Epidemiology Program

Department of Biostatistics and Epidemiology
School of Public Health and Health Sciences

(MS and MPH)

Policies and Procedures
Masters of Science and Masters of Public Health Degrees
For Students Entering Fall 2022
Every student should become familiar with this manual and all of the above materials. It is the responsibility of each student to make sure that all academic requirements and deadlines are met. Whenever in doubt, contact the School of Public Health Graduate Program Office for further information.
## I. CONTACT INFORMATION

### Program Contacts

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Email</th>
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<tbody>
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### Epidemiology Faculty (can serve as thesis and project committee CHAIRS & MEMBERS)

<table>
<thead>
<tr>
<th>Focus Area</th>
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<tbody>
<tr>
<td>Liz Bertone-Johnson</td>
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<td>Infectious Disease Epi</td>
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<tr>
<td>Genetic Epi</td>
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<tr>
<td>Women's Health; Cancer Epi</td>
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<td>Women's Health; Reproductive Epi</td>
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<tr>
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II. MAJOR UPDATES TO THE MANUAL

Updated May 2022

- Updated information for MPH project
- Added checklist for MS students to assist with timing of degree milestones
- Updated information throughout to align with degree requirements, including links to recent forms and removal of obsolete degree requirements.

Updated January 2021

Effective for students incoming Fall 2021:

- Updated degree changes as a result of CEPH accreditation changes:
  - New required course for MS students: SPHHS 501
  - Required MS thesis credits (EPI 699) increased from 3 credits to 5 credits
  - Removed EPI 631 as a degree requirement for MS students and MPH students completing the MPH project
  - Removed MPH exit exam as culminating experience option
  - MPH Project requirements updated to not require data analysis
The Epidemiology concentration in the University of Massachusetts Amherst School of Public Health and Health Sciences prepares students to unravel complex health issues by the study of the distribution of the spread of disease, social factors and other risk factors.

Mission

The overall mission of the Epidemiology concentration is to provide students with strong analytic and quantitative skills needed to conduct professional-level public health research, disease surveillance, program evaluation, public health practice, and epidemiological research. The Epidemiology program closely complements the program in Biostatistics both academically and professionally. These related fields are based on the natural, mathematical, and social sciences. The faculty meets its mission by preparing public health professionals who work in industry, hospital and medical research settings, and academic institutions to improve the health of the public. The academic program includes a base of theoretically sound courses complemented by hands-on research experiences in industry and public health agencies.
A. Dates

Applications for Fall admissions are due in February; refer to the SOPHAS website for official dates and to complete an application.

In general, applications for Spring admission are discouraged, but may be considered in some circumstances. Typically, only students who have taken introductory epidemiology (EPI 630), introductory biostatistics (BIOSTAT 540), and introductory SAS programming (EPI 600) courses (or equivalent courses at another institution) are accepted for Spring admission.

B. MPH vs. MS

Descriptions of the MPH and MS degree programs can be found elsewhere in this manual. Traditionally, the MPH program is intended for students with prior public health experience and/or professional degrees, or for students who are interested in careers in public health practice, while the MS program is appropriate for students without a background in public health and/or those who wish to pursue research-based careers.

C. Applying to the PhD program while a master student

The PhD program is highly selective, and typically only 2-4 new PhD students matriculate each year. Students usually have a prior graduate-level degree, though exceptional students with only a BA/BS may be considered on a case-by-case basis.

We encourage current MPH and MS students with a strong interest in epidemiology to consider applying to the PhD program. Applications will be considered after the first year in the MPH/MS program (i.e. students may apply by February of their second year for admission to the PhD program starting the following Fall semester).

In addition to the requirements described above, the student’s performance in their first year of coursework for the MPH and MS as well as potential fit within the Epidemiology program will be considered.

D. Financial aid

We offer a limited number of teaching assistant (TA) and research assistant (RA) positions, which include a stipend and a tuition waiver. Priority is given first to PhD students and then MS/MPH students in their 2nd/final year. It is unlikely that first year students will be given positions, though some exceptional PhD applicants may be promised positions upon admission.

Available positions and an application are posted on this website: www.umass.edu/sphhs/career-opportunities. If none are listed currently, keep checking as they often become available throughout the semester. Additionally, our students have been successful obtaining TA/RA positions outside of our department, for example in nutrition, nursing, psychology and chemistry. Students can search for available positions on the websites of those departments and on the Graduate School’s website.

Additional information on financial aid can be found in Student Resources.
A. Who is my faculty advisor?

All students are assigned an academic advisor from amongst the epidemiology faculty at matriculation. The
name of your advisor will be sent to you over the summer before matriculation, along with recommended
course registration; contact the Department Administrator, with questions about the name of your advisor.
Academic advisors can be consulted to address questions regarding class registration, progress monitoring, and
other policy issues.

When students register for master’s thesis credits, the chair of the thesis committee will serve as the research
advisor and will replace the academic advisor as the primary advisor.

