COMPETENCIES

All MPH concentrations have the same [Foundational Competencies](#)

MPH Foundational Competencies

1. **Apply epidemiological methods to settings and situations in public health practice** (EEH500 Introduction to Epidemiology, EEH 501 Principles of Epidemiology)
2. **Select quantitative and qualitative data collection methods appropriate for a given public health context** (EEH 500 Introduction to Epidemiology or EEH 501 Principles of Epidemiology, CHB 507 Public Health Teams and Practice)
3. **Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate** (STA 503 Introduction to Applied Biostatistics I and STA 504 Introduction to Applied Biostatistics II, STA 527 Statistical Analysis I, CHB 507 Public Health Teams and Practice)
4. **Interpret results of data analysis for public health research, policy or practice** (STA 503 Introduction to Applied Biostatistics I and STA 504 Introduction to Applied Biostatistics II, or STA 527 Statistical Analysis I)
5. **Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings** (EEH 530 Introduction to Health Care Organization)
6. **Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and systemic levels** (EEH 550 Environmental Health)
7. **Assess population needs, assets and capacities that affect communities' health** (CHB 501 Study of Health Behavior)
8. **Apply awareness of cultural values and practices to the design, implementation, or critique of public health policies or programs** (CHB 501 Study of Health Behavior)
9. **Design a population-based policy, program, project or intervention** (CHB 501 Study of Health Behavior)
10. **Explain basic principles and tools of budget and resource management** (EEH 530 Introduction to Health Care Organization)
11. **Select methods to evaluate public health programs** (EEH 530 Introduction to Health Care Organization)
12. **Discuss the policy-making process, including the roles of ethics and evidence** (EEH 530 Introduction to Health Care Organization)
13. **Propose strategies to identify relevant communities and individuals and build coalitions and partnerships for influencing public health outcomes** (EEH 590 Leadership, Collaboration, and Negotiation in Public Health)
14. **Advocate for political, social or economic policies and programs that will improve health in diverse populations** (CHB 501 Study of Health Behavior)
15. **Evaluate policies for their impact on public health and health equity** (EEH 550 Environmental Health)
16. **Apply leadership and/or management principles to address a relevant issue** (EEH 590 Leadership, Collaboration, and Negotiation in Public Health).

17. **Apply negotiation and mediation skills to address organizational or community challenges** (EEH 590 Leadership, Collaboration, and Negotiation in Public Health)
18. **Select communication strategies for different audiences and sectors** (EEH 550 Environmental Health)
19. **Communicate audience-appropriate public health content, both in writing and through oral presentation to a non-academic, non-peer audience with attention to factors such as literacy and health literacy** (CHB 501 Study of Health Behavior)
20. **Describe the importance of cultural humility in communicating public health content** (CHB 507 Public Health Teams and Practice)
21. **Integrate perspectives from other sectors and/or professions to promote and advance population health** (CHB 507 Public Health Teams and Practice, EEH 590 Leadership, Collaboration, and Negotiation in Public Health)
22. **Apply a systems thinking tool to visually represent a public health issue in a format other than standard narrative** (EEH 550 Environmental Health)

Epidemiology (EPI) Concentration Competencies

- EPI CS1. Critique strategies used in an epidemiologic study to prevent and control for the influence of bias and confounding. (EEH 502 Advanced Methodology)
- EPI CS2. Evaluate strengths and limitations of an epidemiologic study, including design, data collection, and analysis issues, to make appropriate interpretations. (EEH 502 Advanced Methodology)
- EPI CS3. Examine data for the presence of confounding and effect modification. (STA 528 Statistical Analysis II)
- EPI CS4. Demonstrate how to manage confounders and effect modifiers in statistical analysis. (STA 528 Statistical Analysis II)
- EPI CS5. Apply different principles of investigation for acute outbreaks versus chronic conditions in populations. (EEH 573 Epidemiology of Infectious Diseases)

Environmental Health (EH) Concentration Competencies

EH CS1. Evaluate the impact of environmental hazards on the human body, considering pathways and routes of exposure, fate within the body, and the role of genetic (epigenetic) factors (PMY 626 Toxicology Principles and Practice)

EH CS2. Propose a study design to research the adverse health outcomes from a specific environmental risk factor in a systematic way (EEH 575 Epidemiologic Applications to Environmental Health)

EH CS3. Interpret environmental epidemiology, toxicology, or other related scientific literature for the evaluation of environmental health issues (EEH 551 Advanced Environmental Health Sciences)

EH CS4. Summarize and communicate environmental health findings in writing and by presentation, including descriptions of background, study design, results, and interpretation (EEH 551 Advanced Environmental Health Sciences, PMY 626 Toxicology Principles and Practice)

EH CS5. Apply synthesized information to critique regulatory programs and guidelines that regulate environmental or occupational health issues (PMY 626 Toxicology Principles and Practice)

Health Services Administration (HSA) Concentration Competencies

- HSA CS1. Use clinical, billing OR population data to assess the relationship between the financial, health outcomes and regulatory aspects of health care delivery (EEH 532 Financial Management for Public Health Professions, EEH 538 Introduction to Health Economics)
- HSA CS2. Critically appraise evidence to understand and evaluate policy effects. (EEH 536 Health Policy in the US, EEH 538 Introduction to Health Economics)
- HSA CS3. Identify political processes necessary for public health policy or program design, rulemaking, operating and evaluation (EEH 536 Health Policy in the US, EEH 538 Introduction to Health Economics)
- HSA CS4. Apply the principles of program development, budgeting, management, and evaluation to health care initiatives (EEH 532 Financial Management for Public Health Professions, EEH 538 Introduction to Health Economics)
- HSA CS5. Apply principles of strategic planning and marketing to public health and health care policy development (EEH 536 Health Policy in the US, EEH 538 Introduction to Health Economics)

**MASTER OF SCIENCE
EPIDEMIOLOGY
(MS)**

MASTER OF SCIENCE IN EPIDEMIOLOGY (MS)

The goal of the MS program is to provide both theoretical and experiential training that prepares students to participate in conducting epidemiologic research including working independently and as part of an interdisciplinary team.

EPIDEMIOLOGY MS DEGREE REQUIREMENTS

The MS degree requires 33 credit hours: a minimum of 27 course credit hours plus a maximum of six credit hours of thesis credit. Students must maintain a minimum overall GPA of 3.0 and a minimum grade of B (3.0) in all required courses. Note: B- (2.67) is below the minimum grade for required courses.

Required Courses for Epidemiology MS

Principles and Methods of Epidemiology Core Courses

- EEH 501 Principles of Epidemiology (4 credits)
- EEH 502 Advanced Methodology (3 credits)

Statistical Methods Core Courses

- EEH 505 Application of Biostatistics to Epidemiology I (3 credits)
- STA 527 (LEC) Statistical Analysis I (3 credits)
- STA 527 (REC) Statistical Analysis I (1 credit)
- STA 528 (LEC) Statistical Analysis II (3 credits)
- STA 528 (REC) Statistical Analysis II (1 credit)

Public Health Core Course

- CHB 550 Public Health and Population Wellbeing (3 credits)

Professional Development

- EEH 650 Research and Professional Development (0 - 1 credit)
 - MS students are required to sign up for 1 credit of EEH 650 in the fall and spring semesters of the second year of their program of study.
 - MS students are required to sign up for an additional 2 semesters at 0 credits in the program.
 - MS students are strongly encouraged to attend as much as possible after meeting these minimum registration requirements. (2 credits total)

MS Thesis Guidance

- EEH 600 Thesis Guidance (minimum of 1 credit required)

CREDITS FOR REQUIRED CORE COURSES AND THESIS FOR EPIDEMIOLOGY MS = 24 CREDITS

Epidemiology Elective Courses for MS

Choose 3 Epidemiology Elective Courses (all courses are 3 credits):

- EEH 510 Principles of Measurement in Public Health (3 credits) (annual)
- EEH 570 Cancer Epidemiology (annual)
- EEH 571 Epidemiology of Cardiovascular Disease (annual)
- EEH 572 Nutritional Epidemiology (biennial)
- EEH 573 Epidemiology of Infectious Diseases (annual)
- EEH 574 Epidemics and Outbreaks (biennial)
- EEH 575 Epidemiologic Applications to Environmental Health (annual)
- EEH 577 Perinatal Epidemiology (biennial)

Note: Check current class schedule for course offerings (frequency and semester).

CREDITS FOR REQUIRED EPIDEMIOLOGY MS ELECTIVE COURSES = 9 CREDITS

Graduate Seminar

- EEH 591 Graduate Seminar (0 Credits, each semester)
- The graduate seminar is an opportunity to hear about epidemiologic research both from the department and school as well as from outside researchers. The seminars are an important complement to coursework for building an understanding of research methods and applications.
 - This is a required course for:
 - All full-time students
 - All students who are certified full-time
 - All full and part-time students who have completed their course work and are registered for a minimum of one credit hour of Thesis Guidance.
 - All part-time students are strongly encouraged to attend the seminars, as well.

Students are required to register for and attend the weekly departmental seminars. The course will be assigned an 'S/U' grade. Students are allowed two unexcused absences per semester. An additional absence beyond the two may be granted ONLY for extenuating circumstances and requires the permission of the MS & PhD Graduate Director prior to the seminar.

- **MS/PHD students are required to register for and attend the weekly departmental seminars. The course will be assigned an 'S/U' grade.**
 - MS students who have completed 4 semesters of enrollment in the EEH 591 seminar are not required (but encouraged) to register for EEH 591. Their attendance will not be tracked.
 - PhD students who have completed 8 semesters of enrollment in the EEH 591 seminar are not required (but encouraged) to register for EEH 591. Their attendance will not be tracked.
 - PhD students actively working on their specialty exam are not required to attend seminar during that period. It is their responsibility to notify the Graduate Program Coordinator **in advance** and cc their faculty mentor and MS/PhD Graduate Director when doing so.

- **Attendance Sign in is Required:**

All students must "sign into" the seminar to be considered present.

- A paper sign-in sheet is available at each seminar when students attend in person.
- If you do not sign in, we cannot assume you were there.
- Students attending via Zoom, must log into Zoom under their own name (ex., no telephone numbers, nicknames). Students attending via Zoom are also required to have their videos on.
- If you do not show your name on Zoom and have your video on, we cannot assume you were there.

- **Two Unexcused Absences Allowed Per Semester:**

- Students are allowed two unexcused absences per semester (regardless of whether you attend in person or via Zoom) without approval from the Graduate Coordinator who oversees the attendance.
- An additional absence beyond the two may be granted ONLY for extenuating circumstances and requires the permission of the Graduate Coordinator prior to the seminar.

- **Two Zoom Attendances Allowed Per Semester:**

- Students only allowed two Zoom attendances per semester without approval from the Graduate Coordinator who oversees the attendance.
- Any additional Zoom attendances beyond these two will be considered absences from seminar.

- **Obtaining permission to attend all seminars via Zoom:**

- Students can formally request to attend all seminars via Zoom but must do so BEFORE the start of the semester. Permission to attend via Zoom for all seminars will only be approved in scenarios where it is obvious that attending in person is logistically difficult.
- Requests must be sent in email to the Graduate Coordinator.
- Approvals will not be given after the start of the semester.

CREDITS FOR REQUIRED GRADUATE SEMINAR = 0 CREDITS

Ethics Course/Responsible Conduct of Research (RCR) Training

Masters students must receive formal training in the Responsible Conduct of Research.

- All MS students are complete the CITI online Responsible Conduct of Research course with an average score of 80 percent or higher.

- Go to [Compliance Training](#) and read the section on “*Collaborative Institutional Training Initiative (CITI) Online Program in Responsible Conduct of Research (RCR)*” for detailed instructions on this requirement.

Students are required to document successful completion of their training with the Graduate Coordinator.

CREDITS FOR CITI COURSE = 0 CREDITS

NOTE FOR ALL MS STUDENTS: Students can petition to take courses outside the listed electives if the course is relevant to their future career plans and they obtain permission of the course instructor and the MS & PhD Graduate Director.

Recommended MS Course Sequence

(Course offerings may change and some courses are offered biennially; actual program tailored to student)

MS IN EPIDEMIOLOGY (33 credits)	
Year 1: Fall Semester	Year 1: Spring Semester
CHB 550 Public Health and Population Wellbeing (3) EEH 501 Principles of Epidemiology (4) EEH 505 Application of Biostatistics to Epidemiology I (3) STA 527 (LEC) Statistical Analysis I (3) STA 527 (REC) Statistical Analysis (1) EEH 650 Research and Professional Development (0) EEH 591 Graduate Seminar (0) <div style="text-align: right;">Total credits=14</div>	EEH 502 Advanced Methodology (3) STA 528 (LEC) Statistical Analysis II (3) STA 528 (REC) Statistical Analysis II (1) Two epidemiology elective courses (6) CITI Training (0) EEH 650 Research and Professional Development (0) EEH 591 Graduate Seminar (0) <div style="text-align: right;">Total credits=13</div>
Year 2: Fall Semester	Year 2: Spring Semester
One epidemiology elective course (3) EEH 650 Research and Professional Development (1) EEH 591 Graduate Seminar (0) Thesis proposal defense <div style="text-align: right;">Total credits=4</div>	EEH 600 Thesis Guidance (1) EEH 650 Research and Professional Development (1) EEH 591 Graduate Seminar (0) Thesis defense <div style="text-align: right;">Total credits=2</div>

COMBINED PUBLIC HEALTH BS/EPIDEMIOLOGY MS PROGRAM

This combined program leads to a bachelor's degree and a master's degree in epidemiology. Please see the EEH website for more information. [Public Health BS/Epidemiology MS](#)

ADDITIONAL REQUIREMENTS RELEVANT TO THE MS PROGRAM

On-Campus Presence & Engagement Expectations

Unless actively engaged in field research directly related to their thesis, dissertation, or assistantship responsibilities, students are expected to maintain an on-campus presence. Regular in-person engagement with faculty and participation in the academic community are essential for maximizing learning and professional development opportunities.

Thesis

Overview

The thesis provides the opportunity to do independent epidemiologic research that demonstrates ability to identify a problem, develop a research design, and analyze, interpret and discuss data with the purpose of developing or testing theory. The MS thesis should be approximately equivalent to one publishable manuscript. Students are urged to examine copies of theses on file in the Department's graduate office or online at UB libraries.

Thesis Committee

When all formal coursework has been completed, and with the advice of their advisor, the student selects a committee consisting of a major professor who is a member or associate member of the UB Graduate Faculty and whose primary geographic appointment is in the Department of EEH or Roswell Park Comprehensive Cancer Center (RPCCC) Department of Cancer Prevention and Control and one additional committee member who is also a member or associate member of the UB Graduate Faculty. More committee members can be added at the major advisor and student's discretion. A list of eligible members of the Graduate Faculty is available at the Graduate School website. The Graduate Program Coordinator can provide information regarding eligible faculty.

NOTE: geographic is defined as the department or unit of primary paying appointment where full-time professional services and activities are conducted.

All members of the thesis committee should be involved throughout the design and conduct of the original research project. The student is encouraged to meet frequently with their committee. Faculty who leave UB may remain on a student's committee for up to one year as a committee member, but not as major professor. If the major professor is no longer a full-time EEH or RPCCC Cancer Prevention and Control faculty member, the major professor must be replaced; however, the faculty member who left may remain on the committee as a committee member for up to one year. Students may petition the MS & PhD Graduate Director to have the faculty member remain on the committee in exceptional circumstances.

BEFORE a student begins work on their thesis, they must first have their committee approved by the MS & PhD Graduate Director using the [Thesis Committee Approval Form](#).

A description of the study hypothesis is also required.

Thesis Committee Checklist:

- ✓ Submit the ***Thesis Committee Approval Form*** to the MS & PhD Graduate Director Studies BEORE beginning work on the thesis

Thesis Proposal Defense

With guidance from the major professor and all committee members, the student develops a written study plan (proposal). This plan includes: a definition of the problem the student intends to address, a review of the relevant literature (10 to 15 pages double spaced), statement of rationale and objectives, study questions and/or hypotheses

(specific aim(s)), and a description of the intended design and methods, in regard to any sampling, data collection, analytic methods with mock tables, power calculations, data analysis, and study strengths and limitations (total length 15 to 25 pages double spaced not including references).

Before a student can proceed with their thesis, they must defend their proposal at a formal defense with the major professor and all committee members.

Students should allow a minimum of two weeks for their major professor/committee members to review all drafts and the final proposal. The major professor/committee members may set longer time limits if needed. Students should be respectful of faculty's time/workload. Approval of the proposal by the full committee is required to schedule the proposal defense.

The proposal, summarized on the [Abstract of Proposed Research Form](#)) must be approved by the full committee.

The MS proposal defense consists of a 20 to 25-minute presentation followed by questions from the committee. The presentation should include the background and rationale, study questions and hypotheses, and proposed study design and methods. The latter section should include information regarding data collection, analytic methods with mock tables, power calculations and study strengths and limitations. The full defense usually lasts about 1 hour.

Proposal Defense Checklist:

- ✓ With approval from the full committee, schedule the proposal defense
- ✓ Schedule a time that will allow for the MS/PhD program director to attend
- ✓ Reserve a room for the defense through the Graduate Program Coordinator
- ✓ Distribute copies of the approved final copy of the proposal to the committee
- ✓ Formally defend the proposal with the major professor, Graduate Director, and all committee members present

Abstract of Proposed Research Form

All students must submit an ***Abstract of Proposed Research Form***. Be sure to follow the example format. The abstract form is signed by the committee at the proposal defense and submitted (see section on Proposal Defense). The [Abstract of Proposed Research Form](#) remains in the department..

Certification of Full-Time Status Form

A student is required to enroll for 12 credit hours (or 9 credit hours if appointed as a graduate, teaching, or research assistant) to be considered full-time for tuition assistantship/scholarship, loan deferral, or immigrant status. To be certified full-time a student must be registered for a minimum of one credit hour and submit a ***Certification of Full-Time Status Form***. (See section on Certification of Full-Time Status). For international students, it is your responsibility to communicate with the [International Student Services Office \(ISS\)](#) to ensure that you are in compliance with all requirements for your student visa. Be sure to refer to the checklist on the following page.

Thesis Format and Thesis Defense

All MS students must complete and formally defend a thesis approved by the student's major professor and all committee members. The major professor, all committee members, and the MS & PhD Graduate Director must be present for the final defense.

**Students and primary faculty mentors are responsible for checking to ensure the Graduate Director is available for the defense PRIOR to setting the defense date.

Students should allow a minimum of two weeks for their major professor/committee members to review all drafts and final copy of the thesis. The major professor/committee members may set longer time limits if needed. Students should be respectful of faculty's time/workload. **Approval of the thesis by the full committee is required in order to schedule the defense.**

In addition, a minimum of two weeks (14 days) notice must be allowed for the public posting of the defense. Prior to the posting of the defense, the final unbound copy of the thesis (in hard copy or pdf), approved by the student's committee must be on file in the department for review. NOTE: the thesis is bound AFTER the student has successfully defended their thesis.

The student's thesis must contain the following:

1. Title page
2. Acknowledgements, including funding for the project and acknowledgement of the major thesis advisor and committee members
3. Table of Contents
4. List of Tables
5. List of Figures
6. List of Abbreviations
7. Abstract (~ 2 pages double spaced and includes objective(s), methods, results, conclusion).
8. Background: This should include a review of the relevant literature and describe the problem the student intends to address (10 to 15 pages double spaced)
9. A statement of the study rationale and study objective(s), specific aim(s), study question(s), and/or hypothesis(es) (~1 page double spaced)
10. A description of the study design and methods (~5 pages double spaced)
11. Study results (~5 pages double spaced)
12. A discussion including study strengths and limitations (~5 pages double spaced)
13. Associated table(s) and figure(s) (no page limit)
14. References (no page limit)

The total length of the thesis is estimated to be around 35 to 40 pages double spaced not including references, tables, and figures.

