



Master of Public Health (MPH) Thesis Guide

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Acknowledgement

While much of this document is specific to the Global Health MPH program, this manual draws from the on-line Thesis Guide used in the Department of Health Services. Much of their concise and encouraging language is utilized below.

I. OVERVIEW

This manual presents thesis guidelines for students and faculty in the Department of Global Health (DGH). The outline presented here incorporates departmental and Graduate School requirements, and includes discussion of the standards for acceptable theses, the roles and responsibilities of the committee members and the student, and detailed guidelines and timeline for completing the master's thesis. The goal of this handbook is to help make the thesis process predictable, enlightening, and enjoyable for both students and faculty.

What is a Thesis?

The Graduate School defines a master's thesis as *“evidence of the graduate student's ability to carry out independent investigation and to present the results in a clear and systematic form.”*

The Department of Global Health MPH Program expects masters theses to be of publishable quality, a benefit to the student author and faculty members on the committee, as well as to the organization and/or community where the data came from.

Approval of the content, writing quality, and format of the thesis is determined by the thesis chair and committee. It is recommended to use the length and format of an article in a scientific journal but details must be agreed upon between student author and faculty committee members. Journal articles vary in length but roughly entail 2500-4000 words, 5-10 tables or figures, and appendices for supplementary tables or copies of data collection instruments. An oral thesis presentation to DGH faculty, staff and students is required and organized by the program.

Publishing your Thesis

Publishing your thesis is highly encouraged. A published thesis is proof of a high quality, completed, peer reviewed manuscript. A thesis that is turned in to a published manuscript also rewards study participants, many who chose to take part in research in order for results to be disseminated and benefit the greater good. More on this at the end of the guide.

II. TYPES OF ACCEPTABLE THESIS PROJECTS

Several different types of projects may fulfill the thesis requirement. Each type of study requires a slightly different approach to formulating research questions, collecting and analyzing data. Regardless of the type of study chosen, the student investigator must apply critical thought, systematic analysis, and clear presentation.

Descriptive study: a qualitative or quantitative study to measure magnitude and/or variability of a need or problem and to explore associated factors. Descriptive studies are often guided by general questions rather than formal hypotheses, and are often the first step in developing a more directed research project.

Analytic study: a case control or cohort study, although other epidemiologic approaches may fit into this category. Analytic studies utilize quantitative methods, and should be guided by one or more hypotheses. The research design, methodologic approach, and analysis plan should be developed prior to analysis and should clearly aim to test the study's a priori hypotheses. Analytic studies conducted by master's students typically use existing data.

Program evaluation: a structured study to assess whether a program, intervention or technique was effective at accomplishing its goals (effectiveness or efficacy for interventions). A program evaluation addresses explicit questions, and the methods and measurement may be complex.

Policy analysis: a synthesis of existing and newly collected data brought together in an organized, structured and thoughtful manner to answer a policy question or present and evaluate policy the strengths and weaknesses of options for decision makers. A policy analysis usually employs multiple sources and types of information (e.g., literature, documents, interviews, secondary data). The policy analysis also places the onus on the investigator to identify relevant data, and provide clarity, organization and structure to the analysis.

Case study: a detailed review of a unique or important program that captures the background, process, outcomes, successes, failures and lessons learned. The case study may include either qualitative or quantitative data or both. The case study provides an opportunity to explore a single program in depth, but places the onus on the investigator to provide clarity, organization and scholarship to the investigation. Case studies typically have limited generalizability, but are very useful to local program staff and providers.

Experiment: a study with randomized or otherwise highly controlled allocation of two or more identifiable intervention strategies to test a hypothesis, frequently one regarding causation or treatment effectiveness/efficacy. The experiment most explicitly addresses the study question, results are clearly relevant, and can be communicated in a straightforward way. Feasibility of conducting an experiment is usually limited within the time frame and resources available to the master's student, given that the student must take significant initiative in study design and execution for the thesis research project.

Some types of projects are not acceptable as theses, including:

- A literature review, though a systematic review with critique and suggestions to the field can be acceptable. A formal meta-analysis is acceptable in that it generates new knowledge.
- A group project, though the thesis may be part of a collaborative project, provided the student had the lead role in that part (original work).
- A recycled class or practicum project, though the thesis can be a significant extension of work that began as a class paper, project or practicum.