B. When should I meet with my advisor?

Students are required to meet with their faculty advisor before the end of the first week of classes each
semester. Provisional students should meet with the advisor during the last week of classes for all semesters
when they have ‘provisional’ status. Advisor contacts should be recorded on the tracking form, along with the
date of the meeting and the advisor’s signature.

C. Am I meeting requirements to maintain full-time student status?

Information regarding academic status can be found in the Graduate School in the Graduate Student

In brief, students enrolled in ≥ 9 credits/semester are considered full-time. In addition, MS and MPH students
are considered full time if they are in their last academic semester and are enrolled in ≥ 3 credits

D. What are the requirements regarding grades?

The most recent information regarding academic standing can be found in the Graduate School Bulletin
(Policies and Regulations >> Enrollment Policies and Regulations >> Coursework, Grading and Academic
Standing). In brief: All courses that count toward the degree must be taken for a letter grade (i.e., pass/fail
grade basis is not allowed). Practicum, MPH Project, and MS Thesis credits are taken with pass/fail grading.

A minimum GPA of 3.0 must be maintained. Students who have a GPA of 2.8 or lower in any two semesters
(consecutive or otherwise) are classified as provisional, consistent with policies of the Graduate School.
Students who are assigned provisional status are subject to academic dismissal and must raise their GPA to 3.0
to meet University minimum standards for satisfactory work and thereby remove provisional status.

Grades lower than a B- in any of the required courses will not count toward the degree requirement. Students
may retake these courses. Students who receive lower than a B- a second time must petition the Associate
Dean for Academic Affairs in order to retake the course again.
VI. COURSE CURRICULUM

Course requirements for MS and MPH degrees in epidemiology are described in this section, including a suggested/sample course sequence. The full course schedule is available on SPIRE.

A. Public Health Core

- BIOSTATS 540: Introductory Biostatistics (or equivalent)
- EPI 630: Principles of Epidemiology
- SPHHS 600: Great Challenges in Public Health and Health Sciences II [required for MS students only]
- EHS 565: Environmental Health Practices [required for MPH students only]
- HPP 601: Application of Social & Beh. Theories in Public Health Interventions [required for MPH students only]
- HPP 620: Introduction to the U.S. Health Care System [required for MPH students only]

B. Epidemiology Core

- EPI 600: Introduction to Management of Epidemiologic Data
- EPI 632: Applied Epidemiology
- BIOSTATS 640: Intermediate Biostatistics (or comparable alternate)
- BIOSTATS 691F: Data Management and Analysis with SAS
- EPI 700: Analysis of Epidemiologic Data [required for MS students only]
- EPI 737: Intermediate Methods in Epidemiology [required for MS students only]

C. Epidemiology Electives

For MPH Students, other epidemiology courses not required for the degree (e.g., EPI 700 and EPI 737) can fill this requirement. For MS students, questions regarding whether other courses fulfill this requirement will be considered on a case-by-case basis. As guidance, to fill this requirement courses should be clearly epidemiological in methods and without substantial overlap with other coursework.

- EHS 600: Molecular Epidemiology
- EPI 633: Infectious Disease Epidemiology
- EPI 634: Nutritional Epidemiology
- EPI 635: Social Epidemiology
- EPI 636: Epidemiological Assessment
- EPI 639: Cancer Epidemiology
- EPI 640: Reproductive Epidemiology
- EPI 680: Epidemiology of Women’s Health
- EPI 690E: Environmental Epidemiology
- EPI 690G: Genetic Epidemiology
- EPI 790M: Population Mental Health-Epidemiology and Intervention

D. Other Elective Courses

Graduate-level courses offered at UMass (in SPHHS or otherwise) fulfill this requirement. Epidemiology electives can count toward this requirement. Please consult with your academic advisor regarding appropriate courses for this requirement. Examples include, but are not limited to:

- EHS 588: Developmental Origins of Disease
- HPP 583: Global Health in the Developing World
- HPP 622: Program Evaluation in Health and Human Service Organizations
- HPP 638: Fundamentals of Women’s Health

E. Practicum, MPH Project, and MS Thesis credits

- EPI 698: Practicum
- EPI 696D: MPH Project
- EPI 699: Masters Thesis
F. Course requirements by degree/plan

<table>
<thead>
<tr>
<th>MPH [42 credits total]</th>
<th>MS [45 credits total]</th>
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<tr>
<td><strong>REQUIRED COURSES</strong></td>
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<tr>
<td>PUBLIC HEALTH CORE</td>
<td>EPI 630</td>
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<td></td>
<td>BIOSTATS 540</td>
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<td>EHS 565, HPP 601, and HPP 620</td>
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<tr>
<td>EPIDEMIOLOGY AND BIOSTATISTICS CORE</td>
<td>EPI 600</td>
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<td></td>
<td>EPI 632</td>
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<td></td>
<td>BIOSTATS 640</td>
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<td>BIOSTATS 691F</td>
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<tr>
<td>Additional Epidemiology</td>
<td>EPI 698, Practicum</td>
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<td></td>
<td>[3 credits]</td>
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<tr>
<td>ELECTIVE COURSES</td>
<td>EPI 700</td>
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<td>EPI 737</td>
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<td>Epidemiology b</td>
<td>3 courses</td>
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<td>[9 credits]</td>
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<td>Other elective c</td>
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<tr>
<td>CULMINATING EXPERIENCE</td>
<td>EPI 696D, MPH project</td>
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<td></td>
<td>[3 credits]</td>
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<td></td>
<td>EPI 699, Masters Thesis</td>
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<td>[5 credits]</td>
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G. Course waivers, and transferring courses not offered on campus at UMass Amherst