The MS thesis defense consists of a 25 to 30-minute presentation followed about one hour of questions. The presentation summarizes the thesis work including background, rationale for the work, study questions and/or hypotheses, methods, results, and conclusions and strengths and limitations. The presentation is followed by questions from the committee and then from anyone else in attendance. If the committee prefers, they can allow the audience to ask questions prior to the committee. After the question period, the student is dismissed and the committee comes to a consensus as to whether the student passed and if anything, additional, with respect to the thesis, needs to be addressed prior to completion of the degree. The student is admitted back to the room and the committee decision (with a possible request for items to be addressed) is communicated to the student.

Thesis Defense Checklist:

- ✓ When approval from the full committee is received, schedule an oral defense of the thesis:
 - Confirm date with the committee and MS & PhD Graduate Director
 - Confirm availability of room
- ✓ Provide the Department with an approved final copy of the thesis. NOTE: the thesis should be bound AFTER the defense in the event the Committee requires minor changes as a result of the defense.
- ✓ Notify the Graduate Program Coordinator of the defense date and title of the thesis.
- ✓ A room will be reserved and a public notice will be posted for the defense. A minimum of two weeks' notice (14 days) must be allowed for posting of the defense.

M-Form

The [M-Form](#) (required for all Master's degrees with a thesis and all PhD degrees) must be completed electronically after a successful thesis defense. Students should complete all sections of the form, leaving signature lines blank—except for Section 3, where their own signature is required. The form should then be sent to the major advisor and all committee members for signatures, confirming the successful defense. If thesis revisions are needed, the major advisor will hold the form and complete Section 4 only after all committee members have reviewed and approved the revisions. Once all signatures are obtained, the student must forward the form to the MS/PhD Graduate Director for

final review and signature. The Graduate Director will then submit the completed M-Form to the Graduate Program Coordinator, who will send it to the Graduate School and copy the student. Students are responsible for ensuring the form is received by the Graduate School by the [official deadline](#) posted on their website.

Note: In addition to submitting the M-Form, you must also [submit your final thesis electronically to the Graduate School](#) by the same deadline. The title of your thesis must exactly match the title listed on your M-Form.

M-Form Checklist:

- ✓ Complete [M-Form](#) **electronically**, including committee's digital signatures, then email to MS & PhD Graduate Director for their final review and signature
- ✓ Submit electronic thesis to Graduate School (see below)
- ✓ Fill out the online [Graduation Information Form](#)
- ✓ Submit bound copy of the thesis to the Department

Graduation Information Form

The [EEH Graduation Information Form](#) should be submitted before program completion.

Submission of the Thesis

The Graduate School requires electronic submission of the thesis. Guidelines for submission can be found on the website. <https://grad.buffalo.edu/succeed/graduate/electronic-submission.html>. Electronic submission can be made at: <https://www.etsadmin.com/main/home?siteId=62>

The Department requires one bound copy of the thesis. At least two weeks should be allowed for binding the final copy. Copies should be bound in boards covered with black imitation leather, with the title and author's name embossed, not printed, on the front in gold and the author's last name, degree, and year of conferral of the degree on the spine (also in gold). Students should inquire whether their major professor and each committee member desires a bound copy prior to ordering one. Some faculty members may not wish to receive a bound copy. Ordering of bound copies for faculty members are the responsibility of the student. At minimum, the major advisors and committee members should receive a pdf of the final thesis.

Guidelines for the Thesis Document

Several style manuals are available that will answer a host of questions regarding the technical aspects of preparing the thesis or dissertation (see below).

[American Psychological Association](#).

[Modern Language Association](#)

[Chicago Manual of Style Online](#).

Copies of the completed thesis are available for reference in the Department or online at the Health Sciences Library.

Research and Professional Conduct

The diversity of faculty interest areas allows for many opportunities for research. All MS students are expected to be actively involved in research throughout their educational experience. The University and department hold standards for professional conduct (see Warning on Plagiarism).

Abstract Submission to Professional Meetings

Students intending to submit abstracts to professional meetings must obtain written approval from their advisor PRIOR to submission. All abstracts must include a full citation of authorship.

Time Limit to Complete the Degree

The time limit for completing the MS degree is FOUR years from the date of first registration in the degree program, not including official leaves of absence, regardless of full- or part-time status. It is expected that students will take four years only in exceptional cases. It is expected that students will complete their degree within two years.

Extension of Time to Complete the Degree

Students unable to complete the MS program within the time limit must petition the Graduate School for an extension of time to complete the degree provided there exists adequate reason to justify such a request. The Graduate School will not approve an extension for 'personal reasons;' the petition must be specific and present strong justification for

the request. Students must provide a detailed description of work completed to date, a detailed month-to-month timeline for completion of the thesis/degree, and a written endorsement from the advisor/major professor. Requests for extensions should be made at least two weeks prior to the start of the semester. The ***Extension of Time Limit for Degree Completion*** is available at the following link: <https://www.buffalo.edu/content/dam/grad/forms/pet-extension.pdf>

Extension of Time Checklist:

- ✓ Complete ***Petition for an Extension of the Time Limit to Complete a Graduate Degree Program***
- ✓ Be sure to sign form
- ✓ Obtain signature of advisor/major professor
- ✓ Attach written statement indicating:
 - Cause of the delay
 - Detailed description of work completed thus far
 - Detailed month-to-month plan or work to be completed
- ✓ Attach written endorsement from advisor/major professor
- ✓ Forward to the Graduate Program Coordinator (do not send directly to the Graduate School)

Checklist for MS Degree Conferral

Graduation Checklist:

- ✓ [Apply for graduation in My Student HUB](#) by the deadline listed below in order to become a candidate for degree conferral.

Graduation Term	Application Deadline	Conferral Date
Fall	Oct. 15	Feb. 1
Spring	Feb. 22	June 1
Summer	July 15	Aug. 31

- ✓ Defend your thesis
- ✓ Complete [M-Form](#) **electronically**, including committee's digital signatures, as well as the MS & PhD Graduate Director's.
- ✓ Ensure fully executed M-form is received by the Graduate School by the [official deadline](#) posted on their website.
- ✓ Upload your thesis to the Graduate School by the [appropriate deadline](#) based on your degree conferral date
- ✓ Fill out online [Graduation Information Form](#)

It is the student's responsibility to [review their academic record in HUB using the AAR](#). You will see any uncompleted requirements and incomplete grades. These must be taken care of before applying for graduation in HUB. Please check with the Graduate Department Coordinator to review the AAR.

MS COMPETENCIES

Found at [MS Competencies](#)

MS C1 Study Designs

Critically evaluate the strengths and weaknesses of the major epidemiologic study designs.
(EEH 502 Advanced Methodology)

MS C2 Outcome Measures

Apply prevalence and incidence of disease measures in public health.
(EEH 501 Principles of Epidemiology)

MS C3 Evaluation of Epidemiologic Data

Critically evaluate the results of epidemiologic studies for appropriate study design implementation and for the influence of chance, bias, confounding and effect modification in order to make appropriate inferences.
(EEH 502 Advanced Methodology)

MS C4 Application of Biostatistics to Epidemiology

Perform common and appropriate statistical methodologies for answering epidemiologic research questions
(STA 528 Statistical Analysis II)

MS C5 Ethical Conduct of Human Subjects Research

Apply the basic ethical and legal issues pertaining to the collection, use and dissemination of data; such as human subjects' protections, informed consent, and confidentiality.
(EEH 650 Research and Professional Development)

MS C6 Culminating Thesis

Develop and execute a hypothesis-driven epidemiologic study, including a literature review and original data analysis culminating in a defensible written document (equivalent to one publishable manuscript) and oral presentation, both of which demonstrate effective communication skills.
(EEH 600 Thesis Guidance)

**MASTER OF ENVIRONMENTAL
HEALTH SCIENCES
(MS)**

MASTER OF SCIENCE IN Environmental Health Sciences (MS)

The goal of this program is to provide both theoretical and experiential training that prepares students to play an active role in addressing environmental health issues.

ENVIRONMENTAL HEALTH SCIENCES MS DEGREE REQUIREMENTS

The MS degree requires 33 credit hours: a minimum of 27 course credit hours plus a maximum of six credit hours of thesis credit. Students must maintain a minimum overall GPA of 3.0 and a minimum grade of B (3.0) in all required courses. Note: B- (2.67) is below the minimum grade for required courses.

Required Courses for Environmental Health Sciences MS

Principles and Methods of Environmental Health Courses

- EEH 550 Environmental Health (3 credits)
- EEH 555 Exposure Assessment in Environmental Health Research I (3 credits)
- PMY 626 Toxicology Principles and Practice (3 credits)

Statistical Methods Core Courses

- STA 527 (LEC) Statistical Analysis I (4 credits) (must be completed in the first year)

Public Health Course

- CHB 550 Public Health and Population Wellbeing (3 credits)
- EEH 501 Principles of Epidemiology (4) (must be completed in the first semester)
- EEH 591 Graduate Seminar (0) (completed every semester)

Professional Development

- EEH 650 Research and Professional Development (0 - 1 credit)
 - MS students are required to sign up for 1 credit of EEH 650 in the fall and spring semesters of the second year of their program of study.
 - MS students are required to sign up for an additional 2 semesters 0 credits in the program.
 - MS students are strongly encouraged to attend as much as possible after meeting these minimum registration requirements. (2 credits total)

Ethics Course/Responsible Conduct of Research (RCR) Training

- RSC 602 Research Ethics for the Health Sciences (3)
- CITI online Responsible Conduct of Research (RCR) Training (0)

Thesis Research preparation

- EEH 600 Thesis Guidance (1 credit) (completed in final semester of program)
- EEH 597 Independent Study (4) (At least one research credit in each of four semesters)

CREDITS FOR REQUIRED CORE COURSES AND THESIS FOR ENVIRONMENTAL HEALTH SCIENCES MS = 30 CREDITS

Elective Courses

Choose one Epidemiology and Environmental Health Elective Courses (all courses are 3 credits):

- EEH 502 Advanced Methodology (annual)
- EEH 510 Principles of Measurement in Public Health (annual)
- EEH 521 Global Health (annual)
- EEH 551 Advanced Environmental Health Science(annual)
- EEH 570 Cancer Epidemiology (annual))
- EEH 572 Nutritional Epidemiology (annual)
- EEH 573 Epidemiology of Infectious Diseases (annual)
- EEH 575 Epidemiologic Applications to Environmental Health (annual)

Note: Check current class schedule for course offerings (frequency and semester).

University-Wide

- CHE 470 Analytical Chemistry of Pollutants
- CIE 563 Air pollution (3)
- CIE 569 Brownfields Restoration (3)
- GEO 506 Geographic Information Systems (3)
- MT 600 Industrial Hygiene (4)
- URP 604 Food Systems Planning (3)

You can petition to take courses outside the listed electives, or at the PhD level, if the course is relevant to your career plans, and you obtain permission from the course instructor and the MS/PhD graduate director.

REQUIRED ENVIRONMENTAL HEALTH MS ELECTIVE COURSES = 3 CREDITS

Graduate Seminar

Graduate Seminar

- EEH 591 Graduate Seminar (0 Credits, each semester)
- The graduate seminar is an opportunity to hear about epidemiologic research both from the department and school as well as from outside researchers. The seminars are an important complement to coursework for building an understanding of research methods and applications.
 - This is a required course for:
 - All full-time students
 - All students who are certified full-time
 - All full and part-time students who have completed their course work and are registered for a minimum of one credit hour of Thesis Guidance.
 - All part-time students are strongly encouraged to attend the seminars, as well.

Students are required to register for and attend the weekly departmental seminars. The course will be assigned an 'S/U' grade. Students are allowed two unexcused absences per semester. An additional absence beyond the two may be granted ONLY for extenuating circumstances and requires the permission of the MS & PhD Graduate Director prior to the seminar.

- **MS/PHD students are required to register for and attend the weekly departmental seminars. The course will be assigned an 'S/U' grade.**
 - MS students who have completed 4 semesters of enrollment in the EEH 591 seminar are not required (but encouraged) to register for EEH 591. Their attendance will not be tracked.
 - PhD students who have completed 8 semesters of enrollment in the EEH 591 seminar are not required (but encouraged) to register for EEH 591. Their attendance will not be tracked.
 - PhD students actively working on their specialty exam are not required to attend seminar during that period. It is their responsibility to notify the Graduate Program Coordinator **in advance** and cc their faculty mentor and MS/PhD Graduate Director when doing so.

- **Attendance Sign in is Required:**

All students must "sign into" the seminar to be considered present.

- A paper sign-in sheet is available at each seminar when students attend in person.
- If you do not sign in, we cannot assume you were there.
- Students attending via Zoom, must log into Zoom under their own name (ex., no telephone numbers, nicknames). Students attending via Zoom are also required to have their videos on.
- If you do not show your name on Zoom and have your video on, we cannot assume you were there.

- **Two Unexcused Absences Allowed Per Semester:**

- Students are allowed two unexcused absences per semester (regardless of whether you attend in person or via Zoom) without approval from the Graduate Coordinator who oversees the attendance.
- An additional absence beyond the two may be granted ONLY for extenuating circumstances and requires the permission of the Graduate Coordinator prior to the seminar.

- **Two Zoom Attendances Allowed Per Semester:**

- Students only allowed two Zoom attendances per semester without approval from the Graduate Coordinator who oversees the attendance.
- Any additional Zoom attendances beyond these two will be considered absences from seminar.

- **Obtaining permission to attend all seminars via Zoom:**

- Students can formally request to attend all seminars via Zoom but must do so BEFORE the start of the semester. Permission to attend via Zoom for all seminars will only be approved in scenarios where it is obvious that attending in person is logistically difficult.
- Requests must be sent in email to the Graduate Coordinator.
- Approvals will not be given after the start of the semester.

CREDITS FOR REQUIRED GRADUATE SEMINAR = 0 CREDITS

- All MS students are complete the CITI online Responsible Conduct of Research course with an average score of 80 percent or higher.

- Go to [CITI Program](#) and read the section on “*Collaborative Institutional Training Initiative (CITI) Online Program in Responsible Conduct of Research (RCR)*” for detailed instructions on this requirement.

Students are required to document successful completion of their training with the Graduate Coordinator.

CREDITS FOR CITI COURSE = 0 CREDITS

NOTE FOR ALL MS STUDENTS: Students can petition to take courses outside the listed electives if the course is relevant to their future career plans and they obtain permission of the course instructor and the MS & PhD Graduate Director.

Recommended MS Environmental Health Sciences Course Sequence

(Course offerings may change and some courses are offered biennially; actual program tailored to student)

MS IN ENVIRONMENTAL HEALTH SCIENCES (33 credits)	
Year 1: Fall Semester	Year 1: Spring Semester
CHB 550 Public Health and Population Wellbeing (3) EEH 501 Principles of Epidemiology (4) PMY 626 Toxicology Principles and Practices (3) STA 527 (LEC) Statistical Analysis I (3) STA 527 (REC) Statistical Analysis (1) EEH 650 Research and Professional Development (0) EEH 591 Graduate Seminar (0) <div>Total credits=14</div>	EEH 550 Environmental Health (3) One epidemiology elective courses (3) EEH 597 Independent Study (2) CITI Training (0) EEH 650 Research and Professional Development (0) EEH 591 Graduate Seminar (0) <div>Total credits=8</div>
Year 2: Fall Semester	Year 2: Spring Semester
RSC 602 Research Ethics for the Health Sciences (3) EEH 555 Exposure Assessment in Environmental Health Research (3) EEH 597 Independent Study (2) EEH 650 Research and Professional Development (1) EEH 591 Graduate Seminar (0) Thesis proposal defense <div>Total credits=9</div>	EEH 600 Thesis Guidance (1) EEH 650 Research and Professional Development (1) EEH 591 Graduate Seminar (0) Thesis defense <div>Total credits=2</div>

ADDITIONAL REQUIREMENTS RELEVANT TO THE MS ENV PROGRAM

On-Campus Presence & Engagement Expectations

Unless actively engaged in field research directly related to their thesis, dissertation, or assistantship responsibilities, students are expected to maintain an on-campus presence. Regular in-person engagement with faculty and participation in the academic community are essential for maximizing learning and professional development opportunities.

Thesis

Overview

The thesis provides the opportunity to do independent epidemiologic research that demonstrates ability to identify a problem, develop a research design, and analyze, interpret and discuss data with the purpose of developing or testing theory. The MS thesis should be approximately equivalent to one publishable manuscript. Students are urged to examine copies of theses on file in the Department's graduate office or online at UB libraries.

Thesis Committee

When all formal coursework has been completed, and with the advice of their advisor, the student selects a committee consisting of a major professor who is a member or associate member of the UB Graduate Faculty and whose primary geographic appointment is in the Department of EEH or Roswell Park Comprehensive Cancer Center (RPCCC) Department of Cancer Prevention and Control and one additional committee member who is also a member or associate member of the UB Graduate Faculty. More committee members can be added at the major advisor and student's discretion. A list of eligible members of the Graduate Faculty is available at the Graduate School website. The Graduate Program Coordinator can provide information regarding eligible faculty.

NOTE: geographic is defined as the department or unit of primary paying appointment where full-time professional services and activities are conducted.

All members of the thesis committee should be involved throughout the design and conduct of the original research project. The student is encouraged to meet frequently with their committee. Faculty who leave UB may remain on a student's committee for up to one year as a committee member, but not as major professor. If the major professor is no longer a full-time EEH or RPCCC Cancer Prevention and Control faculty member, the major professor must be replaced; however, the faculty member who left may remain on the committee as a committee member for up to one year. Students may petition the MS & PhD Graduate Director to have the faculty member remain on the committee in exceptional circumstances.

BEFORE a student begins work on their thesis, they must first have their committee approved by the MS & PhD Graduate Director using the [Thesis Committee Approval Form](#). This form can be found at the link below: A description of the study hypothesis is also required.

Thesis Committee Checklist:

- ✓ Submit the **Thesis Committee Approval Form** to the MS & PhD Graduate Director Studies BEORE beginning work on the thesis

Thesis Proposal Defense

With guidance from the major professor and all committee members, the student develops a written study plan (proposal). This plan includes: a definition of the problem the student intends to address, a review of the relevant literature (10 to 15 pages double spaced), statement of rationale and objectives, study questions and/or hypotheses (specific aim(s)), and a description of the intended design and methods, in regard to any sampling, data collection, analytic methods with mock tables, power calculations, data analysis, and study strengths and limitations (total length 15 to 25 pages double spaced not including references).

Before a student can proceed with their thesis, they must defend their proposal at a formal defense with the major professor and all committee members.

Students should allow a minimum of two weeks for their major professor/committee members to review all drafts and the final proposal. The major professor/committee members may set longer time limits if needed. Students should be respectful of faculty's time/workload. Approval of the proposal by the full committee is required to schedule the proposal defense.

The proposal, summarized on the [Abstract of Proposed Research](#) must be approved by the full committee.

The MS proposal defense consists of a 20 to 25-minute presentation followed by questions from the committee. The presentation should include the background and rationale, study questions and hypotheses, and proposed study design and methods. The latter section should include information regarding data collection, analytic methods with mock tables, power calculations and study strengths and limitations. The full defense usually lasts about 1 hour.