III. STANDARD THESIS FORMAT

Standard thesis format includes four sections: **Introduction**, **Methods**, **Results**, and **Discussion**. These are the typical sections of an academic journal publication, although the organization of your own work may be different. We encourage you to find a 'STROBE (Strengthening the reporting of observational studies in epidemiology) Checklist,' which offers a checklist of items that should be included in reports of observational studies. There are different lists, depending on the study design. See: <http://www.strobe-statement.org/index.php?id=available-checklists>. The organization of subsections may vary, depending on the topic and the preferences of the student and committee.

1. Introduction

Introduces the problem, research question or questions, previous research on the problem, and the conceptual approach used in this study.

1. Specification of the problem; significance, magnitude, and importance of the problem
2. Specific research questions or hypotheses addressed by the study

3. Literature review
4. Conceptual model

2. **Methods**

Describes in detail the research methods used in the study.

1. Study setting
2. Selection of study subjects
 - i) Source
 - ii) Sampling method/recruitment
 - iii) Criteria for eligibility/exclusion of cases
3. Description of intervention (if any)
4. Data collection
 - i) Source (e.g., questionnaire, interview, record review, vital records)
 - ii) Protocol for typical subject
 - iii) Steps taken to assess and assure data quality
5. Analysis (as applicable)
 - i) Hypothesis testing/generation
 - ii) Definition of key analysis variables
 - iii) Sample size/power considerations
 - iv) Statistical methods

3. **Results**

Provides a clear, systematic presentation of results, linked back to the research questions and conceptual model. It does not include interpretation or discussion of results.

1. Characteristics of the study sample, including the number of subjects and the response rate.
2. Table(s) or figure(s) addressing each research question. Tables and figures usually progress from univariate, to bivariate, to multivariate analyses. Text highlights (but does not duplicate) results shown in tables and figures.

4. **Discussion**

Provides the opportunity to discuss the findings, compare them with previous research, and consider the implications of the findings.

1. Study strengths and limitations
2. How key findings compare or contrast with previous work
3. Implications of findings
 - i) For the theory or conceptual model described in the Introduction.
 - ii) For public health practitioners or clinicians

iii) For future research

5. **Appendixes**

Contain detailed materials related to the thesis, such as cover letters to respondents, instructions for computing a scale score from the raw data, documentation of the mathematical equations used in the data analysis, and so forth.

IV. IDENTIFYING A TOPIC

Some students start their MPH Program with a well-defined thesis topic, others do not. Whatever your situation, it is strongly recommend that students choose a thesis topic that is of strong interest to themselves and their committee as the thesis process is long and requires sustained effort. The best way to settle on a topic is to talk over possibilities with faculty and other students about possible topics. Reaching out to faculty will help distill a topic or introduce you to a new topic. It is worth spending the effort to develop one or more well-focused research questions. A well-focused question greatly facilitates planning, conducting, and writing up the thesis research. And remember, the primary goal is educational, this will not be the biggest or best project of your career, but it will be a valuable experience that you will learn a lot from.

V. FORMING A THESIS COMMITTEE

Once you have one or a few topics and well-focused research questions, the next step is to organize a thesis committee. The average thesis committee is composed of two or three faculty members; the Graduate School allows up to four members.

1. **The thesis chair and at least one-half of the total membership must be members of the UW graduate faculty.** Graduate faculty status is a university-wide designation; see the [Graduate Faculty Locator](#).
2. The thesis chair must have an appointment in the School of Public Health (SPH) or the Department of Global Health (DGH). Department of Global Health faculty can be from the School of Medicine and/or the School of Public Health. The chair's appointment may be primary, secondary, adjunct, or clinical. A faculty member who does not have an appointment in the SPH or the DGH may be thesis chair upon approval from the MPH Graduate Program Director.
3. The second committee member must be a UW faculty member. If the chair does not have an appointment in the Department of Global Health, the second committee member must.
4. If a committee has more than two members, the additional members may be based at institutions or organizations from outside the UW. However, non-UW committee members must have their CVs approved by and filed with the department in order to be officially members of the thesis committee.