Credits cannot be waived, and all credits (42 for the MPH and 45 for the MS degree) must be met through courses completed toward the degree. Requirements may be waived if they are deemed to have been adequately met through prior coursework/experience; in this case, other courses may be taken in place of the waived course to make up the credits associated with that class. In addition to coursework completed on campus, courses and credit may be transferred, as detailed here:

- A total of 12 credits maximum can be transferred from other sources, combined. Additionally:
  - A maximum of 6 credits may be completed at Worcester (UMass)
  - A maximum of 6 credits may be transferred from other institutions

For credits to be eligible for transfer, students must have earned a grade of B or better in the course, and the credits cannot already have been applied toward a previous degree. All requests for transfer credits need to be discussed and approved with your academic advisor, who may request a copy of the syllabus prior to making a final decision. If possible, request for transfer credits should be made prior to registering for the course, to prevent the student investing time and resources in a class that does not meet program criteria.

Some required courses for the MS and MPH degrees are offered online through Continuing Education. However, students should take all Public Health Core courses and all Epidemiology and Biostatistics Core courses on campus unless prior approval is given otherwise. For other courses, students should request approval from their advisor before registering for online courses.

H. Policy for independent studies

Independent studies are offered at the discretion of faculty. Independent studies can be taken for 1 – 3 credits, in accordance with the number of contact hours associated with each level of credit. Working together,
students and faculty should prepare a contract with expectations clearly specified. Independent study is generally taken toward satisfying the “Epidemiology Elective” or “Other Elective” and should be noted as such in tracking forms. A maximum of 6 credits of independent study can be taken toward requirements for MS/MPH, consistent with the policies of the UMass Graduate School.

I. Seminar attendance

The Epidemiology Seminar Series takes place roughly monthly, and provides an opportunity to learn about current research in the field beyond that taking place within the department. Attendance at Seminar is strongly encouraged for all students, as a critical component of training; further, attendance of at least 2 seminars is a requirement for some required courses (EPI 600, EPI 632, MS thesis/MPH project). Check with your course instructors or advisor for specific details.
### MS course sequence suggestion

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</thead>
</table>
| **Fall, year 1**  
(13 credits) | **Spring, year 1**  
(12 credits) | **Fall, year 2**  
(11 credits) | **Spring, year 2**  
(9 credits) |
| BIOSTAT 540 | BIOSTAT 640 | EPI 700 | EPI 699 (thesis - 3 credits) |
| EPI 630 | EPI 632 | EPI 737 | (EPI elective #3)* |
| EPI 600 | BIOSTAT 691F | EPI 699 (thesis - 2 credits) | (EPI elective #4)* |
| SPHHS 600 | (EPI elective #1)* | (EPI elective #2)* | (other elective) |

### MPH course sequence suggestion

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| **Fall, year 1**  
(12 credits) | **Spring, year 1**  
(12 credits) | **Summer, year 1** | **Fall, year 2**  
(12 credits) |
| **Spring, year 2**  
(6 credits) |
| BIOSTAT 540 | BIOSTAT 640 | EPI 698  
(practicum – site work) | (EPI elective #2) |
| EPI 630 | EPI 632 | (EPI elective #3) | (PH core #3)* |
| EPI 600 | BIOSTAT 691F | (PH core #2)* | |
| (PH core #1)* | (EPI elective #1) | EPI 698 (practicum  
– 3 credits) | |

*a Epi electives tend to be offered so there is one taught in the fall semester and two taught in the spring and with each being offered once every two years generally;*  
*b PH core includes HPP 601, HPP 620, and EHS 565 which may be offered only once per academic year. Students should plan accordingly.*
VIII. MS THESIS GUIDELINES

It is the student's responsibility to see that these guidelines are followed properly. Please read them carefully, and re-read them often as you progress through the various stages of your thesis.