Proposal Defense Checklist:

- ✓ With approval from the full committee, schedule the proposal defense
- ✓ Schedule a time that will allow for the MS/PhD program director to attend
- ✓ Reserve a room for the defense through the Graduate Program Coordinator
- ✓ Distribute copies of the approved final copy of the proposal to the committee
- ✓ Formally defend the proposal with the major professor, Graduate Director, and all committee members present

Abstract of Proposed Research Form

All students must submit an [Abstract of Proposed Research](#) . Be sure to follow the example format. The abstract form is signed by the committee at the proposal defense and submitted (see section on Proposal Defense). The Abstract of Proposed Research Form remains in the department. Be sure to follow the example format.

Certification of Full-Time Status Form

A student is required to enroll for 12 credit hours (or 9 credit hours if appointed as a graduate, teaching, or research assistant) to be considered full-time for tuition assistantship/scholarship, loan deferral, or immigrant status. To be certified full-time a student must be registered for a minimum of one credit hour and submit a ***Certification of Full-Time Status Form***. (See section on Certification of Full-Time Status). For international students, it is your responsibility to communicate with the [International Student Services Office \(ISS\)](#) to ensure that you are in compliance with all requirements for your student visa. Be sure to refer to the checklist on the following page.

Thesis Format and Thesis Defense

All MS students must complete and formally defend a thesis approved by the student's major professor and all committee members. The major professor, all committee members, and the MS & PhD Graduate Director must be present for the final defense.

****Students and primary faculty mentors are responsible for checking to ensure the Graduate Director is available for the defense PRIOR to setting the defense date.**

Students should allow a minimum of two weeks for their major professor/committee members to review all drafts and final copy of the thesis. The major professor/committee members may set longer time limits if needed. Students should be respectful of faculty's time/workload. **Approval of the thesis by the full committee is required in order to schedule the defense.**

In addition, a minimum of two weeks (14 days) notice must be allowed for the public posting of the defense. Prior to the posting of the defense, the final unbound copy of the thesis (in hard copy or pdf), approved by the student's committee must be on file in the department for review. NOTE: the thesis is bound AFTER the student has successfully defended their thesis.

The student's thesis must contain the following:

1. Title page
2. Acknowledgements, including funding for the project and acknowledgement of the major thesis advisor and committee members
3. Table of Contents
4. List of Tables
5. List of Figures
6. List of Abbreviations
7. Abstract (~ 2 pages double spaced and includes objective(s), methods, results, conclusion).
8. Background: This should include a review of the relevant literature and describe the problem the student intends to address (10 to 15 pages double spaced)
9. A statement of the study rationale and study objective(s), specific aim(s), study question(s), and/or hypothesis(es) (~1 page double spaced)
10. A description of the study design and methods (~5 pages double spaced)
11. Study results (~5 pages double spaced)
12. A discussion including study strengths and limitations (~5 pages double spaced)
13. Associated table(s) and figure(s) (no page limit)
14. References (no page limit)

The total length of the thesis is estimated to be around 35 to 40 pages double spaced not including references, tables, and figures.

The MS thesis defense consists of a 25 to 30-minute presentation followed about one hour of questions. The presentation summarizes the thesis work including background, rationale for the work, study questions and/or hypotheses, methods, results, and conclusions and strengths and limitations. The presentation is followed by questions from the committee and then from anyone else in attendance. If the committee prefers, they can allow the audience to ask questions prior to the committee. After the question period, the student is dismissed and the committee comes to a consensus as to whether or not the student passed and if anything, additional, with respect to the thesis, needs to be addressed prior to completion of the degree. The student is admitted back to the room and the committee decision (with a possible request for items to be addressed) is communicated to the student.

Thesis Defense Checklist:

- ✓ When approval from the full committee is received, schedule an oral defense of the thesis:
 - Confirm date with the committee and MS & PhD Graduate Director
 - Confirm availability of room
- ✓ Provide the Department with an approved final copy of the thesis. NOTE: the thesis should be bound AFTER the defense in the event the Committee requires minor changes as a result of the defense.
- ✓ Notify the Graduate Program Coordinator of the defense date and title of the thesis.
- ✓ A room will be reserved and a public notice will be posted for the defense. A minimum of two weeks' notice (14 days) must be allowed for posting of the defense.

M-Form

The [M-Form](#) (required for all Master's degrees with a thesis and all PhD degrees) must be completed electronically after a successful thesis defense. Students should complete all sections of the form, leaving signature lines blank—except for Section 3, where their own signature is required. The form should then be sent to the major advisor and all committee members for signatures, confirming the successful defense. If thesis revisions are needed, the major advisor will hold the form and complete Section 4 only after all committee members have reviewed and approved the revisions. Once all signatures are obtained, the student must forward the form to the MS/PhD Graduate Director for

final review and signature. The Graduate Director will then submit the completed M-Form to the Graduate Program Coordinator, who will send it to the Graduate School and copy the student. Students are responsible for ensuring the form is received by the Graduate School by the [official deadline](#) posted on their website.

Note: In addition to submitting the M-Form, you must also [submit your final thesis electronically to the Graduate School](#) by the same deadline. The title of your thesis must exactly match the title listed on your M-Form.

M-Form Checklist:

- ✓ Complete [M-Form electronically](#), including committee's digital signatures, then email to MS & PhD Graduate Director for their final review and signature
- ✓ Submit electronic thesis to Graduate School (see below)
- ✓ Fill out the online [Graduation Information Form](#)
Submit bound copy of the thesis to the Department

Graduation Information Form

The [Graduation Information Form](#) should be submitted before program completion.

Submission of the Thesis

The Graduate School requires [electronic submission](#) of the thesis.

The Department requires one bound copy of the thesis. At least two weeks should be allowed for binding the final copy. Copies should be bound in boards covered with black imitation leather, with the title and author's name embossed, not printed, on the front in gold and the author's last name, degree, and year of conferral of the degree on the spine (also in gold). Students should inquire whether their major professor and each committee member desires a bound copy prior to ordering one. Some faculty members may not wish to receive a bound copy. Ordering bound copies for faculty members is the responsibility of the student. At minimum, the major advisors and committee members should receive a PDF of the final thesis.

Guidelines for the Thesis Document

Several style manuals are available that will answer a host of questions regarding the technical aspects of preparing the thesis or dissertation (see below).

[American Psychological Association.](#)

[Modern Language Association](#)

[Chicago Manual Style](#)

Copies of the completed thesis are available for reference in the Department or online at the Health Sciences Library.

Research and Professional Conduct

The diversity of faculty interest areas allows for many opportunities for research. All MS students are expected to be actively involved in research throughout their educational experience. The University and department hold standards for professional conduct (see Warning on Plagiarism).

Abstract Submission to Professional Meetings

Students intending to submit abstracts to professional meetings must obtain written approval from their advisor PRIOR to submission. All abstracts must include a full citation of authorship.

Time Limit to Complete the Degree

The time limit for completing the MS degree is FOUR years from the date of first registration in the degree program, not including official leaves of absence, regardless of full- or part-time status. It is expected that students will take four years only in exceptional cases. It is expected that students will complete their degree within two years.

Extension of Time to Complete the Degree

Students unable to complete the MS program within the time limit must petition the Graduate School for an [Extension of the Time Limit to Complete a Graduate Degree](#) to complete the degree provided there exists adequate reason to justify such a request. The Graduate School will not approve an extension for 'personal reasons;' the petition must be specific and present strong justification for the request. Students must provide a detailed description of work completed to date, a detailed month-to-month timeline for completion of the thesis/degree, and a written

endorsement from the advisor/major professor. Requests for extensions should be made at least two weeks prior to the start of the semester.

Extension of Time Checklist:

Complete [Extension of the Time Limit to Complete a Graduate Degree](#)

- ✓ Be sure to sign form
- ✓ Obtain signature of advisor/major professor
- ✓ Attach written statement indicating:
 - Cause of the delay
 - Detailed description of work completed thus far
 - Detailed month-to-month plan or work to be completed
- ✓ Attach written endorsement from advisor/major professor
- ✓ Forward to the Graduate Program Coordinator (do not send directly to the Graduate School)

Checklist for MS Degree Conferral

Graduation Checklist:

- ✓ [Apply for graduation in My Student HUB](#) by the deadline listed below in order to become a candidate for degree conferral.

Graduation Term	Application Deadline	Conferral Date
Fall	Oct. 15	Feb. 1
Spring	Feb. 22	June 1
Summer	July 15	Aug. 31

- ✓ Defend your thesis
- ✓ Complete [M-Form](#) **electronically**, including committee's digital signatures, as well as the MS & PhD Graduate Director's.
- ✓ Ensure fully executed M-form is received by the Graduate School by the [official deadline](#) posted on their website.
- ✓ Upload your thesis to the Graduate School by the [appropriate deadline](#) based on your degree conferral date
- ✓ Fill out online [Graduation Information Form](#)

It is the student's responsibility to [review their academic record in HUB using the AAR](#). You will see any uncompleted requirements and incomplete grades. These must be taken care of before applying for graduation in HUB. Please check with the Graduate Department Coordinator to review the AAR.

MS ENVIRONMENTAL HEALTH SCIENCES COMPETENCIES

Found at [link](#)

- C1. Apply an environmental or occupational health framework to address environmental public health problems experienced in the community or work environment.
(EEH 501 Principles of Epidemiology, EEH 550 Environmental Health, EEH 555 Exposure Assessment in Environmental Health Research, EEH 600 Thesis Guidance, PMY626 Toxicology Principles and Practice)
- C2. Evaluate studies for their implications to environmental health issues.
(EEH 550 Environmental Health, EEH 597 Independent Study, PMY 626 Toxicology Principles and Practice, EEH 600 Thesis Guidance)
- C3. Apply ethical and legal considerations in research.
(EEH 600 Thesis Guidance, EEH 650 Research and Professional Development, RSC 602 Research Ethics for the Health Sciences)
- C4. Formulate hypotheses and design experiments to test such hypotheses to advance environmental health knowledge.
(EEH 597 Independent Study, EEH 600 Thesis Guidance)
- C5. Conduct environmental health research and analyze and interpret them accordingly.
(EEH 555 Exposure Assessment in Environment Health Research, EEH 600 Thesis Guidance)

**DOCTOR OF PHILOSOPHY
(PhD)**

DOCTOR OF PHILOSOPHY IN EPIDEMIOLOGY (PhD)

The goal of the PhD program is to provide advanced theoretical and complex experiential training that allows students independently to lead and conduct all phases of epidemiologic research.

PHD DEGREE REQUIREMENTS

The PhD degree requires 72 credit hours: a minimum of 60 hours of graduate courses plus a maximum of 12 hours of dissertation credit can be applied to the degree. Students must maintain a minimum overall GPA of 3.0 and a minimum grade of B (3.0) in all required courses, including electives. NOTE: B- (2.67) is below the minimum grade for required courses.

Required Core Courses for Epidemiology PhD

Principles and Methods of Epidemiology Core Courses

- EEH 501 Principles of Epidemiology (4 credits)
- EEH 502 Advanced Methodology (3 credits)
- EEH 601 Advanced Epidemiologic Study Designs (2 credits) *
- EEH 602 Theory and Implementation in Clinical Trial Design (2 credits)

Statistical Methods Core Courses

- EEH 505 Application of Biostatistics to Epidemiology I (3 credits)
- EEH 611 Analysis of Health Data (4 credits) *
- STA 527 (LEC) Statistical Analysis I (3 credits)
- STA 527 (REC) Statistical Analysis (1 credit)
- STA 528 (LEC) Statistical Analysis II (3 credits)
- STA 528 (REC) Statistical Analysis II (1 credit)
- STA 529 (LEC+) Statistical Analysis III (3 credits)
- STA 529 (REC) Statistical Analysis III (1 credit)

Public Health Core Course

- CHB 550 Public Health and Population Wellbeing (3 credits)

Professional Development

- EEH 650 Research and Professional Development (0 - 1 credit)
 - PhD students are required to sign up for 1 credit of EEH 650 in the fall and spring semesters of the second year of their program of study.
 - PhD students are required to sign up for an additional 4 semesters at 0 credits in the program.
 - PhD students are strongly encouraged to attend as much as possible after meeting these minimum registration requirements (2 credits total)

PhD Dissertation Guidance

- EEH 700 Dissertation Guidance (a minimum of 1 credit required)

CREDITS FOR REQUIRED CORE COURSES FOR EPIDEMIOLOGY AND DISSERTATION GUIDANCE FOR PHD = 36 CREDITS

Epidemiology Elective Courses for PhD

Choose 4 Epidemiology Elective Courses (all courses are 3 credits):

- EEH 510 Principles of Measurement in Public Health (3 credits) (annual)
- EEH 570 Cancer Epidemiology (annual)
- EEH 571 Epidemiology of Cardiovascular Disease (annual)
- EEH 572 Nutritional Epidemiology (biennial)
- EEH 573 Epidemiology of Infectious Diseases (annual)
- EEH 574 Epidemics and Outbreaks (biennial)
- EEH 575 Epidemiologic Applications to Environmental Health (annual)
- EEH 577 Perinatal Epidemiology (biennial)
- EEH 610 Fundamentals of Grant Development (biennial)* (strongly recommended)
- EEH 670 Advanced Cancer Epidemiology and Prevention (biennial) *
- EEH 672 The Role of Physical Activity in the Etiology, Treatment and Prevention of Chronic Disease (biennial) *

- EEH 673 Molecular Epidemiology (biennial) *
- EEH 674 Fundamentals of Genetic Epidemiology (biennial) *

* This course is designed for advanced doctoral students.

Note: Check current class schedule for course offerings (frequency and semester).

CREDITS FOR REQUIRED EPIDEMIOLOGY PHD ELECTIVE COURSES = 12 CREDITS

Graduate Seminar

- EEH 591 Graduate Seminar (0 Credits, each semester)
- The graduate seminar is an opportunity to hear about epidemiologic research both from the department and school as well as from outside researchers. The seminars are an important complement to coursework for building an understanding of research methods and applications.
 - This is a required course for:
 - All full-time students
 - All students who are certified full-time
 - All full and part-time students who have completed their course work and are registered for a minimum of one credit hour of Thesis Guidance.
 - All part-time students are strongly encouraged to attend the seminars, as well.

Students are required to register for and attend the weekly departmental seminars. The course will be assigned an 'S/U' grade. Students are allowed two unexcused absences per semester, and separately, two Zoom attendances per semester without prior approval. Additional absences or Zoom attendances beyond these limits require advance permission from the Graduate Coordinator.

- **MS/PHD students are required to register for and attend the weekly departmental seminars. The course will be assigned an 'S/U' grade.**
 - MS students who have completed 4 semesters of enrollment in the EEH 591 seminar are not required (but encouraged) to register for EEH 591. Their attendance will not be tracked.
 - PhD students who have completed 8 semesters of enrollment in the EEH 591 seminar are not required (but encouraged) to register for EEH 591. Their attendance will not be tracked.
 - PhD students actively working on their specialty exam are not required to attend seminar during that period. It is their responsibility to notify the Graduate Program Coordinator **in advance** and cc their faculty mentor and MS/PhD Graduate Director when doing so.

- **Attendance Sign in is Required:**

All students must "sign into" the seminar to be considered present.

- A paper sign-in sheet is available at each seminar when students attend in person.
- If you do not sign in, we cannot assume you were there.
- Students attending via Zoom, must log into Zoom under their own name (ex., no telephone numbers, nicknames). Students attending via Zoom are also required to have their videos on.
- If you do not show your name on Zoom and have your video on, we cannot assume you were there.

- **Two Unexcused Absences Allowed Per Semester:**

- Students may have up to two unexcused absences per semester (regardless of whether you attend in person or via Zoom) without approval from the Graduate Coordinator who oversees attendance. Any absences beyond these two require advance permission and will only be approved for extenuating circumstances. Note: Zoom attendances beyond the allowed two per semester (see below) are counted as absences.

- **Two Zoom Attendances Allowed Per Semester:**

- Students may attend up to two seminars via Zoom per semester without prior approval. Any additional Zoom attendances beyond this limit will be counted as absences. For example, if you attend four seminars via Zoom, the first two count toward your Zoom allowance, and the other two will count as absences toward your two-absence limit.

- **Obtaining permission to attend all seminars via Zoom:**

- Students can formally request to attend all seminars via Zoom but must do so BEFORE the start of the semester. Permission to attend via Zoom for all seminars will only be approved in scenarios where it is obvious that attending in person is logistically difficult.

- Requests must be sent in email to the Graduate Coordinator.
- Approvals will not be given after the start of the semester.

CREDITS FOR REQUIRED GRADUATE SEMINAR = 0 CREDITS

Ethics Course/Responsible Conduct of Research (RCR) Training

Doctoral students must receive formal training in the Responsible Conduct of Research.

- All PhD students are complete the CITI online Responsible Conduct of Research course with an average score of 80 percent or higher.
 - Go to the following website and read the section on “*Collaborative Institutional Training Initiative (CITI Program) Online Program in Responsible Conduct of Research (RCR)*” for detailed instructions on this requirement.
 - [Graduate School Policy Library Degree Requirements](#)

Students are required to document successful completion of their training when they submit their ***Application to Candidacy (ATC)*** (see section on Application to Candidacy).

CREDITS FOR CITI COURSE = 0 CREDITS

Recommended Options to Fulfill the Balance of Remaining Credit Hours to Achieve 72

The remaining credits are tailored to the trainee's particular interests and needs and are planned in consultation with the faculty advisor. Elective courses from departments other than EEH, Biostatistics, or Community Health and Health Behavior must first be reviewed by the faculty advisor and approved by the MS & PhD Graduate Director.

PhD students are strongly recommended to take one of the following ethics courses in addition to CITI:

- RPG 504 Responsible Conduct of Research (1 credit)
- RSC 602 Research Ethics for the Health Sciences (3 credits)

PhD students are strongly recommended to engage in Independent Study and/or Directed Research (shown below). In general, Independent Study focuses on learning or exploring a specialized topic not covered in regular coursework, while Directed Research involves conducting research—often tied to developing the dissertation proposal—under faculty guidance.

- EEH 697 Independent Study PhD (1-9 credits)
 - For students with special interests not satisfied through the formal course work, there is an opportunity to pursue independent study under the direction of a faculty member. With permission of the instructor, students may take EEH 697 Independent Study PhD for up to 9 credits (no more than 6 credits per semester)
- EEH 698 Directed Research (1-15 credits)
 - Students can engage in directed research under the mentorship of a faculty member. It is suggested that PhD students register for Directed Research when working on writing their dissertation proposals. With permission of the instructor, students may take EEH 698 Directed Research for up to 15 credits (no more than 6 credits per semester).

PhD students can also choose to register for additional dissertation credits above the required 1 credit.

- EEH 700 Dissertation Guidance (1 to 12 credits)
 - Student should register for this while working on their dissertations. Students may take up to 12 credits in Dissertation Guidance (no more than 10 credits per semester).
 - Students are not permitted to register for dissertation hours until after they pass the doctoral preliminary examination in full and successfully defend their dissertation proposal, thusly being advanced to candidacy through the Graduate School.

Graduate Seminar Requirement

Doctoral students are required to present at least one departmental seminar while in the final stages of their data analysis and PRIOR to scheduling their dissertation defense.