VI. STUDENT AND COMMITTEE ROLES AND RESPONSIBILITIES

Regular communication between the student and his/her thesis committee is paramount to the success and timeliness of completing a thesis. Although students will receive a great deal of help and support from committee members, the student is the researcher and ultimately responsible for carrying out the thesis work.

The student and committee members must work out a realistic timeline for completing the thesis, including review and comment on all drafts, taking into account members' schedules and commitments. On average, students submit three to four drafts to their committee before the thesis is ready for final submission. Students are strongly advised to obtain advance confirmation of the committee's availability each quarter.

Student Responsibilities:

1. **Identify and confirm a committee chair.** Then *inform your first year faculty advisor that you have identified a chair*; the role of faculty advising moves from the faculty advisor to the thesis chair at this point. NOTE: students are not necessarily expected to include their first year faculty advisor on the committee; this decision is up to the student and faculty advisor.
2. **Identify and confirm committee members.** Consult with thesis chair to identify faculty to serve on the committee who have relevant, complementary expertise regarding the thesis project.
3. **Complete [Use of Human and Animal Subjects for UW Graduate Student Theses and Dissertations](#) form** when thesis committee finalized **and submit to Catalyst site.**
4. **Establish a communication plan and timeline with thesis committee.** Specifically determine when committee members will be expected to review and provide feedback on thesis drafts.
5. **Write a thesis proposal.** This should be complete and approved by the thesis committee *before* proceeding with data collection or analysis. *The completed proposal must be sent to all members of the committee and the student's staff advisor.*
6. **Determine if human subjects application needs to be filed with the UW** in consultation with thesis committee. When in doubt contact the Human Subjects office at hsdinfo@uw.edu or 206.543.0098. NOTE: human subjects applications may need to be filed with other entities as well depending on the country and organization you will be working with.
7. **Register for a minimum of 9 thesis credits, G H 700,** using the faculty code of the thesis chair.
8. **Conduct thesis work with the highest ethical standards.**
9. **Write up thesis** abiding by the [SPH Academic Integrity Policy](#).
10. **Submit final draft of thesis to committee members at least 6 weeks before the intended graduation date.** If the full draft has not been received by that time, the student should expect to graduate the following quarter.
11. **Present thesis orally** to departmental students, faculty, and staff; staff to organize.
12. **Follow the Graduate School's [Final Submission Guidelines](#).**

Committee Chair Responsibilities:

- **Guide the student's expectations** about the scope of the project as it relates to the time constraints of their academic program.

- **Assess the student's ability to carry out all parts of the proposed thesis project**, if gaps are identified, advise student on how to gain the skills necessary for completion of the project.
- **Assist student in identifying appropriate committee members.**
- **Ensure all committee members have read and approved the thesis proposal** (i.e. brief overview of problem statement, data collection and proposed analyses) early in the thesis process.
- **Negotiate with committee members the extensiveness of their roles** (see below) on the thesis.
- **Assist student with establishing a communication plan and timeline.** Specifically determine when committee members will be expected to review and provide feedback on thesis drafts.
- **Assist student with UW human subjects application or exemption**, as well as other potential human subjects requirements.
- **Assist with mediation if conflict arises.**
- **Sign the [Master's Supervisory Committee Approval Form](#) to convey approval of the thesis.**
- **Provide interim ("N") and final (CR is recommended) grade** for thesis work, via G H 700.

Committee Member Responsibilities:

- **Read, give advice and sign off on the initial thesis proposal.**
- **Work individually with student on the thesis aspects for which the committee member carries primary responsibility.**
- **Read drafts and provide comments to student and chair in a timely fashion**, consistent with the communication plan and timeline provided by the student.
- **Attend meetings requested by student or chair.**
- **Sign the [Master's Supervisory Committee Approval Form](#) to convey approval of the thesis.**

VII. THESIS PROPOSAL

After the thesis committee is finalized and a timeline has been established, the next step is to write a thesis proposal. The proposal describes the purpose of the study and the methods for accomplishing them. This requirement (1) ensures that thesis projects are based on sound and rigorous research methods, and (2) provides an important opportunity for students to develop research design skills with expert guidance from faculty.