A. Summary of Steps to Complete the Thesis

<table>
<thead>
<tr>
<th>Sample Timeline for MS Progress and Expectations for a May Graduation</th>
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<tbody>
<tr>
<td>Year 1</td>
</tr>
<tr>
<td>Summer, Year 1</td>
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<tr>
<td>Fall, Year 2</td>
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<tr>
<td>Winter, Year 2</td>
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<tr>
<td>December, Year 2</td>
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<tr>
<td>January, Year 2</td>
</tr>
<tr>
<td>Spring, Year 2</td>
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<tr>
<td>February, Year 2</td>
</tr>
<tr>
<td>Once the defense is scheduled. Do not delay until the last moment.</td>
</tr>
<tr>
<td>Early- to Mid-March, Year 2</td>
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<tr>
<td>Late-March, Year 2</td>
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<td>April, Year 2</td>
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B. Nature and Purpose of the MS Thesis

The MS thesis provides the student with an opportunity to develop an individual research project under the guidance of a faculty committee. The student gains experience in problem identification, study design, data analysis, and interpretation of results as an investigator working in collaboration with fellow professionals. The final write-up of the thesis requires an organized presentation of the theory, methods, and results in the
context of the existing literature. Typically, the written presentation takes the form of a scientific manuscript. The final oral presentation of the project provides a collegial forum within which to present the major points of the project and defend the approaches taken.

It is expected that the thesis will have a strong theoretical foundation, and will demonstrate the student's competence in applying theory and appropriate methodology to investigating a problem. Mastery of methodology, including the understanding of the strengths and limitations of the research, has a greater emphasis than developing new information. The faculty considers the process of carrying out the study, and the integration of knowledge by the student, to be more important than the findings which result.

C. Required Coursework

Students must have completed first year coursework prior to registering for thesis credits including:

- EPI 630: Principles of Epidemiology
- EPI 632: Applied Epidemiology
- EPI 600: Introduction to Management of Epidemiologic Data
- BIOSTAT 540: Introduction to Biostatistics
- BIOSTAT 640: Intermediate Biostatistics
- BIOSTAT 691F: Data Management and Analysis with SAS

Because MS Theses generally include extensive scientific writing and data analysis, MS students are required to take the following courses in the fall of their 2nd year:

- EPI 700: Analysis of Epidemiologic Data

D. Registering for Thesis Credits

MS Students must complete five credits of EPI 699: Master’s Thesis (MS Students) in their final year of the degree; two credits are completed in the Fall semester and three credits are completed in the Spring semester of their final year. Students should email the Department Administrator to register for EPI 699 credits, and register for credits as Pass/Fail. In order to try to complete work on the thesis during the fourth semester, it is recommended that students register for a lighter course load during their final semester to allow adequate time for work on the thesis. Otherwise, as faculty experience has shown repeatedly, the student is diverted by the immediacy of course work and may be challenged to find adequate time to devote to the thesis.

E. Coming Up With a Topic

Students should start considering possible thesis topics by the end of their second semester. The student considers possible topics based upon areas of personal interest, practicum or internship experience, discussions with other students, and with faculty. One's academic advisor and/or other faculty may be approached for help in exploring possible topics.

What is an appropriate project? One answer to this question is: "A project that enough faculty members find acceptable so as the student is able to constitute an appropriate committee." Talking with your advisor and/or potential Thesis Committee Chair is a good place to start. A review of MS theses recently completed by other students will help you an idea of the range of acceptable projects. Examples of recent MS Theses can be found on the Library website at: http://scholarworks.umass.edu/theses/.

F. Assembling the Committee

Once the specific topic is decided upon, the student should ask a faculty member to be chair of the thesis committee. As the topic is developed further, the student selects other committee members in conjunction
with the chair. If the committee chair is not the same as the academic advisor, then the chair automatically assumes the role of the academic advisor and the student's advising folder should be transferred to the committee chair. The MS thesis committee will have at least two Epidemiology faculty. The chair must be a tenure-system member of the faculty in Epidemiology at least two Epidemiology faculty. The chair must be a tenure-system member of the faculty in Epidemiology at the Amherst campus (a list of eligible faculty is provided in the CONTACT INFORMATION section). It is recommended, but not required, that the committee also include a Biostatistics faculty member. Graduate faculty from other campus Departments, health agency, or adjunct faculty, are often useful contributors to a committee depending upon the topic.

Adjunct faculty, if they have a graduate level appointment, are eligible to serve as voting members of a committee but may not serve as chair of a committee if the student is registered through the Amherst campus. A list of epidemiology adjunct faculty is provided in the CONTACT INFORMATION section. Other related professionals may serve on the committee and may be listed as a consultant on the cover page, but have no vote at the time of the defense even though they are expected to attend the defense.

G. The Thesis Proposal

1. Developing the proposal: A Proposal is required by the Department. Students should work with their advisor to determine the contents of the proposal, to be presented to the other committee members for their input. The proposal must be approved by the Committee Chair before research begins. The proposal represents a demonstrated readiness to conduct research on a specific topic, and the proposed hypotheses or procedures may need to be revised further, with the agreement of the committee, as the project proceeds. The proposal should be written using the future tense. Students may wish to review several recent thesis proposals similar to theirs as available from any faculty member.

2. Format for the Proposal: There is no formal format requirement for the proposal; however, it is highly recommended that the student follow the guidelines presented in the Graduate School’s Guidelines for Master’s Theses and Doctoral Dissertations even when preparing the first draft of the thesis proposal.

   Additionally, the Office of Information Technology offers workshops on thesis formatting that may be helpful in preparing the proposal and final version of the thesis.