- EEH 591 Graduate Seminar (0 credits)

Departmental Seminar Checklist:

- ✓ Present a departmental seminar prior to scheduling the dissertation defense

Recommended PhD Course Sequence

(Course offerings may change and some courses are offered biennially; actual program tailored to student)

PhD IN EPIDEMIOLOGY (72 credits)	
Year 1: Fall Semester	Year 1: Spring Semester
CHB 550 Public Health and Population Wellbeing (3) EEH 501 Principles of Epidemiology (4) EEH 505 Application of Biostatistics to Epidemiology I (3) STA 527 (LEC) Statistical Analysis I (3) STA 527 (REC) Statistical Analysis I (1) EEH 650 Research and Professional Development (0) EEH 591 Graduate Seminar (0) RSC 602 Research Ethnicity for the Health Sciences (3) <i>highly recommended for student to take in lieu of CHB 550 if a student waives out of CHB 550</i>	EEH 502 Advanced Methodology (3) STA 528 (LEC) Statistical Analysis II (3) STA 528 (REC) Statistical Analysis II (1) Complete CITI training (0) <u>6 Credits from any of the following:</u> Epidemiology elective course(s) EEH 697 Independent Study PhD* EEH 698 Directed Research* EEH 650 Research and Professional Development (0) EEH 591 Graduate Seminar (0)
Total credits=14	Total credits=13
Year 2: Fall Semester	Year 2: Spring Semester
EEH 601 Advanced Epidemiologic Study Designs (2) EEH 602 Theory and Implementation in Clinical Trial Design (2) STA 529 (LEC) Statistical Analysis III (3) STA 529 (REC) Statistical Analysis III (1) <u>4 Credits from any of the following:</u> Epidemiology elective course(s) EEH 697 Independent Study PhD* EEH 698 Directed Research* EEH 650 Research and Professional Development (0) EEH 591 Graduate Seminar (0)	EEH 611 Analysis of Health Data (4) <u>9 Credits from any of the following:</u> Epidemiology elective course(s) EEH 697 Independent Study PhD* EEH 698 Directed Research* EEH 650 Research and Professional Development (0) EEH 591 Graduate Seminar (0)
Total credits=12	Total credits=13
Year 2: Summer	
Preliminary exam (Summer of second year) – see requirements to sit for preliminary exams	
Year 3: Fall Semester	Year 3: Spring Semester
EEH 698 Directed Research (5) * EEH 650 Research and Professional Development (1) EEH 591 Graduate Seminar (0) Preparation of dissertation proposal	EEH 698 Directed Research (5) * EEH 650 Research and Professional Development (1) EEH 591 Graduate Seminar (0) Preparation of dissertation proposal, defense of dissertation proposal and specialty prelim exam
Total credits=6	Total credits=6
Year 3: Summer	
Specialty exam and proposal defense (During the third year or during the summer of third year)	
Year 4: Fall Semester	Year 4: Spring Semester
EEH 700 Dissertation Guidance (4) ** EEH 650 Research and Professional Development (0) EEH 591 Graduate Seminar (0)	EEH 700 Dissertation Guidance (4) ** EEH 650 Research and Professional Development (0) EEH 591 Graduate Seminar (0) Dissertation defense
Total credits=4	Total credits=4

*Even though a student can register for **EEH 697/Independent Study PhD** for up to 9 credits and for **EEH 698/Directed Research** for up to 15 credits, please note that only 6 credits per semester are allowed for each of these courses.

****EEH 700, Dissertation Guidance:** Students may take up to 12 credits (no more than 10 credits per semester). A minimum of 1 credit hour must be taken.

NOTE: A student with a MS degree in epidemiology may be able to complete the PhD degree more quickly because they will have taken a number of the required courses for their MS. A maximum of 36 credit hours acquired in a relevant master's degree program may be transferred to the PhD.

PHD DEGREE REQUIREMENTS - MULTIDISCIPLINARY TRAINING PROGRAM IN CANCER EPIDEMIOLOGY

Within the PhD program, we offer a cancer epidemiology track for students wishing to focus on interdisciplinary research in this critical area. The requirements for the cancer epidemiology track are the same as those for the PhD generally. Several of the electives are specified to focus on in-depth knowledge of cancer biology and epidemiology.

Completion of the cancer epidemiology track prepares the student for a career in this rapidly changing field, providing advanced skills in epidemiologic methods integrated with an understanding of the biology of cancer. Partnering UB's Department of Epidemiology and Environmental Health with the Roswell Park Comprehensive Cancer Center, the program provides tailored, hands-on opportunities to develop research skills in cancer epidemiology and control as well as in other related disciplines. Students also gain an understanding of and experience in interdisciplinary research.

Required Core Courses for Epidemiology PhD – Cancer Epidemiology Track

Principles and Methods of Epidemiology Core Courses

- EEH 501 Principles of Epidemiology (4 credits)
- EEH 502 Advanced Methodology (3 credits)
- EEH 510 Principles of Measurement in Public Health (3 credits)
- EEH 601 Advanced Epidemiologic Study Designs (2 credits) *
- EEH 602 Theory and Implementation in Clinical Trial Design (2 credits)

Statistical Methods Core Courses

- EEH 505 Application of Biostatistics to Epidemiology I (3 credits)
- EEH 611 Analysis of Health Data (4 credits) *
- STA 527 (LEC) Statistical Analysis I (3 credits)
- STA 527 (REC) Statistical Analysis (1 credit)
- STA 528 (LEC) Statistical Analysis II (3credits)
- STA 528 (REC) Statistical Analysis II (1)
- STA 529 (LEC) Statistical Analysis III (3 credits)
- STA 529 (REC) Statistical Analysis III (1)

Public Health Core Course

- CHB 550 Public Health and Population Wellbeing (3 credits)

Professional Development

- EEH 650 Research and Professional Development (0 - 1 credit)
 - PhD students are required to sign up for 1 credit of EEH 650 in the fall and spring semesters of the second year of their program of study.
 - PhD students are required to sign up for an additional 4 semesters at 0 credits in the program.
 - PhD students are strongly encouraged to attend as much as possible after meeting these minimum registration requirements. (2 credits total)

PhD Dissertation Guidance

- EEH 700 Dissertation Guidance (a minimum of 1 credit required)

CREDITS FOR REQUIRED CORE COURSES FOR EPIDEMIOLOGY PHD IN CANCER TRACK = 36 CREDITS

Other Required Courses for Epidemiology PhD – Cancer Epidemiology Track

- RPG 501 Integrated Cancer Sciences I (4 credits)
- RPG 502 Integrated Cancer Sciences II (4 credits)
- EEH 570 Cancer Epidemiology (annual) (3 credits)
- EEH 670 Advanced Cancer Epidemiology and Prevention (biennial) (3 credits) *
- EEH 673 Molecular Epidemiology (biennial) (3 credits) *

Take two additional advanced epidemiology courses from list below (all courses are 3 credits):

- EEH 571 Epidemiology of Cardiovascular Disease (annual)
- EEH 572 Nutritional Epidemiology (biennial)
- EEH 573 Epidemiology of Infectious Diseases (annual)

- EEH 574 Epidemics and Outbreaks (biennial)
- EEH 575 Epidemiologic Applications to Environmental Health (annual)
- EEH 577 Perinatal Epidemiology (biennial)
- EEH 610 Fundamentals of Grant Development (biennial) *
- EEH 672 The Role of Physical Activity in the Etiology, Treatment and Prevention of Chronic Disease (biennial) *
- EEH 674 Fundamentals of Genetic Epidemiology (biennial) *

* This course is designed for advanced doctoral students.

Note: Check current class schedule for course offerings (frequency and semester).

CREDITS FOR ADDITIONAL REQUIRED COURSES FOR EPIDEMIOLOGY PHD IN CANCER TRACK = 23 CREDITS

Graduate Seminar

- EEH 591 Graduate Seminar (0 Credits, each semester)
- The graduate seminar is an opportunity to hear about epidemiologic research both from the department and school as well as from outside researchers. The seminars are an important complement to coursework for building an understanding of research methods and applications.
 - This is a required course for:
 - All full-time students
 - All students who are certified full-time
 - All full and part-time students who have completed their course work and are registered for a minimum of one credit hour of Thesis Guidance.
 - All part-time students are strongly encouraged to attend the seminars, as well.

Students are required to register for and attend the weekly departmental seminars. The course will be assigned an 'S/U' grade. Students are allowed two unexcused absences per semester, and separately, two Zoom attendances per semester without prior approval. Additional absences or Zoom attendances beyond these limits require advance permission from the Graduate Coordinator.

- **MS/PHD students are required to register for and attend the weekly departmental seminars. The course will be assigned an 'S/U' grade.**
 - MS students who have completed 4 semesters of enrollment in the EEH 591 seminar are not required (but encouraged) to register for EEH 591. Their attendance will not be tracked.
 - PhD students who have completed 8 semesters of enrollment in the EEH 591 seminar are not required (but encouraged) to register for EEH 591. Their attendance will not be tracked.
 - PhD students actively working on their specialty exam are not required to attend seminar during that period. It is their responsibility to notify the Graduate Program Coordinator **in advance** and cc their faculty mentor and MS/PhD Graduate Director when doing so.

- **Attendance Sign in is Required:**

All students must "sign into" the seminar to be considered present.

- A paper sign-in sheet is available at each seminar when students attend in person.
- If you do not sign in, we cannot assume you were there.
- Students attending via Zoom, must log into Zoom under their own name (ex., no telephone numbers, nicknames). Students attending via Zoom are also required to have their videos on.
- If you do not show your name on Zoom and have your video on, we cannot assume you were there.

- **Two Unexcused Absences Allowed Per Semester:**

- Students may have up to two unexcused absences per semester (regardless of whether you attend in person or via Zoom) without approval from the Graduate Coordinator who oversees attendance. Any absences beyond these two require advance permission and will only be approved for extenuating circumstances. Note: Zoom attendances beyond the allowed two per semester (see below) are counted as absences.

- **Two Zoom Attendances Allowed Per Semester:**

- Students may attend up to two seminars via Zoom per semester without prior approval. Any additional Zoom attendances beyond this limit will be counted as absences. For example, if you attend four seminars via Zoom, the first two count toward your Zoom allowance, and the other two will count as absences toward your two-absence limit.

- **Obtaining permission to attend all seminars via Zoom:**

- Students can formally request to attend all seminars via Zoom but must do so BEFORE the start of the semester. Permission to attend via Zoom for all seminars will only be approved in scenarios where it is obvious that attending in person is logistically difficult.
- Requests must be sent in email to the Graduate Coordinator.
- Approvals will not be given after the start of the semester.

CREDITS FOR REQUIRED GRADUATE SEMINAR = 0 CREDITS

Ethics Course/Responsible Conduct of Research (RCR) Training

Doctoral students must receive formal training in the Responsible Conduct of Research.

- All PhD students are complete the CITI online Responsible Conduct of Research course with an average score of 80 percent or higher.
 - Go to [CITI Program](#) and read the section on “*Collaborative Institutional Training Initiative (CITI) Online Program in Responsible Conduct of Research (RCT)*” for detailed instructions on this requirement.

Students in the cancer training track are required to take one of the following courses in addition to CITI.

- RPG 504 Responsible Conduct of Research (1 credit)
- RSC 602 Research Ethics for the Health Sciences (3 credits)

Students are required to document successful completion of their training when they submit their ***Application to Candidacy (ATC)*** (see section on Application to Candidacy).

CREDITS FOR REQUIRED ETHICS COURSE = 1-3 CREDIT

Recommended Options to Fulfill the Balance of Remaining Credit Hours

The remaining credits needed for the 72-credit doctoral degree are tailored to the trainee's particular interests and needs and are planned in consultation with the faculty advisor. Elective courses from departments other than EEH, Biostatistics, or Community Health and Health Behavior must first be reviewed by the faculty advisor and approved by the MS & PhD Graduate Director.

PhD students are strongly recommended to take coursework in professional development

- EEH 650 Research and Professional Development (2 credits)
 - PhD students are strongly recommended to register for 1 credit of EEH 650 in the fall and 1 credit in the spring semester of their second year. Students are strongly recommended to register for this course as 0 credits in all other semesters they are enrolled.

PhD students are strongly recommended to engage in Independent Study and/or Directed Research (shown below). In general, Independent Study focuses on learning or exploring a specialized topic not covered in regular coursework, while Directed Research involves conducting research—often tied to developing the dissertation proposal—under faculty guidance.

- EEH 697 Independent Study PhD (1-9 credits).
 - For students with special interests not satisfied through the formal course work, there is an opportunity to pursue independent study under the direction of a faculty member. With permission of the instructor, students may take EEH 697 Independent Study PhD for up to 9 credits (no more than 6 credits per semester).
- EEH 698 Directed Research (1-15 credits).
 - Students can engage in directed research under the mentorship of a faculty member. It is suggested that PhD students register for Directed Research when working on writing their dissertation proposals. With permission of the instructor, students may take EEH 698 Directed Research for up to 15 credits (no more than 6 credits per semester).

PhD students can also choose to register for additional dissertation credits above the required 1 credit.

- EEH 700 Dissertation Guidance (1 to 12 credits)
 - Student should register for this while working on their dissertations. Students may take up to 12 credits in Dissertation Guidance (not more than 10 credits per semester).

Graduate Seminar Requirement

Doctoral students are required to present at least one departmental seminar while in the final stages of their data analysis and PRIOR to scheduling their dissertation defense.

- EEH 591 Graduate Seminar (0 credits).

Departmental Seminar Checklist:

- ✓ Present a departmental seminar prior to scheduling the dissertation defense

Recommended PhD Multidisciplinary Training Program in Cancer Epidemiology Course Sequence
(Course offerings may change and some courses are offered biennially; actual program tailored to student)

PHD MULTIDISCIPLINARY TRAINING PROGRAM IN CANCER EPIDEMIOLOGY (72 credits)	
Year 1: Fall Semester	Year 1: Spring Semester
CHB 550 Public Health and Population Wellbeing (3) EEH 501 Principles of Epidemiology (4) EEH 505 Application of Biostatistics to Epidemiology I (3) STA 527 Statistical Analysis I (3) STA 527 (REC) Statistical Analysis I (1) RPG 504 Ethics and Conduct of Research (1) <ul style="list-style-type: none"> Take RSC 602 Research Ethics for the Health Sciences (3 credits) if waive out of CHB 550 EEH 650 Research and Professional Development (0) EEH 591 Graduate Seminar (0) RPCCC Journal Club, RPCCC Cancer Prevention grand rounds	EEH 502 Advanced Methodology (3) EEH 570 Cancer Epidemiology (3) EEH 510 Principles of Measurement in Public Health (3) STA 528 (LEC) Statistical Analysis II (3) STA 528 (REC) Statistical Analysis II (1) Complete CITI training (0) <u>1 credit hour of the following:</u> EEH 697 Independent Study PhD* EEH 698 Directed Research* EEH 650 Research and Professional Development (0) EEH 591 Graduate Seminar (0) RPCCC Journal Club, RPCCC Cancer Prevention grand rounds
Total credits=15	Total credits=15
Year 2: Fall Semester	Year 2: Spring Semester
EEH 601 Advanced Epidemiologic Study Designs (2) EEH 602 Theory and Implementation in Clinical Trial Design (2) EEH 673 Molecular Epidemiology (3) (biennial) STA 529 (LEC) Statistical Analysis III (3) STA 529 (REC) Statistical Analysis III (1) <u>1 credit hour of the following:</u> EEH 697 Independent Study PhD* EEH 698 Directed Research* EEH 650 Research and Professional Development (0) EEH 591 Graduate Seminar (0) RPCCC Journal Club/, RPCCC grand rounds	EEH 611 Analysis of Health Data (4) EEH Epidemiology Elective (3) <u>3 Credit Hours of the following:</u> EEH 697 Independent Study PhD* EEH 698 Directed Research* EEH 650 Research and Professional Development (0) EEH 591 Graduate Seminar (0) RPCCC Journal Club, RPCCC grand rounds
Total credits=12	Total credits=10
Year 2: Summer	
Preliminary exam (Summer of second year) – see requirements to sit for preliminary exams	
Year 3: Fall Semester	Year 3: Spring Semester
RPG 501 Integrated Cancer Sciences I (4 credits) RPG 502 Integrated Cancer Sciences II (4 credits) EEH 698 Directed Research (1) * EEH 650 Research and Professional Development (1) EEH 591 Graduate Seminar (0) RPCCC Journal Club, RPCCC Cancer Prevention grand rounds Preparation of dissertation proposal	EEH 670 Advanced Cancer Epidemiology and Prevention (3) (biennial) EEH 698 Directed Research (1) * EEH 650 Research and Professional Development (1) EEH 591 Graduate Seminar (0) RPCCC Journal Club, RPCCC Cancer Prevention grand rounds Preparation of dissertation proposal, defense of dissertation proposal and specialty prelim exam
Total credits=10	Total credits=5

Year 3: Summer	
Specialty exam and proposal defense (During the third year or during the summer of third year)	
Year 4: Fall Semester	Year 4: Spring Semester
EEH 700 Dissertation Guidance (2)** EEH 650 Research and Professional Development (0) EEH 591 Graduate Seminar (0) RPCCC Journal Club, RPCCC grand rounds Total credits=2	EEH 700 Dissertation Guidance (2)** EEH 650 Research and Professional Development (0) EEH 591 Graduate Seminar (0) RPCCC Journal Club, RPCCC grand rounds Dissertation defense Total credits=1

*A student can register for **EEH 697, Independent Study PhD** for up to 9 credits and for **EEH 698, Directed Research** for up to 15 credits. Please note that only 6 credits per semester are allowed for each of these courses.

****EEH 700, Dissertation Guidance**: Students may take up to 12 credits (no more than 10 credits per semester). A minimum of 1 credit hour must be taken.

NOTE: A student with a MS degree in epidemiology may be able to complete the PhD degree more quickly because they will have taken several the required courses for their MS. A maximum of 36 credit hours acquired in a relevant master's degree program may be transferred to the PhD.

DEGREE REQUIREMENTS - MD/PHD MEDICAL SCIENTIST TRAINING PROGRAM (MSTP)

Earn two degrees, an MD from UB's Jacobs School of Medicine and Biomedical Sciences and a PhD in epidemiology in less time and fewer credits than each individually with this collaborative program.

Through the Medical Scientist Training Program (MSTP), students earn both degrees through a single, well-integrated curriculum focused on preparation for work as a clinical translational scientist.

On average, the program takes seven-eight years to complete, four years for the MD component and three-four years for the PhD component. 72 credit hours are required for the PhD.

Following the first two years of the MD component, students complete the requirements for the doctorate, which takes three to four years and includes:

- Completion of coursework in epidemiology and statistics
- Completion of advanced coursework in selected basic science disciplines as appropriate
- Weekly Grand Rounds in the clinical program of choice or clinical alternative
- MSTP research seminars
- EEH seminars
- PhD Prelim Exam
- Specialty Exam/Dissertation Proposal Defense
- PhD dissertation research

72 credit hours are required for the PhD of which a minimum of 50% of credits (36 credits) "must consist of courses completed at UB that have not been applied toward any other degree program."

[Graduate School Policy Library](#)

The current doctoral program requires 46 credits in required coursework which adequately satisfies this 36-credit requirement.

Required PhD Coursework

Principles and Methods of Epidemiology Core Courses

- EEH 501 Principles of Epidemiology (4 credits)
- EEH 502 Advanced Methodology (3 credits)
- EEH 601 Advanced Epidemiologic Study Designs (2 credits) *
- EEH 602 Theory and Implementation in Clinical Trial Design (2 credits)

Statistical Methods Core Courses

- EEH 505 Application of Biostatistics to Epidemiology I (3 credits)
- EEH 611 Analysis of Health Data (4 credits) *
- STA 527 (LEC) Statistical Analysis I (3 credits)
- STA 527 (LEC) Statistical Analysis I (1 credit)
- STA 528 (LEC) Statistical Analysis II (3 credits)
- STA 528 (REC) Statistical Analysis II (1 credit)
- STA 529 (LEC) Statistical Analysis III (3 credits)
- STA 529 (REC) Statistical Analysis III (1 credit)

Epidemiology Elective Courses

- Four epidemiology elective courses (12 credits)

Public Health Core Course

- CHB 550 Public Health and Population Wellbeing (3 credits)

Professional Development

- EEH 650 Research and Professional Development (0 - 1 credit)
 - PhD students are required to sign up for 1 credit of EEH 650 in the fall and spring semesters of the second year of their program of study.
 - PhD students are required to sign up for an additional 4 semesters at 0 credits in the program.