Structure of the Thesis Proposal

The thesis proposal is typically 3-5 pages, plus any graphs or tables, and should be structured in the format presented below. Writing a thesis proposal requires the student to be explicit regarding plans to execute the

thesis. The format can be adapted to individual project needs and constraints as deemed appropriate by the thesis chair.

I. Title Page: Project title, student's name, chair of committee, committee members, and date. If the committee is not yet formally constituted, indicate potential committee members being considered, including a chair.

II. Specific Aims: List the project's immediate goals in terms of research or practice questions to be answered. The overall purpose of this line of investigation should indicate the importance of the specific information being sought through this study. This section should not exceed ½ page in length and may be shorter.

III. Background and Significance: Describe the scientific context for the study, briefly summarizing the existing body of knowledge and/or the context and issues to be addressed in the practice setting. This should NOT be an extensive literature review; rather it is meant to allow the student to demonstrate a basic understanding of the issue or field to be studied. Keep references to a minimum by citing only those that are most relevant. This section should identify the gaps in knowledge which the proposed project will help to fill. One to two pages is usually enough.

IV. Methods: The format of this section may be tailored to meet the needs of the specific project being proposed. This should be the longest section of the proposal, usually 2-3 pages in length.

V. Limitations: Describe any limitations that are beyond the control of the project (those that have already been decided upon or implemented), which may affect results of the thesis work or may influence the interpretation of the study results.

VI. Timeline: Provide an approximate timeline for completion of the various stages of the project.

VII. Budget: Provide a budget outlining anticipated costs.

VIII. References: Provide citations to key literature references used in the proposal.

Obtaining Approval of the Thesis Proposal

Obtaining approval of the thesis proposal by all members of the thesis committee is required. Students should provide each committee member with a copy of their proposal. A meeting of the committee may be needed or helpful to discuss improvements to be made to the proposal. Ideally committee feedback on the proposal, whether by meeting or otherwise, should be provided within 2 weeks of receipt of the proposal.

Once edited, the revised thesis proposal should be resubmitted to the committee for final review (a meeting may not be necessary, if the revisions are small). When the committee has approved the thesis proposal you have reached an important milestone as your committee is essentially declaring that your research question and the methods for answering them are acceptable. **Once approved, upload a copy of your thesis proposal to the Catalyst site.** Once this step is complete you have a "green light" to begin your thesis work.

VIII. HUMAN SUBJECTS

Understanding the history and background that led to the creation of Institutional Review Boards (IRB) and Human Subjects Committees is critical when pursuing research. The Graduate School and Department of Global Health MPH program each have requirements that help ensure the protection of human subjects.

Requirements

- **The Graduate School requires all graduate degree students to discuss human subjects requirements with their thesis chair** and then file a [Use of Human and Animal Subjects for UW Graduate Student Theses and Dissertations Form](#) with their staff advisor as mentioned previously.
- **The DGH MPH program requires human subjects training to be completed before a student begins working on his/her thesis.** The UW utilizes CITI web-based training. To get started follow the directions below.
 - Go to: <https://www.citiprogram.org/>
 - Under “Create an account”, click on “Register” (after registering you can use the Username/Password box for future entry).
 - Select “University of Washington” under “Select Your Organization Affiliation”.
 - Complete the “Personal Information” section.
 - Under “University of Washington Courses”, select “Social /Behavioral”.

Determining if Review is Needed

Most theses that involve gathering data from or about people will require review from a UW Human Subjects Institutional Review Board (IRB). The first place to look is the [UW Human Subjects Division](#) home page. Look in the box that says “Determine if your project requires IRB review”. Your thesis chair is instrumental in helping you sort out when and what type of review is needed. Your staff advisor will have contact information for staff members working on global health issues in the UW HSD office.

Foreign Institution Review Boards

It is equally important that the student and thesis chair consider where the student’s research will take place and whether a human subjects application needs to be filed with a host organization, Ministry of Health, or other entity. If a second review is required, it can potentially add months to the overall thesis timeline. Having a colleague/counterpart in the host country to help answer questions and interface with the foreign IRB can be immensely helpful.

Timeline

The time required for approval varies considerably, depending on the volume of applications at the time of submission. To allow enough time for the entire process, we recommend a minimum of two months for an Exempt Application and up to four months for a Minimal Risk or Full Review Application.