3. Timeline for the proposal: The proposal should be prepared and completed during the fall semester of the 2nd year. Students should work with their Committee Chair to ensure that they are meeting the times. In addition, students are encouraged to meet with each member of their committee in person at least once during the fall semester as they prepare the final version of their proposal.

4. Submitting the proposal: Once the proposal has been approved by all committee members, a completed copy of the MS Proposal Signature Form needs to be submitted to the Graduate Program Director. The MS Proposal Signature Form may be signed via DocuSign (please email the Department Administrator for assistance with this).

H. Human Subjects Approval

Prior to beginning any involvement with human subjects or data meeting the definition of human subjects, the student must complete training in the use of human subjects for research, as mandated by the University. Students should complete training through the CITI system, if they have not already done so for another project and/or their training is out of date. Also, appropriate IRB approval must be obtained for the student’s research. It is the responsibility of both the student and the committee chair to ensure that the student has met all University policies concerning human subjects.

I. Carrying Out the Thesis

The committee chair is expected to assume the major role in guiding the student through the project. Other
faculty generally contribute to selected aspects of the project. It is important that the student keep each of the committee members up-to-date on significant aspects of the project. In the case of conflicting or extreme demands from the committee, the student should inform the chair and request a committee meeting to resolve any issues. Any substantial change in the proposed project should trigger a meeting of the full committee.

J. Writing

MS students should be sure to strictly follow the Graduate School Guidelines for Master's Theses to the letter. Otherwise you will have a lot of unnecessary hassles at the last minute when you need it the least. Students should use the table format, reference format, and reference citation method of the American Journal of Epidemiology. If you transfer over any of your thesis proposal text to the thesis, please change the text from the future tense to the past tense.

The chapter headings of the thesis/project are as follows: Introduction; Review of the Literature; Methods; Results; Discussion. As with all scientific writing, the writing of the Master’s thesis or project usually involves an intense period of writing, editing, rewriting, editing, rewriting, and so forth. To maximize the clarity and impact of the writing, students are encouraged to contact the University's Writing Center, and meet one-on-one with a writing tutor. This may be especially beneficial for students who do not have extensive experience with scientific writing or for whom English is not their primary language.

K. Scheduling the Thesis Defense

Timing for scheduling the MS Thesis Defense will vary year to year based upon the date that Degree Eligibility Forms and Tracking Forms are due to the Graduate School. It is generally advised that students aim to defend their MS thesis by mid-March, but students should get final scheduling dates at the beginning of every Spring semester.

For the Thesis, students should provide a complete draft to their committee at least 10 days prior to the deadline for scheduling of the defense. Faculty members then have 10 days to review the thesis and determine whether the project is generally ready for defense. At this stage, Faculty may provide minor comments that they expect to be addressed prior to the defense. However, if major changes are required at this stage, it may not be possible to schedule a defense in time to meet the May graduation deadline.

When the committee chair affirms a consensus among the committee members that the project is essentially completed and is ready for the defense, the student should work with the Department Administrator to schedule the defense. Please note, the defense must be scheduled two weeks in advance. At least one week after the thesis defense is built into the schedule to allow for final revisions or changes to the thesis prior to submission to the Graduate School, and to allow for rescheduling of the defense in the event that an emergency situation arises.

Please be advised that the faculty have nine-month appointments and are not obligated to be available during June, July, or August. Also, in your planning you should query the faculty about any sabbatical or leave of absence plans.

L. Who May Attend the Defense

The project defense is public. Departmental faculty member and students are welcome to attend. First year students are encouraged to attend MS thesis defenses, as they will be undergoing similar projects the following year.

M. The Defense Process

Note that the Graduate School requires that all members of the committee must be present for the defense. Each committee member shall have received a "final" version of the thesis at least a week before the defense.
The committee chair oversees the proceedings of the defense. The student is expected to present, generally in about 40 minutes, a synopsis of the key elements of the project, especially emphasizing methods, analytical approach, results, limitations, and the significance of the results within the context of the literature. Usually, questions of information or clarification are asked during the presentations, but matters of substance are held for the question period.

N. Outcomes of the Defense

When the presentation is finished, the chair directs the question period. Upon completion of the question period, the committee then meets in private to discuss the student’s performance and votes for a pass or not. To pass the defense, the candidate must receive a unanimous vote. If the committee is not unanimous in voting to pass the candidate, the student is considered to have not passed the thesis defense at this time. The student is allowed one chance to re-defend the thesis at a later date. The thesis committee will determine the minimum amount of time the student must wait to re-defend the thesis, as well as the latest possible date the thesis may be re-defended. The chair will present the candidate with a new timeline for revision, review and rescheduling the defense. Please note, given the timeline required by the Graduate School, it is generally unlikely that a student who does not pass a defense in the spring will be able to re-defend and graduate for the May graduation date. In this situation, the earliest likely graduation date will be August. In the interim, the student will receive an INC for EPI 699. This designation will be changed upon re-defense of the thesis.