- PhD students are strongly encouraged to attend as much as possible after meeting these minimum registration requirements. (2 credits total)

PhD Dissertation Guidance

- EEH 700 Dissertation Guidance (a minimum of 1 credit required)

CREDITS FOR REQUIRED PHD COURSES = 48 CREDITS

Graduate Seminar

- EEH 591 Graduate Seminar (0 Credits, each semester)
- The graduate seminar is an opportunity to hear about epidemiologic research both from the department and school as well as from outside researchers. The seminars are an important complement to coursework for building an understanding of research methods and applications.
 - This is a required course for:
 - All full-time students
 - All students who are certified full-time
 - All full and part-time students who have completed their course work and are registered for a minimum of one credit hour of Thesis Guidance.
 - All part-time students are strongly encouraged to attend the seminars, as well.

Students are required to register for and attend the weekly departmental seminars. The course will be assigned an 'S/U' grade. Students are allowed two unexcused absences per semester, and separately, two Zoom attendances per semester without prior approval. Additional absences or Zoom attendances beyond these limits require advance permission from the Graduate Coordinator.

- **MS/PHD students are required to register for and attend the weekly departmental seminars. The course will be assigned an 'S/U' grade.**
 - MS students who have completed 4 semesters of enrollment in the EEH 591 seminar are not required (but encouraged) to register for EEH 591. Their attendance will not be tracked.
 - PhD students who have completed 8 semesters of enrollment in the EEH 591 seminar are not required (but encouraged) to register for EEH 591. Their attendance will not be tracked.
 - PhD students actively working on their specialty exam are not required to attend seminar during that period. It is their responsibility to notify the Graduate Program Coordinator **in advance** and cc their faculty mentor and MS/PhD Graduate Director when doing so.

- **Attendance Sign in is Required:**

All students must "sign into" the seminar to be considered present.

- A paper sign-in sheet is available at each seminar when students attend in person.
- If you do not sign in, we cannot assume you were there.
- Students attending via Zoom, must log into Zoom under their own name (ex., no telephone numbers, nicknames). Students attending via Zoom are also required to have their videos on.
- If you do not show your name on Zoom and have your video on, we cannot assume you were there.

- **Two Unexcused Absences Allowed Per Semester:**

- Students may have up to two unexcused absences per semester (regardless of whether you attend in person or via Zoom) without approval from the Graduate Coordinator who oversees attendance. Any absences beyond these two require advance permission and will only be approved for extenuating circumstances. Note: Zoom attendances beyond the allowed two per semester (see below) are counted as absences.

- **Two Zoom Attendances Allowed Per Semester:**

- Students may attend up to two seminars via Zoom per semester without prior approval. Any additional Zoom attendances beyond this limit will be counted as absences. For example, if you attend four seminars via Zoom, the first two count toward your Zoom allowance, and the other two will count as absences toward your two-absence limit.

- **Obtaining permission to attend all seminars via Zoom:**

- Students can formally request to attend all seminars via Zoom but must do so BEFORE the start of the semester. Permission to attend via Zoom for all seminars will only be approved in scenarios where it is obvious that attending in person is logistically difficult.

- Requests must be sent in email to the Graduate Coordinator.
- Approvals will not be given after the start of the semester.

CREDITS FOR REQUIRED GRADUATE SEMINAR = 0 CREDITS

Ethics Course/Responsible Conduct of Research (RCR) Training

Doctoral students must receive formal training in the Responsible Conduct of Research.

- All PhD students are complete the CITI online Responsible Conduct of Research course with an average score of 80 percent or higher.
 - Go to [CITI Program](#) and read the section on “*Collaborative Institutional Training Initiative (CITI) Online Program in Responsible Conduct of Research (RCT)*” for detailed instructions on this requirement.

<https://www.buffalo.edu/grad/succeed/current-students/policy-library.html> Students are required to document successful completion of their training when they submit their ***Application to Candidacy (ATC)*** (see section on Application to Candidacy).

Graduate Seminar Requirement

Doctoral students are required to present at least one departmental seminar while in the final stages of their data analysis and PRIOR to scheduling their dissertation defense.

- EEH 591 Graduate Seminar (0 credits).

Departmental Seminar Checklist:

- ✓ Present a departmental seminar prior to scheduling the dissertation defense

MSTP Seminar

In the first two years of the PhD program, students take the MSTP Research Seminar, a course that integrates clinical and research training. Distinguished university faculty present biweekly seminars on current advances in basic and clinical research across the biological and medical disciplines, and students participate weekly in a supervised clinical experience.

MSTP Seminar (1 credit) – take 4 semesters in first 2 years

CREDITS FOR REQUIRED MSTP SEMINAR = 4 CREDITS

Students meet all requirements of the UB Graduate School for completion of the PhD in epidemiology. Afterwards, they then return to the medical school's standard third- and fourth-year curriculum to complete their medical education, with the MSTP Research Seminar integrated with the remaining courses.

Recommended Options to Fulfill the Balance of Remaining Credit Hours to Achieve 72

The remaining credits needed for the MD/PHD student to meet 72 credits are tailored to the trainee's particular interests and needs and are planned in consultation with the MS & PhD Graduate Director. Possible course that doctoral student are recommended to take to meet credit needs include.

PhD students are strongly recommended to engage in Independent Study and/or Directed Research (shown below). In general, Independent Study focuses on learning or exploring a specialized topic not covered in regular coursework, while Directed Research involves conducting research—often tied to developing the dissertation proposal—under faculty guidance.

- EEH 697 Independent Study PhD (1-9 credits)
 - For students with special interests not satisfied through the formal course work, there is an opportunity to pursue independent study under the direction of a faculty member. With permission of the instructor, students may take EEH 697 Independent Study PhD for up to 9 credits (no more than 6 credits per semester)
- EEH 698 Directed Research (1-15 credits)
 - Students can engage in directed research under the mentorship of a faculty member. It is suggested that PhD students register for Directed Research when working on writing their dissertation proposals. With permission of the instructor, students may take EEH 698 Directed Research for up to 15 credits (no more than 6 credits per semester).

PhD students can also choose to register for additional dissertation credits above the required 1 credit.

- EEH 700 Dissertation Guidance (1 to 12 credits)
 - Student should register for this while working on their dissertations. Students may take up to 12 credits in Dissertation Guidance (no more than 10 credits per semester).

Recommended PhD in Epidemiology – MSTP Track – Suggested Course Sequence
(Course offerings may change and some courses are offered biennially; actual program tailored to student)

MEDICAL SCHOOL YEARS 1 & 2	
PHD IN EPIDEMIOLOGY STARTS AFTER 2 YEARS OF MEDICAL SCHOOL – MSTP TRACK (72 credits)	
PhD Year 1: Fall Semester	PhD Year 1: Spring Semester
CHB 550 Public Health and Population Well Being (3) EEH 501 Principles of Epidemiology (4) EEH 505 Application of Biostatistics to Epidemiology I (3) STA 527 (LEC) Statistical Analysis I (3) STA 527 (REC) Statistical Analysis I (1) EEH 650 Research and Professional Development (0) EEH 591 Graduate Seminar (0) MST 601 MSTP Seminar (1)	EEH 502 Advanced Methodology (3) STA 528 (LEC) Statistical Analysis II (3) STA 528 (REC) Statistical Analysis II (1) Two epidemiology elective course (6) Complete CITI training (0) EEH 650 Research and Professional Development (0) EEH 591 Graduate Seminar (0) MST 601 MSTP Seminar (1)
Total credits=15	Total credits=14
PhD Year 2: Fall Semester	PhD Year 2: Spring Semester
EEH 601 Advanced Epidemiologic Study Designs (2) EEH 602 Theory and Implementation in Clinical Trial Design (2) STA 529 (LEC) Statistical Analysis III (3) STA 529 (REC) Statistical Analysis III (1) Epidemiology elective course (3) EEH 650 Research and Professional Development (1) EEH 591 Graduate Seminar (0) MST 601 MSTP Seminar (1) Begin preparation of dissertation proposal	EEH 611 Analysis of Health Data (4) Epidemiology elective course (3) EEH 650 Research and Professional Development (1) EEH 591 Graduate Seminar (0) MST 601 MSTP Seminar (1) Continued preparation of dissertation proposal
Total credits=13	Total credits=9
PhD Year 2: Summer	
Preliminary exam (Summer of second year) NOTE: PhD students need 48 credits to sit for the PhD in epidemiology prelim, which includes certain specific required courses (see details in the handbook section titled “Additional Degree Requirements Relevant to all PhD Tracks”).	
PhD Year 3: Fall Semester	PhD Year 3: Spring Semester
EEH 698 Directed Research (1) * EEH 650 Research and Professional Development (0) EEH 591 Graduate Seminar (0) Specialty Exam/Dissertation Proposal Defense	EEH 700 Dissertation Guidance (1) ** EEH 650 Research and Professional Development (0) EEH 591 Graduate Seminar (0) Transfer credits from Medical School curriculum towards PhD to reach 72 credits total Dissertation defense
Total credits=1	Total credits=1
MEDICAL SCHOOL YEARS 3 & 4	

****EEH 700, Dissertation Guidance:** Students may take up to 12 credits (no more than 10 credits per semester). A minimum of 1 credit hour must be taken. In the above scenario, the student has taken 2 credits of dissertation guidance.

Note: The Preliminary Examination is taken at the end of Year 2 (see details below). A maximum of 36 credit hours acquired in a relevant master's degree program or medical school may be transferred to the PhD.

ADDITIONAL REQUIREMENTS RELEVANT TO ALL PHD TRACKS

On-Campus Presence & Engagement Expectations

Unless actively engaged in field research directly related to their dissertation or assistantship responsibilities, students are expected to maintain an on-campus presence. Regular in-person engagement with faculty and participation in the academic community are essential for maximizing learning and professional development opportunities.

General/Analytic Preliminary Exam

Purpose. The purpose of the exam is to determine whether the student has sufficient knowledge and reasoning capabilities essential for conducting advanced epidemiology research (e.g., dissertation) toward completion of a doctoral degree. Permission of the student's advisor is required to sit for the general preliminary exam. Students are expected to sit for the general/analytic prelim at the end of their second year in the doctoral program, after successful completion of all required coursework for the prelim exam. If a student is not ready to sit for the exam at the end of their second year, they must submit written justification and obtain permission of their major faculty advisor and of the MS & PhD Graduate Director to delay taking the preliminary examination (typically the delay would be one year).

Preliminary Exam Checklist:

- ✓ Receive permission of advisor
- ✓ Passing (minimum B grade) all required courses for the prelim

Exam format. The general/analytic examination includes both written and oral components. The exam focuses on general epidemiologic methods and reasoning skills, including data analysis and interpretation. At least one question focuses on analytic methods. That question could include conducting an analysis using a designated data set and summarizing results of the analysis in tables and/or written text; and/or interpretation of results from a data analysis that are provided to you. Other examination questions will focus on application of general epidemiologic methods, including reasoning within an epidemiologic scientific framework. The written component is usually administered over two days during the summer, with exact dates determined on a yearly basis. An overall passing grade on the written component of the general/analytic examination typically requires passing 50% of the questions given (though this may vary somewhat depending on the number and complexity of questions in a given year). Students who pass the written examination then proceed to an oral examination, usually scheduled within a month of being notified that they passed the written component. During the oral examination, there are questions probing the students' answers to the written exam as well as questions of more general nature regarding epidemiologic methods and reasoning processes. Passing the oral component of the general/analytic examination requires the student demonstrate sufficient understanding of concepts queried and discussed as determined by the examination committee. The final overall grade (Pass/Fail) for the general/analytic component of the preliminary examination is based on the student's performance on both the written and oral parts of the exam as determined by the examination committee.

Students who do not pass the general/analytic preliminary examination are typically permitted to retake the exam the following year. During the interim time interval the student should work together with their supervisory faculty to address the deficiencies identified on the examination. Please note, students typically are not permitted to register for dissertation hours (EEH 700) until they pass both the general/analytic and specialty components of the doctoral preliminary examination and successfully defend their dissertation proposal. This could affect full-time status certification with the Graduate School. While waiting to retake the exam, students will need to register for the required credit hours to suffice full-time status based on their specific circumstance (e.g., domestic or international; state or RF funded, etc.). International students will need to communicate with ISS to determine any additional requirements relevant to their visa status. Those who **do not pass the exam after two attempts will be dismissed** from the epidemiology PhD program. It is possible that an individual dismissed from the epidemiology PhD program could be admitted into the epidemiology MS program in order to complete a terminal master's degree. This determination is made on a case basis by the Department Chair, MS/PhD Graduate Director, and Program Coordinator.

Eligibility. Epidemiology PhD students are ***eligible to sit for the general analytic preliminary exam*** after successfully completing (grade of 'B' or better) 48 credit hours toward the doctorate (including all required courses) and before defense of a doctoral dissertation proposal. These required courses are listed in the box below. Students must maintain a minimum overall GPA of 3.0 and a minimum grade of B (3.0) **in all required courses** to sit for the exam.

REQUIRED COURSES

Epidemiologic Methods Courses

- EEH 501 Principles of Epidemiology (4 credits)
- EEH 502 Advanced Methodology (3 credits)
- EEH 601 Advanced Epidemiologic Study Designs (2 credits)
- EEH 602 Theory and Implementation in Clinical Trial Design (2 credits)

Statistics Courses

- EEH 505 Application of Biostatistics to Epidemiology I (3 credit)
- STA 527 (LEC) Statistical Analysis I (3 credits)
- STA 527 (REC) Statistical Analysis I (1 credit)
- STA 528 (LEC) Statistical Analysis II (3 credits)
- STA 528 (REC) Statistical Analysis II (1 credit)
- STA 529 (LEC) Statistical Analysis III (3 credits)
- STA 529 (REC) Statistical Analysis III (1 credit)

Analysis of Health-Related Data

- EEH 611 Analysis of Health Data (4 credits)

Epidemiology Elective Courses

- Four epidemiology elective courses (12 credits)

Additional School-wide Required Course

- CHB 550 Public Health and Population Wellbeing (3 credits) or RSC 602 Research Ethics for the Health Sciences (3 credits) as determined by your academic advisor

ADDITIONAL COURSE WORK

Electives/Independent Study/Directed Research

3 additional credits as Electives and/or Independent Study and/or Directed Research

This will give students a total of 48 credits

Suggested preparation. In addition to course work, preparation for the preliminary exam should include self-directed independent preparation by the student. Students are strongly encouraged to do independent reading, attend relevant seminars, and organize and participate in preliminary exam study sessions with other graduate students who are also scheduled to take the exam. All students are expected to be actively involved in research throughout their educational experience; research experience will help in successful completion of the exam.

Next steps following the General/Analytic prelims. Students are encouraged to complete any additional course credits so that their total credits completed by the end of their third year (the year after they take the General/Analytic prelim exam) in the PhD program equals at least 60 credits.

No later than one year after passing the General/Analytic prelim exam, students must submit their dissertation proposal to their committee and **initiate the Proposal/Specialty exam process**. Ideally students begin work on their proposal during the second year of the program so that they can complete this process as soon as possible. Students who are unable to submit their proposal for the Proposal/Specialty exam within the year after passing the general/analytic prelim must provide a written justification, with permission from their major advisor to the MS & PhD Graduate Director for approval of an extension.

Students with an MS in epidemiology from EEH. Students admitted to the PhD program who were awarded an MS in epidemiology from EEH typically take the prelim exam *at the end of their first year of doctoral studies*; however, this should be confirmed with the MS/PhD Graduate Director. They must have completed all required course work for the PhD (see the box above), take a minimum of 12 credits in the first year of their doctoral program in order to sit for prelims. These students must complete at minimum the requirements listed above to sit for prelims. Delaying the prelim for one additional year (until the end of the second year in the doctoral program) will require a written justification and permission of the student's major advisor and the MS & PhD Graduate Director.

Dissertation Overview

Students are required to design and undertake significant hypothesis-driven original independent epidemiological research that includes aims publishable as a minimum of three manuscripts that demonstrate mastery and understanding in one or more overarching content area(s) as reported in a doctoral dissertation. In accordance with the rules of the Graduate School, the dissertation proposal and the completed research must be defended before a three-member committee selected by the candidate with the approval of the MS/PhD Graduate Director.

Dissertation Committee

When all formal coursework has been completed and the general analytic preliminary exam has been passed, and with the input from their advisor, the student selects a committee which consists of a major professor who is a member of the UB Graduate Faculty whose primary geographic appointment is in the Department of EEH or Roswell Park Comprehensive Cancer Center (RPCCC) Department of Cancer Prevention and Control and two additional committee members who are also members of the UB Graduate Faculty. A list of eligible members of the Graduate Faculty is available at the Graduate School website. Contact the Graduate Program Coordinator for assistance. Thus, the dissertation committee is comprised of a minimum of three voting members, all of whom are UB Graduate Faculty. Graduate Faculty associate members may not serve as one of the three voting committee members but may serve as an additional committee member who brings relevant expertise to the committee.

NOTE: *Geographic* refers to the department or academic unit where the faculty member holds their primary paid appointment and carries out the majority of their professional duties and activities.

All members of the dissertation committee should be involved throughout the design and conduct of the original research project and in the specialty exam/dissertation proposal defense. The student is encouraged to meet frequently with their committee. Faculty who leave UB may remain on a student's committee for up to one year as a committee member but not as major professor. If the major professor is no longer a full-time member of the EEH or RPCCC Cancer Prevention and Control faculty, the major professor must be replaced. However, they may remain on the committee as a member for up to one year. Students can petition the MS & PhD Graduate Director to have the faculty member remain in exceptional circumstances.

BEFORE a student proceeds to the specialty exam/dissertation proposal defense, they must first have their committee approved by the MS & PhD Graduate Director using the [Dissertation Committee Approval Form](#).

A description of the study hypothesis is also required. If additional expertise is needed, students can include additional committee members as determined by the primary supervisory faculty. These additional members are not required to have a primary geographic, graduate faculty, or UB appointment.

All doctoral students are required to include a biostatistician or methodologist faculty member on their dissertation committee. The biostatistician or methodologist faculty member will be one component of the committee that is reviewed and approved by the MS & PhD Graduate Director.

Dissertation Committee Checklist:

- ✓ Identify and meet with your primary supervisory faculty member to discuss committee membership
- ✓ Submit the ***Dissertation Committee Approval Form*** to the MS & PhD Graduate Director

Specialty Exam/Dissertation Proposal Defense

The specialty exam/dissertation proposal defense should be initiated within one year after passing the general/analytic prelim exam, and after the dissertation committee has been approved. *If the student is not able to complete the specialty exam dissertation proposal within 12 months, a written justification must be provided to the MS & PhD Graduate Director for approval of an extension.*

BEFORE a student proceeds to the specialty exam/dissertation proposal defense, they must first have their committee approved by the MS & PhD Graduate Director using the [Dissertation Committee Approval Form](#).

Proposal. The student writes a proposal (the equivalent of approximately 15-25 pages, single spaced, with one-inch margins), which includes the following sections: specific aims, background and significance, methods, including a detailed analytic plan and mock tables, strengths and limitations, student roles and responsibilities and timeline. The proposal must be approved by all committee members as sufficiently developed for defending before the student moves on to the written exam and proposal defense. Committee approval will be communicated in writing (email is acceptable) to the chair of the committee and then to the MS & PhD Graduate Director.

Written Specialty Exam. A written exam will be developed by the student's dissertation committee based on the approved written proposal. The exam will be both specific to the student's dissertation project and to the student's general area of research and will include at least three questions. The purpose of the exam is to assess whether the student has sufficient breadth and depth of knowledge in their specialty area to successfully complete the proposed project.