This includes the writing of the protocol and application forms, requesting letters of permission from outside collaborators or agencies, review and sign off by faculty thesis advisors (for students), sign off by the Department (at least a week), and then time for the UW review committee's questions and final approval.

Final approval by the UW Human Subjects Division may take as little as one week (as is typically the case with concurrence for most exempt applications), but typically requires two months for minimal risk and full review applications. If your Exempt application is denied and ends up being referred to the Minimal Risk review committee, you will need extra time.

IX. GETTING STARTED

While classes have well-defined start and end dates, the thesis has far less structure and can vary considerably in content and duration. In most cases, the student's ability to complete a thesis without delay depends on what s/he knows about the **topic and research methods; individual skills in time management, organization, working with other people; and knowledge of thesis requirements** imposed by the University of Washington's Graduate School. These guidelines are designed to help you navigate the thesis terrain from beginning to end.

While it may seem obvious, a key step in completing your thesis is simply to *start*. There are several sources of inertia that can slow or deter a student from starting the thesis: lack of time, comfort with structured course work and discomfort with a less structured thesis, feeling overwhelmed by the magnitude of the task and no clue of where or how to begin, stress from personal or family problems, and so forth. The best way to overcome this inertia is to make a commitment and start the process. Once your thesis committee approves your thesis proposal and you have obtained approval from the Human Subjects Division, you may start your study!

Writing and Revising as you Work

If you have not yet completed the Introduction and Methods chapters of your thesis, now is a good time to do so. By completing the two chapters now, you must only write the Results and Discussion chapters later. In short, this breaks up the writing into manageable pieces and increases the likelihood that you will complete your thesis on schedule.

As you perform your study, you undoubtedly will encounter a number of methodological issues that were not addressed in the thesis proposal. When the way to solve these issues is unclear, you should obtain advice from one or more members of your committee on how best to address them. These steps also decrease the likelihood that committee members will find problems with your study after it is completed.

Rather than operating in "crisis mode" and contacting committee members only when problems arise, it is strongly suggested that students and faculty speak on regular basis to monitor progress and address any problems that may have emerged. The frequency of meetings may vary during different stages of the thesis process, with more frequent meetings (e.g., every two weeks) in the first and last stages, and fewer meetings in between. In particular, students should meet periodically to discuss the data analysis and interpretation of results.

Registering for Credit

Student must register for a minimum of 9 thesis credits for their degree. There is no total maximum number of credits one can register for; however, students can register for no more than 10 credits of G H 700 per quarter. Each credit should be roughly equivalent to 30 hours of student effort across the quarter, or three hours per week.

Students are responsible for communicating with their faculty chair each quarter they register for thesis credits, and must determine with their chair the appropriate number of credits to register for. The chair is responsible for distributing their faculty code to students. Staff also have access to these codes.

X. COMPLETING THE WRITE-UP

After all analyses are completed, students should write the first draft of the Results and Discussion chapters. Once completed, the Introduction, Methods, Results, and Discussion chapters should be submitted to the committee for review. **In most cases, students find they must revise the four chapters at least 2 times before all committee members will approve them.** Depending on the study and the student, the revisions can take a month or more to complete.

Some general points to keep in mind about preparing an acceptable thesis are:

1. Approval of the content, writing quality, and format of the thesis is determined by the thesis chair and committee.
2. Neither the DGH MPH Program nor the Graduate School requires your thesis to be a certain length. Therefore, it is wise to negotiate expectations about the length of your thesis with your committee.
3. It is recommended to use the length and format of an article in a scientific journal. This still allows wide variation, but as a rough guideline typically entails:
 - 2500-4000 words
 - 5-10 tables or figures
 - Appendices for supplementary tables or copies of data collection instruments, as needed
4. The "Program Authorized to Offer Degree" on your title pages is Global Health.

XI. ORAL PRESENTATION

An oral presentation of the master's thesis is a departmental requirement. This presentation usually takes place the quarter a student plans to graduate. The thesis does not need to be complete in order for it to be presented. The presentation will be scheduled by a staff member. The student is responsible inviting his/her committee.

Ten minutes are allowed to present the thesis findings and five minutes to take questions. The ability to synthesize and summarize one's work into such a framework is a useful professional skill. It requires that the

student practice their presentation, edit accordingly to fit the timeframe, and think about how to best use audiovisual technologies slides.