Committee members may recommend additional minor changes to the written thesis/project at this time, as some new issue may have been raised during the thesis defense question period.

Students defending an MS Thesis should complete the MS Thesis Signature Form which will be signed by all committee members indicating that the student has passed the defense. The committee chair signs the signature sheet only when the final copy of the corrected thesis is received. The Department Chair will then sign the signature sheet after the committee chair. The MS Thesis Signature Form may be signed via DocuSign (please email the Department Administrator for assistance with this).

O. Submission of the Thesis

After the defense is successfully passed, students should work with their committee chair to complete any additional revisions required by the committee. After the chair has determined that the final draft is acceptable and signs the MS Thesis Signature Form, the student should submit the thesis to the Graduate School electronically through Scholarworks.

P. Archiving of data and statistical code

After the defense is passed and prior to graduation, students should make sure that a final version of their data set and relevant statistical code (SAS, STATA logs, etc.) have been archived in the appropriate folder on the J drive, along with documentation. Students should confirm the location of data with their Chair.

Q. Publications from the Thesis

Where the results are publishable, the student is encouraged to write-up a first draft of the manuscript as first author. If the student does not prepare a draft of the manuscript within six months of the defense, especially where the student was using faculty or agency data, it is the prerogative of the committee chair or other committee member or agency person to prepare a first draft and include the student as an author.

In the case of the use of faculty data or data from an outside agency, it is vitally important the authorship of paper(s) resulting from the project be explicitly negotiated in writing in advance of beginning the project. Such an agreement should state the order of authorship for any potential publication(s) and the general content of such publication(s). Failure to address this issue in advance has caused unhappy complications in the past.
IX. MPH PROJECT GUIDELINES

The purpose of the MPH Project is to provide students with a culminating experience in which students synthesize foundational and concentration-specific competencies (see Appendix B).

All students will achieve the following competencies through the successful completion of the requirements of the MPH Project Course (696D):

- #4 – Interpret results of data analysis for public health research, policy or practice
- #19 – Communicate audience-appropriate public health content, both in writing and through oral presentation
- #E3 – Critique published epidemiologic research using a knowledge of study design and analysis
- #E4 – Synthesize material from various sources, including peer-reviewed literature, to formulate a research question

In addition, students should select at least one additional competency from this list. This decision will help inform the scope of the finished MPH project.

- #E2 - Design an epidemiologic study and articulate the strengths and limitations of the study design
- #9 - Design a population-based policy, program, project or intervention
- #3 - Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate

CEPH requires that “the student produces a high quality written product that is appropriate for the student’s educational and professional objectives.” The MPH project is typically a literature-based analytical study (e.g. a systematic literature review on a topic of public health importance, with a focus on the epidemiologic data), though could be a data-driven analysis with the faculty advisor’s approval.

- The MPH Project does not need to include data analysis. In fact, a typical epidemiologic manuscript is unlikely to meet the requirements of the project (i.e. may not sufficiently integrate across the core areas of Public Health).
  - Students who wish to pursue data analysis as part of their MPH project must identify a faculty member who can supervise their MPH project and also register for EPI 696A (Independent Study) credits.
- Semester-specific dates for MPH project milestones will be on the syllabus for Epi 696D, shared at the beginning of Spring semester.

Check Moodle for ‘MPH Resources’ for more information on the MPH Project.
A. Required Coursework

Students must have completed first year coursework prior to registering for project credits including:

- EPI 630: Principles of Epidemiology
- EPI 632: Applied Epidemiology
- EPI 600: Introduction to Management of Epidemiologic Data
- BIOSTAT 540: Introduction to Biostatistics
- BIOSTAT 640: Intermediate Biostatistics
- BIOSTAT 691F: Data Management

For MPH Projects that will include data analysis, MPH Project students are strongly encouraged to take the following course in the fall of their 2nd year:

- EPI 700: Analysis of Epidemiologic Data

B. Registering for Project Credits

MPH Students must complete three credits of EPI 696D: Independent Study – MPH Project in their final semester of the degree. Students should email the Department Administrator to register for the appropriate EPI 696D credits, and register for credits as Pass/Fail. In order to try to complete work on the project during the fourth semester, it is recommended that students register for a lighter course load during their final semester to allow adequate time for work on the project. Otherwise, as faculty experience has shown repeatedly, the student is diverted by the immediacy of course work and may be challenged to find adequate time to devote to the project.

C. Coming Up With a Topic

Students should start considering possible project topics by the end of their second semester. The student considers possible topics based upon areas of personal interest, practicum or internship experience, discussions with other students, and with faculty. One’s academic advisor and/or other faculty may be approached for help in exploring possible topics.

What is an appropriate project? One answer to this question is: "A project that enough faculty members find acceptable so as the student is able to constitute an appropriate committee." Talking with your advisor and/or the 696D instructor is a good place to start. The MPH Project is meant to be a culminating experience for MPH students that integrates all areas of Public Health, but with an emphasis on Epidemiology; the topic for the Project should reflect this goal.