The exam is in take-home format and will be given to the student within two weeks after the written proposal is approved. The student is permitted to use resources (class notes, textbooks, published scientific papers, etc.) and will have two weeks to respond to the questions. The written exam should be scheduled such that it is handed in at least two weeks before the oral specialty exam is held. *All relevant resources used to answer the exam must be appropriately cited.* The student must not discuss the exam with others, including faculty and students.

The committee reviews the written responses before the oral exam and determines whether the answers are sufficient to proceed with the oral defense. The committee reserves the right to postpone the oral if the written responses are not sufficiently developed. In the case when responses are considered inadequate, the student is given feedback as to what is required. The student is given up to one month to revise their responses. The committee then reviews the revised responses and determines if the answers are sufficient to proceed to the oral. If not, the committee is dissolved, and the student must identify a revised/new topic and corresponding committee. If the student is unable to identify a dissertation topic area, primary supervisory faculty, and corresponding committee, then the student could be dismissed from the PhD program.

Oral Proposal Defense. The defense of the proposal and written exam is open to the rest of EEH and other interested people. The purpose of the oral exam is to allow the committee to question the student about their planned dissertation research as well as their written exam, and to provide an opportunity for the student to present the proposed dissertation project to the public. The student is responsible for scheduling a time and date that is convenient for the Committee Members. The student's Major Professor, all committee members, and the MS & PhD Graduate Director must be present. If all committee members cannot be present, a maximum of one member may participate via conference telephone.

A minimum of one week (7 days) notice must be allowed for the public posting of the specialty exam/dissertation proposal defense to the faculty and student listservs.

The MS & PhD Graduate Director must be present at the oral defense. **Students should verify that the Graduate Director is available when they schedule the defense.**

The specialty exam/PhD proposal defense should take approximately two hours. The specialty exam/dissertation proposal defense consists of a 30-minute presentation of the proposed dissertation research followed by approximately 1.5 hours of questions from the student's committee and from others in attendance. The presentation should include the background and rationale, a brief review of the relevant literature, study questions, hypotheses and their significance, study design, including data collection, and analytic methods, as well as strengths and limitations. After the question session is completed, the audience is dismissed and just the student and the committee remain. At that point, the student is questioned about their responses on the written specialty exam as well as other questions related to the topic for approximately 50 to 60 minutes more as needed.

The committee meets privately immediately after the exam to determine whether the student passed or failed. If the student passes the oral exam, the committee signs the student's Application to Candidacy (ATC) form. If the student fails the oral exam, they have one more opportunity to pass an oral exam after completing work assigned by the committee to remedy identified deficiencies. The amount of time between exams should not be longer than a month. If performance on the oral exam is sufficiently poor after two attempts, the committee will be dissolved, and the student must identify a new topic and corresponding committee. A new committee should be formed within two months. At that time, the committee prepares a timeline for preparation and defense of the proposal and specialty exam. The timeline should be approved by the MS & PhD Graduate Director. Should the student be unable to form a new committee, he or she may be dismissed from the PhD program for failure to make satisfactory progress, as stated by the Graduate School policies.

The **Application to Candidacy** (ATC) is signed by the Committee after a successful proposal defense. (See sections on ATC and Abstract of Research).

Specialty Exam/Dissertation Proposal Defense Checklist:

- ✓ With approval of the committee, schedule the specialty exam/proposal defense.
- ✓ Reserve a room for the defense through the Graduate Program Coordinator
- ✓ Confirm that the MS & PhD Graduate Director is available at the planned time
- ✓ Formally defend the proposal with the major professor, all committee members, and MS & PhD Graduate Director present
- ✓ Electronically complete the **Application to Candidacy Form** and **Abstract of Proposed Research Form** (see below)

Abstract of Proposed Research Form

All students must submit [The Abstract of Proposed Research Form](#). Be sure to follow the example format. The abstract form must be completed electronically, including the committee's digital signatures. The completed Abstract of Proposed Research Form must be submitted with the ATC (see next section).

Application to Candidacy

[PhD Application to Candidacy \(ATC\)](#) is a document that includes a summary of courses to be applied toward a degree. The filing of this document is required when all formal course work has been completed, and **after the student has successfully defended the proposal**. The ATC must be completed **electronically**. Once the ATC form is completed, including the committee's digital signatures, the student should email the ATC form AND the Abstract of Proposed Research Form to the MS & PhD Director for their review and signature.

Once the ATC has been approved, a student is not required to enroll for 12 credit hours (or 9 credit hours if appointed as a graduate, teaching, or research assistant) to be considered full-time for tuition assistantship/scholarship, loan deferral or immigrant status. The Graduate School will automatically grant full-time certification through the expected conferral date listed on the student's ATC form. **Doctoral Candidates are responsible for contacting the Graduate Program Coordinator to confirm their full-time status for the upcoming semester upon registration for that term.**

Should doctoral candidates need to change their expected graduation term or amend their ATC, they must [file the appropriate form](#) to do so.

For international students, it is your responsibility to communicate with the [International Student Services Office \(ISS\)](#) to ensure that you are in compliance with all requirements for your student visa. Be sure to refer to the checklist on the following page.

Progress Toward Degree Completion

After successfully passing the specialty examination and defending the dissertation proposal, doctoral students are expected to make consistent progress toward completing their dissertation, including the final defense, within a reasonable timeframe. Steady advancement reflects both academic engagement and professional readiness, and students should remain in regular communication with their advisor and committee throughout this process.

Application to Candidacy Checklist:

- ✓ Electronically complete Parts 1-3 of the ATC form.
- ✓ Print your name, sign, and date the top portion of Part 4.
- ✓ Complete **Abstract of Proposed Research Form**
- ✓ Obtain major advisor and committee members' signatures on both the ATC form and abstract of proposed research form.
- ✓ Send the signed ATC form, including required attachments, and the abstract form to the MS/PhD Graduate Director for their review and signature, if satisfactory.
- ✓ The Department will obtain the Academic Dean's signature afterwards and forward the fully executed form on to the Graduate School.

- ✓ The completed ATC form must be submitted to the department **no later than FOUR weeks before the Graduate School's official deadline.**

- ✓ Department deadlines are:

August 31 for a February degree conferral

February 1 for a June degree conferral

June 1 for a September degree conferral

Read Carefully: The Application to Candidacy (ATC) form must be submitted to the Department a minimum of FOUR weeks before the Graduate School deadline. This will allow time for it to be reviewed and approved by the MS & PhD Graduate Director and Associate Dean for Academic and Student Affairs before it is forwarded to the Graduate School. Incomplete ATCs will be returned to the student. ATCs received after the Department deadline may result in delay of degree conferral.

Teaching Assistantship Requirement

PhD students are required to have a Teaching Assistant (TA) experience equal to a minimum of 10 hours/week for one semester during their doctoral program (it could be two semesters of 5 hours/week). It is suggested that this TA-ship occur during the first two 2 years of their program, prior to the prelim exams. Students must list completion of this teaching requirement within their progress reports for review by their academic advisor and the Graduate Director.

Scientific Communications Requirement

Doctoral students must demonstrate experience in both written and oral communication of scientific research. Starting in the second year in the PhD program, every doctoral student is expected to present primary research that they have been involved at least once a year. Presentations that count are expected to be in an oral or poster presentation format. This communications requirement can be met through the following: a research presentation in the EEH 650 course, a poster at the Perry Poster Day held annually, a EEH 591 seminar presentation, or a local, national or international seminar, workshops or meeting. Each spring, students must indicate their presentation(s) to complete this communications requirement within their progress reports for review by their academic advisor and the Graduate Director.

Dissertation Format and Dissertation Defense

All PhD students must complete and formally defend a dissertation approved by the student's committee. The dissertation must be examined and approved by the major professor, and all committee members. The major professor, all committee members, and the MS & PhD Graduate Director must be present for the final defense (either in person or by teleconference).

Students should allow a minimum of two weeks for their major professor/committee members to review the final version of the dissertation. The major professor/committee members may set longer time limits if needed. Students should be respectful of faculty's time/workload. Approval of the final version by the full committee is required to schedule the defense.

In addition, a minimum of two weeks (14 days) notice must be allowed for the public posting of the defense. A final unbound copy (or electronic version) of the dissertation approved by the student's committee must be on file in the department for review two weeks before defense.

The MS & PhD Graduate Director must be present at the oral defense. The student is responsible for making sure that the Graduate Director is available when the defense is scheduled.

The student's dissertation must contain the following:

1. Title page
2. Acknowledgements, including funding for the project and acknowledgement of the major thesis advisor and committee members
3. Table of Contents
4. List of Tables
5. List of Figures
6. List of Abbreviations
7. Abstract (~2 pages double spaced and includes objective(s), methods, results, conclusion.
8. Background: This should include a review of the relevant literature and describe the problem the student intends to address (~20 to 25 pages double spaced)

For each of the 3 studies in the dissertation, the following should be included:

9. A statement of rationale and study objective(s), specific aim(s), study question(s), and/or hypothesis(es) (~1 page double spaced)
10. A description of the study design and methods (~5 pages double spaced)
11. Study results (~5 pages double spaced)
12. A discussion including study strengths and limitations (~5 pages double spaced)
13. Associated table(s) and figure(s) (no page limit)
14. References (no page limit)

The total length of the thesis is estimated to be around ~70 pages double spaced not including references, tables, and figures.

The PhD dissertation defense consists of a 25 to 30-minute presentation followed by approximately 1 to 1.5 hours of questions. The presentation summarizes the dissertation work including background, rationale for the work, study questions and/or hypotheses, methods, results, and conclusions and strengths and limitations. The presentation is followed by questions from the committee and from anyone else in attendance. After the question period, the student is dismissed and the committee comes to a consensus as to whether or not the student passed and if anything additional, with respect to the dissertation, needs to be addressed prior to completion of the degree. The student is admitted back to the room and the committee decision (with a possible request for items to be addressed) is communicated to the student.

Dissertation Defense Checklist:

- ✓ Present a departmental seminar while in final stages of data analysis
- ✓ When approval from the full committee is received, schedule an oral defense of the dissertation:
 - Confirm date with committee and the MS & PhD Graduate Director
 - Confirm availability of room
- ✓ Provide the Department with an approved final copy of the dissertation. NOTE: the dissertation should be bound AFTER the defense in the event the Committee requires minor revisions as a result of the defense.
- ✓ Notify the Graduate Program Coordinator of the defense date and title of the dissertation
- ✓ A room will be reserved and a public notice will be posted for the defense. A minimum of 14 days' notice must be allowed for the posting of the defense.

M-Form

The [M-Form](#) (required for all Master's degrees with a thesis and all PhD degrees) must be completed electronically after a successful dissertation defense. Students should complete all sections of the form, leaving signature lines

blank—except for Section 3, where their own signature is required. The form should then be sent to the major advisor and all committee members for signatures, confirming the successful defense. If dissertation revisions are needed, the major advisor will hold the form and complete Section 4 only after all committee members have reviewed and approved the revisions. Once all signatures are obtained, the student must forward the form to the MS/PhD Graduate Director for final review and signature. The Graduate Director will then submit the completed M-Form to the Graduate Program Coordinator, who will send it to the Graduate School and copy the student. Students are responsible for ensuring the form is received by the Graduate School by the [official deadline](#) posted on their website.

Note: In addition to submitting the M-Form, you must also [submit your final dissertation electronically to the Graduate School](#) by the same deadline. The title of your dissertation must exactly match the title listed on your M-Form.

M-Form Checklist:

- ✓ Complete [M-Form](#) **electronically**, including committee's digital signatures, then email to MS & PhD Graduate Director for their final review and signature
- ✓ Complete online **Graduation Information Form** (see below)
- ✓ Submit electronic dissertation to Graduate School (see below)
- ✓ Submit the doctoral degree recipient survey (see below)
- ✓ Submit bound copy of the thesis to the Department (see below)

Graduation Information Form

The [EEH Graduation Information Form](#) should be submitted before program completion.

Submission of the Dissertation

The Graduate School requires electronic submission of the dissertation. Guidelines can be made at Guidelines for submission and relevant deadlines can be found on the website.

The Department requires one bound copy of the dissertation. At least two weeks should be allowed for binding the final copy. Copies should be bound in boards covered with black imitation leather, with the title and author's name embossed, not printed, on the front in gold and the author's last name, degree and year of conferral of the degree on the spine (also in gold). Students should inquire whether their major professor and each committee member desires a bound copy prior to ordering one. Some faculty members may not wish to receive a bound copy. Ordering of bound copies for committee members is the responsibility of the student.

Doctoral students should also complete the [Doctoral Degree Recipients Survey](#).

Students should also consider the benefits of [copyrighting](#) their dissertation (not required).

Guidelines for the Dissertation Document

Several style manuals are available, including

- [American Psychological Association](#)
- [Modern Language Association](#)
- [Chicago Manual of Style](#)

These sites provide information on a host of questions regarding the technical aspects of preparing the thesis or dissertation. Copies of completed dissertations are available for reference in the Department or online at the Health Sciences Library.

Research and Professional Conduct

The diversity of faculty interest areas allows for many opportunities for research. All graduate students are expected to be actively involved in research throughout their educational experience. The University and department hold standards for professional conduct (see Warning on Plagiarism).

Abstract Submission to Professional Meetings

Students intending to submit abstracts to professional meetings must obtain written approval from their advisor PRIOR to submission. All abstracts must include a full citation of authorship.

Time Limit to Complete the Degree

The time limit for completing the PhD degree is SEVEN years from the date of first registration in the degree program, not including official leaves of absence, regardless of full- or part-time status. It is expected that students take seven years only in exceptional cases. It is expected that students complete their degree within three to five years.

Extension of Time to Complete the Degree

Students unable to complete the PhD program within the time limit must file [Extension of the Time Limit to Complete a Graduate Degree Program](#) the Graduate School for an extension of time to complete the degree provided there exists adequate reason to justify such a request. The Graduate School will not approve an extension for 'personal reasons,' the request must be specific and present strong justification for the request. Students must provide a detailed description of work completed to date, a detailed month-to-month timeline for completion of the dissertation/degree, and a written endorsement from the advisor/major professor. Requests for extensions should be made at least two weeks prior to the start of the semester.

Extension of Time Checklist:

- ✓ Complete ***Petition for an Extension of the Time Limit to Complete a Graduate Degree Program***
- ✓ Be sure to sign form
- ✓ Obtain signature of advisor/major professor
- ✓ Attach written statement indicating
 - Cause of the delay
 - Detailed description of work completed thus far
 - Detailed month-to-month plan of work to be completed
- ✓ Attach written endorsement from advisor/major professor
- ✓ Forward to the Graduate Program Coordinator (do not send directly to the Graduate School)

Checklist for the PhD Degree Conferral

- ☐ 72 graduate credit hours are completed with an overall 'B' (3.0) average (a minimum of 60 credit hours of graduate course work plus a maximum of 12 credit hours of dissertation credit).
- ☐ A minimum grade of 'B' (3.0) in all required course work.
- ☐ Registration and attendance at the graduate seminars when registered full-time, certified full-time, and/or when registered for a minimum of one credit hour of Dissertation Guidance.
- ☐ Completion of primary data collection requirement
- ☐ Completion of teaching assistantship requirement
- ☐ Completion of scientific communications requirement
- ☐ Departmental seminar presentation while in the final stages of the dissertation.
- ☐ Continuous registration from the date of matriculation (unless on an approved leave of absence).
- ☐ Successful completion of the General Preliminary Exam and Specialty Exam/Dissertation Proposal Defense.
- ☐ An approved [Application to Candidacy \(ATC\)](#) filed with the Graduate School with all necessary attachments, including unofficial UB transcripts.
- ☐ Completion of UB's Responsible Conduct of Research (RCR) Training Requirement.
- ☐ Submission of an approved [The Abstract of Proposed Research Form](#).
- ☐ If beyond the seven-year time limit for completion of degree, an approved [Extension of the Time Limit to Complete a Graduate Degree Program](#) is on file in the Graduate School.
- ☐ Review unofficial transcript and address any "I" grades.
- ☐ Successful completion and defense of the dissertation.
- ☐ [M-Form](#) submitted to the Graduate School by the Graduate School's established deadlines.
- ☐ [Graduation Information Form](#) submitted to the Department.
- ☐ One bound copy of the dissertation submitted to the Department and to each member of the student's committee if desired.
- ☐ Electronic submission of the dissertation to the Graduate School.
- ☐ **Doctoral Degree Recipients Survey** submitted to the Graduate School by the [published deadline](#) based on conferral date.

* **Read Carefully:** The Application to Candidacy (ATC) form must be submitted to the Department a minimum of FOUR weeks before it is due to the Graduate School. This will allow time for it to be reviewed and approved by the MS & PhD Graduate Director and Associate Dean for Academic and Student Affairs before it is forwarded to the Graduate School. Incomplete ATCs will be returned to the student. ATCs received after the Department deadline may result in delay of degree conferral.

PHD COMPETENCIES

PhD Competencies

PHD C1. Application of Methodology.

Apply advanced understanding and application of epidemiologic methodologic issues to plan, execute and interpret results from varied epidemiologic research study designs. (EEH 601 Advanced Epidemiological Study Design).

PHD C2. Advanced Analysis and Data Interpretation.

Utilize expertise in advanced analysis and interpretation of data, such as data cleaning, data file construction, and management or implementation of analytic strategies. (EEH 611 Analysis of Health Data)

PHD C3. Develop a Research Study Proposal and Appropriate Data Collection

Design a research study proposal) that could be reviewed by an external group.

(EEH 602 Theory and Implementation in Clinical Trial Design and EEH 700 Dissertation Guidance).

PHD C4. Written and Oral Communicate Skills.

Effectively communicate orally and in writing the results of an epidemiology research study in the form of an abstract, manuscript, poster, or oral presentation in a peer-review setting.

(EEH 700 Dissertation Guidance)

PHD C5. Culminating Dissertation.

Perform as a dissertation, a hypothesis-driven epidemiologic research study that includes a minimum of three aims publishable as manuscripts that demonstrate mastery and understanding in one or more overarching content area. This includes developing testable hypotheses using appropriate data and study design(s), conducting data analysis, and interpreting study results in epidemiologic and broader contexts.

(EEH 700 Dissertation Guidance).

PHD C6. Ethical Conduct of Human Subjects Research

Apply the basic ethical and legal issues pertaining to the collection, use and dissemination of data; such as knowledge of human subjects protections to research activities. (EEH 650 Research and Professional Development)

NOTE: In addition to the competencies listed above, competencies of the Epidemiology MS degree will also be attained through the Epidemiology PhD program.