At minimum, the oral presentation should cover:

- Thesis background, study methods, results, discussion, and recommendations, as appropriate
- Recognition of thesis chair, committee and any sponsoring organization (if appropriate)

XII. SUBMISSION TO THE GRADUATE SCHOOL

Your nearly there...but these last two steps are important so make sure to review in advance.

1. File a [Master's degree request](#) (can be done from the first day of the quarter through the last day of class).
2. Review the Graduate School's [Electronic Thesis/Dissertation \(ETD\) webpages](#). Then follow the steps required for a successful final submission of your thesis.

Reminder! Submission of a master's thesis is a requirement of the Department of Global Health MPH program.

Graduate Registration Waiver Fee

The \$250 [Graduate Registration Waiver Fee](#) is an optional fee paid in lieu of registration. It is available to qualifying students for a 2 week period directly following the quarter in which all Graduate School and graduate program degree requirements are met. Qualifying students who pay this fee will graduate in the quarter following the fee payment period.

Note: This option may have an effect on the grace period for student loans becoming due; students should check with their lenders for registration requirements before utilizing this option in lieu of registration.

Eligibility

- Master's students who did not submit a [Master's degree request](#) prior to the request deadline for the quarter in which all degree requirements were completed
- Students who completed all degree requirements but needed additional time to format the thesis or dissertation (project papers are not included)

NOTE: International students must consult with an adviser in the Office of International Students and Scholars to determine their eligibility for this option.

Requirements

- Students must have been registered for the previous quarter.
- Students must have completed **all** Graduate School and graduate program degree requirements (courses, examinations, etc.); the *only* exception being submission of the thesis/dissertation.
- The fee must be paid **and** thesis must be submitted via the UW ETD Administrator Site no later than 14 calendar days following the last day of the quarter in which all degree requirements were met.
- Master's students must submit a master's degree request within the first week (5 weekdays) of the quarter in which they will graduate ([MyGrad – Student View](#)).

XIII. THESIS PUBLICATION

The goal for all students should be dissemination of their thesis results. Everyone benefits when a student's thesis is published, although it is not a requirement for graduation. Submission and response to reviewer comments can take several months, but the benefit of publication is clear:

- Through publication the work becomes known to colleagues, which builds the student's reputation and resume.
- The field of public health benefits from the dissemination of the thesis results to other interested professionals for purposes of building future research and replication of results. In fact, we have an ethical responsibility to publish our work and communicate the issues raised by participants to help their voices be heard.
- Faculty committee members benefit in several ways. First, the collaborative work is communicated and future researchers can build upon this work. Second, faculty can be credited for senior authorship on publications.
- Non-faculty collaborators benefit by being recognized for their contributions.
- The MPH Program benefits, as publication advertises the quality and content of the program

Co-authors on a publication usually include others who made a "meaningful scientific contribution" to the work – typically the thesis chair, other committee members, and any others who played a key role in the project. The student and thesis chair should reach tentative agreement about who will take responsibility for preparing the thesis for publication and about the identities and listing order of co-authors. While a publication usually has co-authors, the thesis must be authored only by the student.

RESOURCES

Graduate Faculty Locator:

<https://grad.uw.edu/for-faculty-and-staff/faculty-locator/>

Use of Human and Animal Subjects for UW Graduate Student Theses and Dissertations Form:

<https://grad.uw.edu/wordpress/wp-content/uploads/human-animal-advisory-certif.pdf>

Instructions for Final Submission of Your Electronic Thesis or Dissertation (ETD):

<https://grad.uw.edu/for-students-and-post-docs/thesisdissertation/final-submission-of-your-thesisdissertation/>

Graduate Registration Waiver Fee:

<https://grad.uw.edu/policies-procedures/general-graduate-student-policies/graduate-registration-waiver-fee/>

Master's Degree Request:

<https://apps.grad.uw.edu/student/mastapp.aspx>

School of Public Health – Academic Integrity:

<http://sph.washington.edu/students/academicintegrity/>

Catalyst Tools for Human Subjects Research:

<http://www.washington.edu/itconnect/learn/stories/teaching-guides/planning-considerations/using-the-catalyst-web-tools-for-research-activities/>