D. Human Subjects Approval

Prior to beginning any involvement with human subjects or data meeting the definition of human subjects, the student must complete training in the use of human subjects for research, as mandated by the University.

Students should complete training through the CITI system, if they have not already done so for another project and/or their training is out of date. Also, appropriate IRB approval must be obtained for the student’s research. It is the responsibility of both the student and the committee chair to ensure that the student has met all University policies concerning human subjects.

E. Writing

Students should use the table format, reference format, and reference citation method of the American Journal of Epidemiology.

The suggested chapter headings of the project are as follows: Introduction; Review of the Literature; Methods;
Results; Discussion. As with all scientific writing, the writing of the Master’s project usually involves an intense period of writing, editing, rewriting, editing, rewriting, and so forth. To maximize the clarity and impact of the writing, students are encouraged to contact the University’s Writing Center, and meet one-on-one with a writing tutor. This may be especially beneficial for students who do not have extensive experience with scientific writing or for whom English is not their primary language.

F. Who May Attend the Project Presentation

The project presentation is public. Departmental faculty and students are welcome to attend. First year students are encouraged to attend MPH project presentations, as they will be undergoing similar projects the following year.

G. Archiving of data and statistical code

If data analysis was used in the MPH Project, after the defense is passed and prior to graduation, students should make sure that a final version of their data set and relevant statistical code (SAS, STATA logs, etc.) have been archived in the appropriate folder on the J drive, along with documentation. Students should confirm the location of data with their Chair.

H. Publications from the Project

Where the results are publishable, the student is encouraged to write-up a first draft of the manuscript as first author. If the student does not prepare a draft of the manuscript within six months of the defense, especially where the student was using faculty or agency data, it is the prerogative of the committee chair or other committee member or agency person to prepare a first draft and include the student as an author.

In the case of the use of faculty data or data from an outside agency, it is vitally important the authorship of paper(s) resulting from the project be explicitly negotiated in writing in advance of beginning the project. Such an agreement should state the order of authorship for any potential publication(s) and the general content of such publication(s). Failure to address this issue in advance has caused unhappy complications in the past.
X. STUDENT RESOURCES

A. Financial Aid

Possibilities for obtaining financial support include graduate assistantships (i.e., research or teaching assistantships) or other scholarships (e.g., the Corinne A. Johnson Memorial Scholarship). Graduate research and teaching assistantships may be available and typically entail 10-20 hours per week paid according to a union negotiated pay scale. Additional information about financial support opportunities are available within the program, SPHHS, and the Graduate School.

B. Research funding

Research funding is generally available through a specific faculty member’s research grant. Available research assistantships are posted on the SPHHS financial-aid website noted above. Also, if you are particularly interested in the research carried out by a specific faculty member, we would encourage you to contact that faculty member directly.

C. Teaching experience

Although TA positions for master’s students are unlikely, obtaining teaching experience can be very useful and rewarding for master’s students as well. There are a number of opportunities to become a teaching assistant either for courses taught by the Biostatistics and Epidemiology Department, or as part of the undergraduate program in public health. Further, there are occasional opportunities to either TA or serve as an instructor for courses offered online through the University/SPHHS continuing education program.

When teaching assistants are needed for any Biostatistics or Epidemiology course, their availability is posted on the following website for one week: https://www.umass.edu/sphhs/career-opportunities

We recommend you bookmark this website and check it weekly. Application instructions are provided on the website. Most teaching assistantships are for 10 hours per week for a semester. If you are interested in serving as a teaching assistant for a specific course, you might email the instructor directly to let them know and to find out if any opportunities are upcoming.

D. Travel funding

Travel funds to defray the cost of attending professional scientific meetings are available to graduate students through several sources:

- **UMass Graduate School**: Funding of up to $300/student also is available through the Graduate School for students who will be presenting their research at a conference. The Graduate Program Director in the Department of Biostatistics and Epidemiology administers these funds. Funds are usually awarded on a first come-first serve basis, so it is important to submit a request for these funds as soon as your abstract has been accepted for presentation.

- **Department of Biostatistics and Epidemiology**: Students who are presenting their research at a meeting, in either an oral or poster presentation, are eligible for up to $500 per academic year. Students who are not presenting at the meeting are eligible for reimbursement of up to $200 per academic year. To apply for these funds, students should submit a BioEpi Graduate Student Travel Grant application to the Biostatistics and Epidemiology Department Chair. Students receiving the funds should keep a copy of this signed form and all travel receipts.
● Travel funds also may be available through the student’s research mentor; please be sure to check with your faculty mentor regarding funding for travel.

Prior to the trip, students must complete an online pre-travel registry using their UMass username and password. Students should then complete the appropriate Travel Reimbursement Form, which requires all original receipts.

See Department Administrator for any questions related to travel reimbursement.

E. Slack Guidelines/Best Practices

● Make the space welcoming. Do not share video, images, posts, or comments that include vulgarity, racial slurs, trolling, or combative language, or language that may be considered defamatory or libelous.