GRADUATE COURSE LIST BY TOPIC AREA

** Course designed for advanced doctoral students.

Epidemiologic Research Methods and Core Courses

- EEH 500 Introduction to Epidemiology
- EEH 501 Principles of Epidemiology
- EEH 502 Advanced Methodology
- EEH 505 Application of Biostatistics to Epidemiology I
- EEH 510 Principles of Measurement in Public Health
- EEH 601 Advanced Epidemiologic Study Designs**
- EEH 602 Theory and Implementation in Clinical Trial Design
- EEH 610 Fundamentals of Grant Development**
- EEH 611 Analysis of Health Data**

Health Services Administration

- EEH 530 Introduction to Health Care Organization
- EEH 531 Administrative Theory and Practice for Public Health Practitioners
- EEH 532 Financial Management for Public Health Professionals
- EEH 533 Understanding Culturally Responsive Health Care
- EEH 536 Health Policy in the United States
- EEH 537 Public Health: Legal and Ethical Perspectives
- EEH 538 Introduction to Health Economics
- EEH 539 The Business of Health Care
- EEH 545 Applied Data Analysis for Population Health Research

Environmental Health

- EEH 550 Environmental Health
- EEH 551 Advanced Environmental Health Sciences
- EEH 555 Exposure Assessment in Environmental Health Research

Epidemiology Electives

- EEH 529 Field Epidemiology
- EEH 570 Cancer Epidemiology
- EEH 571 Epidemiology of Cardiovascular Disease
- EEH 572 Nutritional Epidemiology
- EEH 573 Epidemiology of Infectious Diseases
- EEH 574 Epidemics and Outbreaks
- EEH 575 Epidemiologic Applications to Environmental Health
- EEH 577 Perinatal Epidemiology
- EEH 623 Genetic Epidemiology**
- EEH 670 Advanced Cancer Epidemiology and Prevention**
- EEH 672 The Role of Physical Activity in the Etiology, Treatment and Prevention of Chronic Disease**
- EEH 673 Molecular Epidemiology**
- EEH 674 Fundamentals of Genetic Epidemiology**

Seminars

- EEH 590 Leadership, Collaboration and Negotiation in Public Health
- EEH 591 Graduate Seminar

Informal Courses, Field Training, Thesis and Dissertation Guidance

- EEH 544 MPH Field Training

EEH 547 MPH Field Training Elective
EEH 596 Special Topics
EEH 597 Independent Study Master's
EEH 600 Thesis Guidance
EEH 630 MPH Culminating Project
EEH 650 Research and Professional Development
EEH 696 Selected Topics
EEH 697 Independent Study PhD
EEH 698 Directed Research
EEH 700 Dissertation Guidance

Other EEH Public Health Courses

EEH 520 Biological Basis of Public Health
EEH 521 Global Health

GRADUATE COURSE/SEMINAR DESCRIPTIONS

All courses are 3 credit hours unless otherwise indicated. If prerequisites are required, a grade of B or higher must be earned in the prerequisite course. Elective offerings vary each semester; consult the current class schedule in [HUB](#) for details on course availability (by semester and frequency) and instructor assignments.

Courses - Department of Epidemiology and Environmental Health

EEH 500 Introduction to Epidemiology

This course is intended to provide a basic introduction to principles and methods of epidemiology. The course emphasizes the conceptual aspects of epidemiologic investigation and application of these concepts in public health and related professions. Topics include overview of the epidemiologic approach to studying disease; the natural history of disease; measures of disease occurrence, association and risk; epidemiologic study designs; disease surveillance; population screening; interpreting epidemiologic associations; causal inference using epidemiologic information; and application of these basic concepts in the context of selected major diseases and risk factors. Please note that this course cannot be used for degrees that require EEH 501 or as a prerequisite for courses that require EEH 501.

Prerequisite: None

Fall and Spring Semesters/Annual

EEH 501 Principles of Epidemiology (4 credits)

Introduction to the basic principles, methods, and uses of epidemiology. This course is a master's/doctoral level course designed to introduce epidemiology, its methods and its role in public health. A major portion of the course will be devoted to an overview of fundamental epidemiologic methods used in public health research and practice. The student will be familiarized with basic measures used in describing disease frequency in populations. Descriptive and analytic approaches to the study of disease will be explored, and a perspective on the role of epidemiologic methods in health services planning and evaluation will be provided. Problem solving exercises will be used to provide students with an opportunity to tabulate data and apply subject matter developed during lectures and in reading assignments. At the end of the course students should have a general understanding of the uses and limitations of epidemiologic inquiry. This understanding should provide the basis for applying epidemiologic concepts in work-related settings and in other courses in the public health curriculum.

Prerequisite: None

Fall Semester/Annual

EEH 502 Advanced Methodology

Provides information on advanced topics in epidemiological methods. Emphasis is on various concepts related to the conduct of epidemiologic research. This course extends understanding of topics presented in EEH 501 and presents new topics in advanced epidemiologic methods.

Prerequisite: EEH 501

Spring Semester/Annual

EEH 505 Application of Biostatistics to Epidemiology I (3 credits)

The course is for students in the public health sciences who seek to develop data analysis skills. The course includes emphasis on the application and interpretation of statistical tests using SAS software. Students will learn basic methods for data organization and management as well as skills in data exploration, graphical and tabular display. Topics include descriptive statistics, hypothesis testing for means, proportions, elementary non-parametric techniques, tests, ANOVA, correlations, linear and logistic regression. The course culminates in a group data analysis project.

Prerequisite: None

Fall Semester/Annual

EEH 506 Application of Biostatistics to Epidemiology II (4 credits)

This course is designed to teach students how to perform multivariate statistical analysis commonly used in epidemiologic studies. Topics include correlation, multivariate logistic and linear regression, regression diagnostics, modeling strategies, and survival analysis. Students learn SAS coding in the lab session.

Prerequisites: EEH 501, EEH 502 (concurrent registration), EEH 505, and STA 527

Spring Semester/Annual

EEH 510 Principles of Measurement in Public Health

An explanation of basic principles and methods of measurement and their application in public health-related research. These include development and use of different types of instruments and scales for measuring behavioral and social constructs and biological characteristics; effects of measurement error; traditional and innovative methods of data collection; validity and reliability of measurement; response rates; misuse and misinterpretation of results. Students will apply the course content to a construct or characteristic chosen at the beginning of the course.

Prerequisite: None

EEH 520 Biological Basis of Public Health

Intended for students with little or no background in the biological sciences and health professions. The course provides a broad overview of public health topics related to human health and disease focusing on disease etiology with particular emphasis on parasitic and microbial infections plus a review of the anatomy, physiology, and pathology of selected major organ systems and associated diseases of public health importance.

Prerequisite: None

Spring Semester/Annual

EEH 521 Global Health

Provides an overview of compelling public health problems among the world's poor. Topics addressed will include infectious diseases such as malaria, HIV/AIDS, and tuberculosis; the rise of tobacco-related disease; the role of water, hygiene, and sanitation in the prevention of disease; maternal and neonatal mortality; surveillance; and disaster response in the resource-poor setting. Students will gain practical experience in developing and presenting strategies for the implementation and evaluation of public health programs in the resource-poor setting.

Prerequisite: None

Spring Semester/Annual

EEH 529 Field Epidemiology

This graduate-level course is devoted to "Field Epidemiology" - the timely and practical application of basic epidemiology principles in real time, place, and in community settings, to solve urgent or emergent public health problems. The course is based on both science and experience, real problems, real places, and real people, addressing issues related to observational epidemiology in comparison with experimental epidemiology. Students will learn how to assess and address an outbreak, talk with the media and engage the community regarding health impacts and concerns. Students will learn how to conduct a field investigation, start a surveillance system, how to apply science, technology, and common sense to meet real life problems at the grassroots, local, regional, tribal, state, and federal levels of public health. The course will include hands-on exercises where students will be given real world scenarios and be asked to use the methods and techniques taught in class to resolve the problem.

Prerequisite: None

Fall Semester/Annual

EEH 530 Introduction to Health Care Organization

Introduces students to the historical development, structure, operation, and current and future directions of the major components of the American health care delivery and public health systems. It examines the ways in which health care services are organized and delivered, the influences that impact health care public policy decisions, factors that determine priorities in financing health care services and the relationship of health care costs to measurable benefits. The course enables students to assess the role of organized efforts to influence health policy formulation, and the contributions of medical technology, research findings, and societal values to the evolving U.S health care delivery system. Class time is also devoted to exploring emerging policy, ethical and legal dilemmas resulting from medical and technological advances.

Prerequisite: None

Fall & Spring Semesters/Annual

EEH 531 Administrative Theory and Practice for Public Health Practitioners

Provides students with an overview of the development of management and leadership concepts within health care organizations. Delves into the strategic and policy issues challenging health care systems (access, financing, defining and quantifying quality, etc.). Provides a practical framework of the professional competencies and skills needed to be an effective administrator within a complex health care system.

Prerequisite: EEH 530

Summer & Fall Semesters/Annual

EEH 532 Financial Management for Public Health Professionals

The course introduces students to fundamental management principles of budgeting and accounting used in health care organizations and assumes no prior knowledge in accounting or financial management. This course will focus on the relationship between financial management and organizational decision making in order to maximize efficiency as defined by the provision of the maximum amount of high-quality care utilizing the least amount of inputs. In this course we will learn basic healthcare financial management and accounting terminology and how to apply financial information to organizational planning, implementation, and methods to evaluate and control costs. Managerial accounting techniques of capital and cash budgets, indirect cost allocation, and variance analysis will be reviewed as well as their relation to operating an efficient organization. Students will learn how to analyze an organization's financial condition through balance sheets, cash flow statements, and publicly reported financial documents. We will review the workings of capital markets (bond and equity), asset valuation techniques, and financial decision-making based on *pro forma* analysis and lease versus buy as it relates to service expansion and debt financing. Students mastering these techniques will be able to apply them in a variety of healthcare settings to help the organization employing them meet mission-based and strategic and tactical objectives.

Prerequisite: None

Spring Semester/Annual

EEH 533 Understanding Culturally Responsive Health Care

This course introduces students to an overview of the importance of using culturally responsive care in health service to inform policy, through a flipped classroom approach. Students will be able to apply knowledge from the core concepts in this course to address inconsistencies within the current U.S. health care system. This course provides a review of theories and models that enhance understanding of a culturally responsive approach to health care. Course content will be integrated through student writing and experiential exercises.

Prerequisite: None

Fall Semester/Annual

EEH 536 Health Policy in the United States

Introductory course that explores the U.S. public policymaking process and its impacts upon the determinants of the population's health status including environmental, socio-cultural, ethnic, demographic, economic, lifestyle, service access and other factors. The course provides an historical overview of benchmark developments in U.S. health care, highlighting significant influences that transformed the industry into its current form. With the incremental evolution of U.S. health policy as the context, the course discusses individual and societal values concerning health and the operation of the political system. Each step of the policymaking process highlights the roles of key players in the legislative, judiciary and executive branches of government. The course identifies and characterizes health care system stakeholders ranging from private citizens to powerful industry lobbying organizations and the means and methods used to influence the formulation, implementation and modification of health policy. The course concludes with a discussion of the characteristics and role of political competence in the U.S. policymaking process.

Prerequisite: None

Fall Semester/Annual

EEH 537 Public Health: Legal and Ethical Perspectives

Provides an understanding of how the law serves as a tool in advancing a public health agenda. The class is interdisciplinary, including law students and students from public health-related fields. The course examines the history of public health law, the tension between state and federal governments in the regulation of the public's health, and the conflicts between governmental powers and individual autonomy. The course considers the standard practice of public health professionals to prevent disease and promote healthy behaviors in the wake of emerging public health challenges such as racial disparities in health care, a potential flu pandemic, the obesity epidemic, and the abortion debate.

Prerequisite: None

Spring Semester/Annual

EEH 538 Introduction to Health Economics

Provides the ability to apply economic reasoning to health care markets. Topics include: organization of the hospital, payment systems, costs and charges, the market for physician services, cost-effectiveness analysis, outcomes research, and health care reform.

Prerequisite: None

Spring Semester/Annual

EEH 539 The Business of Health Care

This course is designed to be an overview of the health care industry and a framing of the severe challenges facing leaders in the field. It will take a business approach to the issues presented but will always juxtapose financial issues

with value creation. It begins with a short look at classic economics, and why they do not always apply in health care. It will take an in-depth look at the Patient Protection and Affordable Care Act, and the implications it has on all parts of the industry. It will follow with a review of each component of the industry: government, health plans, employers, providers, and suppliers. Each review will focus on the unique challenges leaders are facing in a dynamic changing environment.

Prerequisite: None

Spring Semester/Annual

EEH 544 MPH Field Training (1-3 credits)

Allows students to synthesize the knowledge and skills developed during the academic portion of their program in a practical application setting. Field training experiences vary depending upon the student's interest and concentration area; experiences need to be approved by the MPH concentration director.

Prerequisite: None

Fall/Spring/Summer Semesters/Annual

EEH 547 MPH Field Training Elective

The objective of the Master of Public Health (MPH) supervised field training experience is for students to synthesize the knowledge and skills developed during the academic portion of their program in a practical application setting. The field training experiences are of various types depending upon student interest, concentration and opportunities available at a field training site. Students may work on a specific project during the field training and/or participate in ongoing activities of a site, as appropriate. Students participating in a second field training experience to use as an elective towards their program register for EEH 547.

Prerequisite: None

Fall/Spring/Summer Semesters/Annual

EEH 550 Environmental Health

Introductory course that explores the role of environmental factors in health with an emphasis on characterization, assessment, and control of environmental hazards. Topics include application of toxicologic and epidemiologic methods in assessing risk and setting exposure limits; the nature of and control of hazards associated with food, water, air, solid and liquid waste, occupation, and radiation; risk communication and management, environmental justice; and environmental laws. The course concludes by examining the impact of human activity, such as energy use and pollution, on the environment and how human-induced environmental change, in turn, impacts public health and that of the planet as a whole.

Prerequisite: None

Fall & Spring Semesters/Annual

EEH 551 Advanced Environmental Health Sciences

Advanced course designed to provide students with the latest knowledge and an in-depth discussion of how the environment interacts with human biological systems and potentiates various health effects over the life cycle. The course includes a detailed examination of environmental hazards, exposure assessment, human susceptibility, biological response pathways, application of biomarkers in environmental health studies and the disease burden of environmental exposure. The course focuses on three major environmental topics: air pollution, water pollution and food safety.

Prerequisites: EEH 501 and EEH 550

Spring Semester/Annual

EEH 555 Exposure Assessment in Environmental Health Research

This course provides a graduate level overview of environmental exposure assessment. Exposure assessment is a key component of environmental health sciences. This class will examine broad spectrum of environmental hazards (e.g., chemical, biological, and physical hazards) covering all major exposure media (air, water, soil, food, etc.). The course is intended to give students a basic knowledge of the design of environmental monitoring and modeling studies, the techniques and equipment used for sampling and analysis, interpretation of data, and how to link exposure assessment with environmental health. Students will be able to apply this knowledge to the assessment of exposure risk in a variety of environmental situations. The linkages among external concentrations, spatial and temporal parameters, exposure pathways (inhalation, ingestion, and dermal contact), internal dose, and biomarker expression are developed within the context of environmental exposure and risk assessment.

Prerequisites: None

Fall Semester/Annual

EEH 570 Cancer Epidemiology

Provides an in-depth overview of the epidemiology on various cancer sites. Standard methodologies and analytic techniques used in cancer epidemiology will be covered. Attention given to critical review of known or suspected cancer risk factors. Cross listed with RGP 585

Prerequisite: None

Spring Semester/Annual

EEH 571 Epidemiology of Cardiovascular Disease

The pathophysiological basis of the major cardiovascular diseases is studied in relation to their clinical and epidemiological characteristics. Findings from major epidemiological studies and clinical trials are reviewed, and their implication for preventive measures are discussed.

Prerequisite: EEH 501

Fall Semester/Annual

EEH 572 Nutritional Epidemiology

Discusses the major strengths and weaknesses of dietary assessment methods used in epidemiologic studies to investigate associations between diet and disease (e.g., 24-hour recalls, food records, food frequency questionnaires, nutritional biomarkers). An introduction to nutritional epidemiologic analysis will be presented and discussed including analysis of nutrients, foods, and dietary patterns. Critical evaluation of nutritional epidemiologic literature will be practiced.

Prerequisite: EEH 501

Spring Semester/Biennial

EEH 573 Epidemiology of Infectious Diseases

Focuses on the theory and epidemiologic methods used in the epidemiologic study of infectious diseases. Emphasis is on the investigation of infectious disease outbreaks, evaluations of vaccine efficacy and effectiveness, and surveillance for infectious diseases of public health importance. The course includes an examination of the following infectious diseases, among others: HIV/AIDs, influenza, foodborne disease, sexually transmitted infections, dengue fever, and vaccine-preventable diseases.

Prerequisite: EEH 501

Fall Semester/Annual

EEH 574 Epidemics and Outbreaks

Advanced course studying recent outbreaks of infectious disease. Each session will deal with an individual agent, review recent outbreaks, and discuss public health implications. Emphasis will be placed on epidemiologic principles, maneuvers by public health authorities to investigate and contain outbreaks, and relationships to the media. Topics and outbreaks will be selected with immediacy and relevance to public health.

Prerequisite: None

EEH 575 Epidemiologic Applications to Environmental Health

Provides epidemiology and environmental health students with a working knowledge of epidemiologic theory and practice applied to issues of environmental health. Case studies and specific environmental issues will be used to illustrate the application of epidemiologic theory to understand the role of environmental factors in the etiology of disease.

Prerequisite: EEH 501 or EEH 500

Fall Semester/Annual

EEH 577 Perinatal Epidemiology

Provides an overview of the current field of perinatal epidemiology, including study designs, exposure and outcome measurement, data resources, and methodological challenges most relevant to the field. Topics of interest will include pregnancy and delivery complications, maternal and fetal morbidities and mortality, and maternal and paternal adverse exposures.

Prerequisite: EEH 501

Fall Semester/Biennial

EEH 590 Leadership, Collaboration and Negotiation in Public Health (2 credit)

This course introduces students to major public health issues from a practice-based perspective. Through presentations by public health leaders and practitioners, readings, group discussion, class activities and analyses, students practice integrating concepts to better understand issues, and develop recommendations for responses based on evidence, and ethical and cultural considerations. Primary areas of exploration for this course are ethics, evidence, policies, leadership, collaboration, cultural competence and communication. Course content focuses on

major public health issues today and comes from the Centers for Disease Control and Prevention (CDC), American Public Health Association (APHA), World Health Organization (WHO), local and state health departments, community-based organizations, healthcare organizations, and other agencies. There is no proscribed text or bibliography for the course. Presenters may, however, provide material as appropriate for distribution to students.

Prerequisite: None

Fall/Spring Semesters/Annual

EEH 591 Graduate Seminar (0 credits)

Intended to inform faculty and MS and PhD students in EEH about new and continuing areas of research and public policy issues in public health and epidemiology. Invited speakers will include EEH and Roswell Park faculty, graduate students, faculty from other departments at the University at Buffalo, and nationally and internationally recognized experts in public health and epidemiology from outside the University.

Prerequisite: None

Fall/Spring Semesters/Annual

EEH 596 Special Topics (3 credits)

Special topics for master's students (MS and MPH) determined by individual faculty interest.

Prerequisite: None

Fall/Winter/Spring/Summer Semesters

EEH 597 Independent Study Master's (1-6 credits)

For master's students (MS or MPH) with special interests not satisfied through the formal course work, there is an opportunity to pursue independent study under the direction of a faculty member.

Prerequisite: Permission of instructor

Fall/Winter/Spring/Summer Semesters/Annual

EEH 600 Thesis Guidance (1-10 credits, can only register for a maximum of 6 credits/semester)

Through the thesis students will design, implement, complete and report on significant and original, independent epidemiologic research. Students will conduct their research under the supervision of their major professor and a thesis committee. A maximum of 6 credits allowed per semester.

Prerequisite: None

Fall/Winter/Spring/Summer Semesters/Annual

EEH 601 Advanced Epidemiologic Study Designs

Advanced course focused on development and design of studies using the two major observational study designs in epidemiologic and public health research: cohort studies, and case-control studies. Topics covered include developing a study question, identifying, recruiting, and enrolling a study population, exposure assessment, ascertaining valid outcomes, bias and confounding, analytic considerations, monitoring adverse events, participant well-being, ethical considerations, and reporting and interpreting study findings. Students gain practical experience in critiquing published research that uses these study designs, and in developing a research question and designing an appropriate study utilizing the study designs to address the question.

Prerequisites: EEH 501 and EEH 502

Fall Semester/Annual

EEH 602 Theory and Implementation in Clinical Trial Design

The focus of this course is on basic and advanced concepts in the planning and execution of randomized trial study designs and the interpretation of results from this research. This course will cover simple randomization, cluster randomization, and other randomization designs and discuss the tradeoffs between different designs. We will discuss issues related to drug trials as well as complex interventions. Students should be able to write a study protocol by the completion of the course. Practical examples as well as discussions of theoretical issues will be the focus. This course is designed for graduate students pursuing a PhD in epidemiology, an MS in epidemiology, and students enrolled in the Graduate Certificate in Clinical Research. Other students (MD, MPH) with understanding of the theory and practice of epidemiologic, public health, and biomedical research may also be interested in this course with instructor permission.

Prerequisites: EEH 500 or EEH 501

Fall Semester/Annual

EEH 610 Fundamentals of Grant Development

This course is designed for advanced PhD students who are committed to obtaining extramural support for scientific research. This course involves interactive class discussion of readings focused on planning and writing grants, with emphasis on funding from the National Institutes of Health (NIH). This class covers how to obtain information on

funding opportunities, understanding the language of grants, development of the common sections of grant proposals, and understanding the grant review process. This course also involves an introduction to budget planning and Institutional Review Board (IRB) requirements for grant submission. All students are required to design and write a research proposal according to NIH guidelines. Students who enroll in the course should have a grant proposal topic of interest to them at the start of class. In addition to class discussions on assigned readings, class time is also be used as a workshop for grant writing and feedback on grant drafts.

Prerequisites: EEH 501, EEH 502, EEH 505, and STA 527

Spring Semester/Biennial

EEH 611 Analysis of Health Data (4 credits)

Provides students in the health sciences with practical experience in preparing, analyzing and reporting findings from epidemiologic and other health-related data. Using existing epidemiologic data sets, students complete exercises related to data cleanup, data file construction and management, basic descriptive statistics, analytical strategies, biostatistical analysis, and data interpretation. Course requirements include analysis and reporting of findings from analysis of existing health-related data.

Prerequisites: STA 527, or permission of instructor

Spring Semester/Annual

EEH 623 Genetic Epidemiology (1 credit)

This course is an introduction of the field of genetic epidemiology, which is focused on the study of the genetic etiology of phenotypic variation in humans. Topics include human genetics, heritability, linkage disequilibrium and genome-wide studies. The course covers the utility of family- and population-based studies. Current concepts in the genetics of complex traits such as Mendelian randomization, interaction of genes and environmental factors, pharmacogenetics, and next generation sequencing are included. Students will participate in critical review of literature will enhance the ability to interpret population-based genetic studies.

Prerequisites: EEH 501, STA 527 or permission of instructor)

EEH 630 MPH Culminating project (3 credits)

The purpose of the culminating projects is for MPH students to integrate core public health knowledge and skills. It will take the form of a paper prepared during the concluding semester of the student's program.

Prerequisite: Permission of instructor

Fall/Winter/Spring/Summer Semesters/Annual

EEH 650 Research and Professional Development (0-1 credit)

The goal of this course is to provide a venue for constructive feedback on ongoing research in the department. This course gives an opportunity for EEH students to present new hypotheses, ongoing research and manuscript in development. We encourage all students (MPH, MS, and PhD), postdoctoral fellows, and faculty to participate. The following types of topics can be presented 1) a proposal for a planned study or analysis, 2) results from, or issue with, and ongoing analysis, or 3) a practice talk on a completed project. This course is not a journal club. Work presented by a student should be reviewed and agreed on by the faculty advisor. It is strongly suggested that the advisor be invited to the presentation by his/her student. Additionally, several sessions each semester will be devoted to practical skill development and discussions about career development. Topics may vary from year to year but are likely to include skills like preparing effective presentations, conducting literature reviews, ethics in publishing, applying for a job, registering study protocols, (re)writing articles for different audiences, and professional development discussions on developing a scholarly/research career, building strong support networks, navigating large team dynamics, physical and mental self-care, and growing within institutions.

Prerequisites: None Spring/Fall Semester/Annual

EEH 670 Advanced Cancer Epidemiology and Prevention

Seminar course focused on an understanding of and critical evaluation of research in cancer biology and cancer epidemiology including an in-depth examination of methodological issues.

Prerequisites: EEH 501, EEH 502, EEH 505, EEH 570, and STA 527

EEH 672 The Role of Physical Activity in the Etiology, Treatment and Prevention of Chronic Disease

Designed for students interested in expanding their knowledge and understanding of physical activity research and the public health implications of an active or inactive lifestyle. The major emphasis will be on methodological issues in physical activity research, and the role of physical activity in health and chronic disease. The course is intended to develop critical thinking, research, and decision-making skills for independent researchers and clinicians.

Prerequisite: EEH 501

EEH 673 Molecular Epidemiology

Molecular epidemiology deals with the contribution of potential genetic and environmental risk factors, identified at the molecular and biochemical level, to the etiology, distribution and control of disease in populations. An understanding of molecular mechanisms involved in disease etiology, and their potential uses in epidemiology is the focus. This course lays the groundwork for reading, interpreting, and critically appraising molecular epidemiologic studies, as well as incorporating molecular methodology into one's own research designs.

Prerequisites: EEH 501, EEH 502, EEH 505, and STA 527

Fall Semester/Biennial

EEH 674 Fundamentals of Genetic Epidemiology

An overview of the field of genetic epidemiology including how to study the genetic causes of phenotypic variation. Topics include human genetics, molecular genetics, and population genetics as they apply to the conduct of a genetic epidemiology study. The concepts of heritability and linkage disequilibrium are covered. The course covers aspects of segregation, linkage, and association as they are used in family- and population-based studies to search for disease-associated genes. Current concepts in the genetics of complex traits as well as an exploration of online databases used in genetic epidemiology are included.

Prerequisites: EEH 501, EEH 502, EEH 505, and STA 527

EEH 696 Selected Topics (3 credits)

Selected topics for PhD students determined by individual faculty interest.

Prerequisite: None

Fall/Winter/Spring/Summer Semesters

EEH 697 Independent Study PhD (1-9 credits, can only register for a maximum of 6 credits/semester)

For PhD students with special interests not satisfied through the formal course work, there is an opportunity to pursue independent study under the direction of a faculty member.

Prerequisite: Permission of instructor

Fall/Winter/Spring/Summer Semesters/Annual

EEH 698 Directed Research (1-15 credits, can only register for a maximum of 6 credits/semester)

For PhD students to engage in research under the mentorship of a faculty member.

Prerequisite: Permission of instructor

Fall/Winter/Spring/Summer Semesters/Annual

EEH 700 Dissertation Guidance (1-12 credits, can only register for a maximum of 10 credits/semester)

Through the dissertation, students design, implement, complete and report on significant and original, independent epidemiologic research. Students conduct their research under the supervision of their major professor and a dissertation committee. A maximum of 10 credits allowed per semester.

Prerequisite: None

Fall/Winter/Spring/Summer Semesters/Annual

EPIDEMIOLOGY AND ENVIRONMENTAL HEALTH CORE AND TEACHING FACULTY

The following EEH teaching faculty list includes individuals who teach EEH courses and those who can serve as primary mentors for EEH MPH, MS and PhD students. For the most up-to-date listing of EEH faculty, please refer to our [department website](#).

Gloria Aidoo-Frimpong, PhD, MPH, MA, University at Buffalo; MPH, MA, Ohio University. Assistant Professor, Epidemiology and Environmental Health. Major interests: Global HIV/AIDS prevention and care, immigrant and refugee health, health disparities and health equity, technology-based research methods (e.g., social media platforms such as WhatsApp), implementation science, reproductive and sexual health, and mixed-methods research.

Katharine Amato, PhD '15, MPH '10, University at Buffalo. Research Assistant Professor, Epidemiology and Environmental Health. Major interests: Cancer survivor outcomes, cancer survivor quality of life, financial toxicity, survivorship program development and implementation, and primary care provider engagement in the delivery of survivorship care. Also, tobacco cessation research, especially regarding cancer patient tobacco cessation efforts.

Christine Ambrosone, PhD, University at Buffalo. Professor of Oncology; Senior Vice President, Population Sciences; Chair, Cancer Prevention & Control, Roswell Park Comprehensive Cancer Center; Research Professor, Epidemiology and Environmental Health. Major interests: Molecular epidemiology, cancer treatment outcomes, risk factors associated with the development of breast cancer.

Kelly Baker, PhD, University of Maryland Baltimore. Associate Professor of Epidemiology and Environmental Health. Major interests: Maternal and child health, One Health, Infectious Disease prevention and control, global development and health, climate change, flood borne outbreaks, water insecurity, water quality, antimicrobial resistance, rapid diagnostics, STEM education, transdisciplinary collaboration.

Matthew Bonner, PhD '03, MPH, University at Buffalo, MPH, University of Rochester. Associate Professor, Epidemiology and Environmental Health. Major interests: Environmental and occupational epidemiology, cancer epidemiology, exposure to pesticides, air pollution, radon, polycyclic aromatic hydrocarbons, phthalates.

Renee Cadzow, PhD, MA, University at Buffalo. Assistant Professor, Epidemiology and Environmental Health. Major interests: Community Health Workers; maternal and child health; stress; patient-centered, culturally responsive care; community engagement; health disparities.

Benjamin Chapman, PhD, MPH, MS, University of North Texas; MPH, MS, University of Rochester. Professor, Epidemiology and Environmental Health. Major interests: Life course and social epidemiology, later life cognitive function and dementia, biopsychosocial factors and processes associated with longevity and later life morbidity, epidemiologic methods, psychometrics, and statistics.

Kristen Cowan, PhD, MPH, University of North Carolina Chapel Hill; MPH, Emory University. Assistant Professor, Epidemiology and Environmental Health. Major interests: Environmental epidemiology, spatial epidemiology, disaster preparedness and response health impacts of climate-related hazards, health effects of air pollution, structural inequities.

Karen Craik, EdD, MHA, D'Youville University. Clinical Assistant Professor, Epidemiology and Environmental Health. Major interests: Public health policy, health care policy, social determinants of health.

Robyn Cree, PhD, Yale University. Clinical Assistant Professor, Epidemiology and Environmental Health. Major interests: Disability and health equity, mental and behavioral health, emergency preparedness, response, and recovery, program evaluation, and qualitative and mixed methods.

Dennis Daniels, Jr., PhD, Indiana University, Clinical Assistant Professor, Division of Health Services Policy and Practice, Epidemiology and Environmental Health. Major interests: specialization in theory-based, primary level and harm reduction intervention program design and evaluation; active learning-based pedagogy, and a focus on population health issues, health education, and social equity.

Gauri Desai, PhD '20, MPH, University at Buffalo, MPH, Indiana University Bloomington. Clinical Assistant Professor, Epidemiology and Environmental Health. Major interests: Effects of toxic chemicals on child health, maternal and child health, nutritional interventions among children.

Marina Oktapodas Feiler, PhD, University of Rochester, MS '15, University at Buffalo. Assistant Professor, Epidemiology and Environmental Health. Major interests: Pediatric environmental epidemiology with a focus on maternal and pediatric exposure to various environmental toxins/toxicants (e.g. lead, perfluorinated compounds, and phthalates) and the impact on immune dysfunction, endocrine disruption, respiratory disease, vaccine response, allergy, and breastfeeding success.

Jo Freudenheim, PhD, MS, RD University of Wisconsin-Madison. SUNY Distinguished Professor and Chair, Epidemiology and Environmental Health. Major interests: Molecular epidemiology, nutrition, life course epidemiology, cancer, especially breast cancer, microbiome and cancer.

Andrew Hyland, PhD '98, University at Buffalo. Chair, Department of Health Behavior, Division of Cancer Prevention & Population Sciences, Roswell Park Comprehensive Cancer Center; Director, New York State Smokers' Quitline; Research Professor, Epidemiology and Environmental Health. Major interests: Evaluation of tobacco policies, cancer and tobacco surveillance, biostatistical support.

Mark Janko, PhD, MSPH, University of North Carolina-Chapel Hill. Assistant Professor, Epidemiology and Environmental Health. Major interests: Climate Change and Health, vector-borne diseases, hierarchical Bayesian modeling, Amazon and Congo Basins, Madagascar, Panama.

Katarzyna (Kasia) Kordas, PhD, Johns Hopkins Bloomberg School of Public Health. Associate Professor, Epidemiology and Environmental Health. Major interests: Environmental epidemiology, global health, toxic metals and metal mixtures and child development, nutrient-metal interactions, dietary predictors of toxicant exposure, gene-environment interactions.

Kim Krytus, PhD, MSW, MPH, CPH, University at Buffalo. Director of MPH initiatives at School of Public Health and Health Professions. Major interests: public health practice, global health, refugee healthcare and community health assessments with Native American Nations.

Michael LaMonte, PhD, MPH, University of Utah; MPH, University of South Carolina. Research Professor, Epidemiology and Environmental Health. Major interests: Epidemiology of physical activity/functional capacity; epidemiology of cardiovascular disease and periodontal disease, preventive medicine, healthy aging with focus in postmenopausal women.

Denise Lillvis, PhD, University of Michigan, Assistant Professor, Division of Health Services Policy and Policy, Epidemiology and Environmental Health. Major interests: Child health, childhood immunizations and physical trauma in the pediatric population.

Joshua Malecki, EdD, D'Youville College. Research Assistant Professor, Epidemiology and Environmental Health. Major interests: Veteran healthcare.

James Marshall, PhD, University of California at Los Angeles. Distinguished Professor Emeritus, Roswell Park Comprehensive Cancer Center; Research Professor, Epidemiology and Environmental Health. Major interests: Chemoprevention strategies in human populations, diet and breast cancer, epidemiologic analysis of predictors of genetic mutation in adenomatous polyps, familial colon cancer registries, endometrial cancer, metabolic factors among multi-ethnic populations.

Pauline Mendola, PhD '94, University at Buffalo. Chair, Professor, Epidemiology and Environmental Health. Major interests: Environmental factors that impact reproductive and pediatric health with a strong focus on the interplay of immune function (asthma, allergy, maternal-fetal tolerance), oxidative stress and air pollution in relation to preterm delivery, preeclampsia and other complications of pregnancy. Women's health includes investigations of chronic disease (autoimmune disorders, hypertension, diabetes) during pregnancy and long-term health effects related to pregnancy complications.

Joshua Miller, PhD, University of North Carolina Chapel Hill. Assistant Professor, Epidemiology and Environmental Health. Major interests: Child and adolescent health, diet healthfulness, food insecurity, global health, health disparities, water insecurity.

Amy Millen, PhD, University of Wisconsin-Madison. Associate Professor, Epidemiology and Environmental Health. Major interests: Nutritional epidemiology, diet and age-related chronic disease (age-related eye disease, periodontal disease, and cancer), micronutrient exposure with emphasis on vitamin D.

Albina Minlikeeva, PhD '17, MPH, University at Buffalo. MPH SUNY Upstate Medical University. Research Assistant Professor, Epidemiology and Environmental Health. Major interests: Exploring modifiable and unmodifiable risk and survival factors associated with ovarian cancer.

Kirsten Moysich, PhD '96, University at Buffalo. Distinguished Professor of Oncology and Academic Program Chair, Department of Cancer Pathology and Prevention, Roswell Park Comprehensive Cancer Center; Research Professor, Epidemiology and Environmental Health. Major interests: Role of inflammation in ovarian cancer, radiation exposure and subsequent reproductive health indicators, environmental risk factors for breast cancer.

Lina Mu, MD, PhD, Shanxi Medical University; PhD, Fudan University. Professor, Epidemiology and Environmental Health. Major interests: Environmental epidemiology, air and water pollution, cancer molecular epidemiology, gene-environment interaction, cancer survival.

Zhongzheng (Jason) Niu, PhD '21, University at Buffalo. Assistant Professor, Epidemiology and Environmental Health. Major interests: Maternal and child health; cardiometabolic health; life course; epigenetics; environmental epidemiology; mixture; susceptible window of exposure; DOHaD; vulnerable population; refugee health; telomere; biological aging; early life; endocrine-disrupting chemicals.

Ekaterina (Katia) Noyes, PhD, MPH, University of Rochester School of Medicine and Dentistry. Professor and Director, Division of Health Services Policy and Practice, Epidemiology and Environmental Health. Major interests: Outcomes and quality of care assessment, economic evaluation of healthcare programs, comparative effectiveness research, multidisciplinary team science and stakeholder engagement, regional care delivery in surgical oncology.

Heather Ochs-Balcom, PhD '04, MS, University at Buffalo. Professor, Epidemiology and Environmental Health. Major interests: Genetic epidemiology of complex traits, gene-environment interactions, obesity and cancer risk, cancer health disparities, hormones and aging, women's health.

James Olson, PhD, Medical College of Wisconsin. UB Distinguished Professor, Pharmacology and Toxicology; and Director, Division of Environmental Health Sciences, Epidemiology and Environmental Health. Major interests: Assessing health risks, biomarkers of exposure, effect and susceptibility to organophosphate pesticides and persistent halogenated aromatic hydrocarbons.

Xuefeng Ren, MD, PhD, MD. Baotou Medical College; PhD, University of Washington. Associate Professor, Epidemiology and Environmental Health. Major interests: Study of environmental mutagens and carcinogens, mechanism of carcinogenesis, genetic/epigenetic biomarkers of environment toxicants, tumor suppressor genes, exposure biology and exposome.

John Violanti, PhD, University at Buffalo. Research Professor, Epidemiology and Environmental Health. Major interests: Assessment of psychological and biological indicators of chronic police stress.

Jean Wactawski-Wende '89, PhD, University at Buffalo. SUNY Distinguished Professor and Dean of the School of Public Health and Health Professions, Epidemiology and Environmental Health. Major interests: Women's health, osteoporosis, cancer, hormone therapy, menopause, hormonal variation, periodontal disease, oxidative stress.

Meng Wang, PhD, Utrecht University. Associate Professor, Epidemiology and Environmental Health. Major interests: Environmental exposure monitoring, air pollution modeling, and health impacts of environmental exposures.

Xiaozhong Wen, MBBS, PhD, Sun Yat-sen University, PhD, Brown University. Associate Professor, Department of Pediatrics, Jacobs School of Medicine and Biomedical Sciences, Major interests: Developmental origins of obesity and cardio-metabolic diseases, including maternal diet, smoking, and other lifestyle during pregnancy, placenta, intrauterine growth, epigenetics, infancy growth, and clinical intervention for pediatric obesity.

Shelby Yamamoto, Dr.,Sci.,Hum., Epidemiology, Heidelberg Institute of Global Health, Heidelberg University, Heidelberg, Germany, MSc, Environmental Health, University of Toronto, Toronto, Canada. Associate Professor, Epidemiology and Environmental Health. Major interests: Environmental epidemiology; health impacts of climate change; air pollution health effects; mitigation and adaptation to climate change; risk and resilience.

Jerome Yates, MD, MPH, University of Illinois College of Medicine; MPH, Harvard School of Public Health. Clinical Professor, Epidemiology and Environmental Health; Adjunct Professor, Medicine and Oncology, University at Buffalo and Roswell Park Comprehensive Cancer Center. Major interests: Adult acute leukemia, infection control in

compromised patients, cancer rehabilitation, palliative and hospice care, cancer in the elderly, outcome disparities among disadvantaged populations.

Lawrence Zielinski, MBA, University at Buffalo. Executive in Residence, Healthcare Administration, School of Management. Major interests: Value-based healthcare, senior healthcare.

Shauna Zorich, MD, MPH '08, University at Buffalo. Clinical Associate Professor, Epidemiology and Environmental Health. Major interests: Preventive medicine, public health, general epidemiology, infectious disease epidemiology, biology.