● Protect account credentials. Do not share the Slack group with people outside of the Department.

● Keep confidential information confidential. Abide by FERPA and don't share student, employee, or alumni data; university business; or other confidential information.
XI. SUMMARY OF USEFUL LINKS

- UMass Graduate School: [https://www.umass.edu/graduate/](https://www.umass.edu/graduate/)
- Graduate Student Handbook: [http://www.umass.edu/graduate/policies/handbook](http://www.umass.edu/graduate/policies/handbook)
  - Guidelines for Master’s Theses and Doctoral Dissertations: [https://www.umass.edu/graduate/policies/handbook/degree-requirements](https://www.umass.edu/graduate/policies/handbook/degree-requirements)
- Graduate School Bulletin: [http://www.umass.edu/graduate/policies/graduate-school-bulletin](http://www.umass.edu/graduate/policies/graduate-school-bulletin)
- SPIRE: [http://www.spire.umass.edu](http://www.spire.umass.edu)
- Moodle: [https://umass.moonami.com/](https://umass.moonami.com/)
- TA, RA positions, and other job postings: [https://www.umass.edu/sphhs/career-opportunities](https://www.umass.edu/sphhs/career-opportunities)
  - Note: “Career Opportunities” is the phrase we use across all SPHHS sites and refers to specific, individual job/internship/assistantship posts that one can apply to. The opportunity links are temporary – either expiring with time or when filled.
  - “Career Resources” usually refers to websites that have information on how to find a job in that field, job search engines, external job boards, etc. The resource links are permanent and do not expire, though the content offered on the pages does change.
- ScholarWorks: [http://scholarworks.umass.edu/theses/](http://scholarworks.umass.edu/theses/)
- Human Subjects: [https://www.umass.edu/research/compliance/human-subjects-irb](https://www.umass.edu/research/compliance/human-subjects-irb)
- UMass Writing Center: [http://www.umass.edu/writingcenter/](http://www.umass.edu/writingcenter/)
- Master’s Degree Checklist of Requirements to Graduate: [https://www.umass.edu/graduate/form/masters-degree-checklist-requirements-graduate](https://www.umass.edu/graduate/form/masters-degree-checklist-requirements-graduate)
- Master’s Degree Eligibility Form: [https://www.umass.edu/graduate/form/masters-degree-eligibility-form-thesis-students](https://www.umass.edu/graduate/form/masters-degree-eligibility-form-thesis-students)
- UMass Travel Registry: [https://travelregistry.umasscs.net/](https://travelregistry.umasscs.net/)
- School of Public Health and Health Sciences Financial Aid Opportunities: [https://www.umass.edu/sphhs/graduate-programs/graduate-financial-aid](https://www.umass.edu/sphhs/graduate-programs/graduate-financial-aid)
- Epi Program Student Tracking Forms, Signature Pages, and Travel Form: [https://drive.google.com/drive/u/1/folders/1w626LQqTX969ziGTu3mR7EBRj8PvR9O-](https://drive.google.com/drive/u/1/folders/1w626LQqTX969ziGTu3mR7EBRj8PvR9O-)
● Appendix A. Course Numbers and Names, Prerequisites, and Degree Requirements

● Appendix B. MPH Foundational and Epidemiology Competencies
### Appendix A. Course Numbers and Names, Prerequisites, and Degree Requirements

<table>
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<th>Requirement/course</th>
<th>Prerequisites</th>
<th>MPH</th>
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Appendix B. MPH Foundational and Epidemiology Competencies

Foundational Competencies

Evidence-based Approaches to Public Health
1. Apply epidemiological methods to the breadth of settings and situations in public health practice
2. Select quantitative and qualitative data collection methods appropriate for a given public health context
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate
4. Interpret results of data analysis for public health research, policy or practice

Public Health & Health Care Systems
5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings
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 societal levels

Planning & Management to Promote Health
7. Assess population needs, assets and capacities that affect communities’ health
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs
9. Design a population-based policy, program, project or intervention
10. Explain basic principles and tools of budget and resource management
11. Select methods to evaluate public health programs

Policy in Public Health
12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations
15. Evaluate policies for their impact on public health and health equity

Leadership
16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision-making
17. Apply negotiation and mediation skills to address organizational or community challenges

Communication
18. Select communication strategies for different audiences and sectors
19. Communicate audience-appropriate public health content, both in writing and through oral presentation
20. Describe the importance of cultural competence in communicating public health content

Interprofessional Practice
21. Perform effectively on interprofessional teams

Systems Thinking
22. Apply systems thinking tools to a public health issue
Epidemiology MPH Competencies

1. Compare epidemiology research findings from a published journal article with how findings are described in a published health claim or media report
2. Design an epidemiologic study and articulate the strengths and limitations of the study design
3. Critique published epidemiologic research using a knowledge of study design and analysis, including limitations and validity
4. Synthesize material from various sources, including peer-reviewed literature, to formulate a research question
5. Connect questionnaire data collection to data management and prepare data for analysis