



# **Master of Public Health Program**

## **Scholarly Project**

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## SCHOLARLY PROJECT

The Scholarly Project (MPH 995) is a required, 2-credit course for students in the MPH Program. It is one component of the MPH Culminating Experience, and enrollment is concurrent with MPH 590: MPH Seminar. The Scholarly Project provides an opportunity for students to work independently on a public health project related to their specialization - Population Health Analytics or Health Management and Policy. A committee, composed of the student's Faculty Advisor and one secondary advisor. The secondary advisor will usually be another member of the UND Graduate Faculty, but may alternatively be an expert outside of UND with approval of the Faculty Advisor. Additional members may be added to the committee with approval of the Faculty Advisor. The completed project demonstrates synthesis and application of competencies acquired through coursework and other public health learning experiences in the MPH Program.

The Scholarly Project is a course developed by the School of Graduate Studies for graduate programs that do not require a thesis. The School of Graduate Studies defines the Scholarly Project in the *Academic Catalog, 2017-18* as follows:

"The independent study or scholarly project is designed to require the student independently to investigate a topic related to the major field of study. The study need not be an original contribution to knowledge but may be a presentation, analysis, and discussion of information and ideas already in the literature of the field. The requirement is to ensure that a student can investigate a topic and organize a scholarly report on the investigation. Independent studies are single author works; scholarly projects may be team projects."

### Scholarly Project Process

The Scholarly Project begins with development of a Topic Proposal, which is submitted to the School of Graduate Studies.

"The topic for an independent study or scholarly project must be approved by the student's advisor. Approval is effected by the student's completing a form entitled Topic Proposal of Independent Study, available from the School of Graduate Studies and on the School of Graduate Studies website, then submitting the proposal to the advisor for approval. **The proposal must be approved no later than the semester or prior to the one in which the student expects to graduate, and must be filed in the School of Graduate Studies to become part of the record before a student is advanced to candidacy for a master's degree**" (*Academic Catalog, 2017-18*).

The Topic Proposal is developed during enrollment in MPH 550: Population Health Research Methods. Throughout this course, students complete assignments that lead to submission of the Topic Proposal and readiness to enroll in MPH 995: Scholarly Project. Students may change their Topic Proposal before enrolling in MPH 995 with advisor permission. It is the student's responsibility to meet deadlines in order to successfully prepare a final manuscript and presentation. **See Attachment C: Scholarly Project Assignments and Schedule in MPH 550: Population Health Research Methods.**

The student's Faculty Advisor is the primary advisor for the Scholarly Project. During the semester when the student is registered for MPH 550, the Faculty Advisor counsels the student on:

- Selection of a Scholarly Project topic

- Review of the literature on that topic and choice of the research question(s),
- Selection of a dataset and variables to answer the research question(s), if the project requires a quantitative or qualitative analysis

The Faculty Advisor confers with the student and approves all MPH 550 assignments related to the Scholarly Project. In most cases, the Scholarly Project will use an existing data set to ensure timely completion of this degree requirement.

**The Faculty Advisor also discusses authorship of the Scholarly Project with the student to ensure that proper acknowledgment of contributions is given to the student, the Faculty Advisor, the additional Committee Member, and any other faculty member who has contributed significantly to the Scholarly Project, such as another course instructor.**

The Faculty Advisor also guides the selection of the additional Committee Member required for the Scholarly Project. In most cases the additional Committee Member will belong to the University of North Dakota faculty, but exceptions may be made, with approval of the Faculty Advisor, to select an expert external to UND. This person adds expertise - either content or methodological - that enhances the quality of the Scholarly Project. **The Committee Member must be chosen before the Topic Proposal is submitted to the School of Graduate Studies, in order that the Committee Member reviews and signs the Topic Proposal.**

Once the Topic Proposal is completed in MPH 550 and approved by the Faculty Advisor and the Committee Member, the student registers for their Faculty Advisor's section of MPH 995: Scholarly Project. During that course, the Faculty Advisor and the student meet regularly to complete the project. **Attachment D contains example assignments and schedule for MPH 995: Scholarly Project.** These assignments and schedule may vary at the discretion of each Faculty Advisor. **The final oral presentation is 20% of the final grade for MPH 995: Scholarly Project, and the remaining 80% of the grade is based on the assignments** as determined by each Faculty Advisor

### **Scholarly Project Outcomes**

In the MPH program, completion of the Scholarly Project requires both written and oral components: (1) a manuscript that will be formatted for submission to a peer-reviewed journal; and (2) an oral presentation based on the manuscript.

For the paper portion of the project, **the student must submit the final version of the paper to the MPH Program Manager one week prior to the oral presentation**, in order to allow time for MPH Core Faculty to read it. The student chooses a peer-reviewed journal that has a focus consistent with the Scholarly Project topic. Students follow the Instructions to Authors, which provide the formatting information, page length, number of tables and figures allowed, and other information on preparation of the manuscript. Students follow these instructions exactly so that they can submit the paper for publication, although actual submission is optional. Each student's Faculty Advisor will review and approve the choice of journal.

For the oral portion of the Scholarly Project, students are required to give a 20-minute presentation on their Scholarly Project to the MPH community including faculty, students, and staff, as well as outside advisors and other stakeholders. Students who are distance learners may present via broadcast, if they cannot come to campus. **This oral presentation will comprise 20% of the student's final grade in MPH 995: Scholarly Project.** To prepare an effective presentation, students are recommended to view

examples of TED talks ([www.ted.com](http://www.ted.com)), especially those that describe how to create a TED talk (e.g. [https://www.ted.com/talks/nancy\\_duarte\\_the\\_secret\\_structure\\_of\\_great\\_talks](https://www.ted.com/talks/nancy_duarte_the_secret_structure_of_great_talks)). **All MPH Faculty and students are strongly urged to attend all Scholarly Project presentations.**

After the oral presentation to the MPH community, “Students must prepare and secure the advisor’s approval of an independent study or scholarly project report. Three copies of the report (one each for the student, the advisor, and the department) must be accepted by the advisor who will certify completion by submission of the Final Report on Candidate to the School of Graduate Studies by the deadline specified in the Academic Calendar and submit a grade for 997-Independent Study or 995-Scholarly Project to the Office of the Registrar” (*Academic Catalog, 2017-18*).

The grade for the Scholarly Project is assigned by the Faculty Advisor, in consultation with all other faculty members who contribute to the project. Twenty percent of the grade is based on the oral presentation, and the remaining portion is based on assignments and other considerations as determined by each individual Faculty Advisor.

### **Scholarly Project Types**

The Scholarly Project provides an opportunity for students to work independently on a public health project related to their specialization - Population Health Analytics or Health Management and Policy. The Scholarly Project can be an expansion of a course project or the Practicum with the approval of the Faculty Advisor, but in such cases must represent a substantial expansion beyond the original project/Practicum. Some examples of types of Scholarly Projects are:

- Literature Review - a synthesis of literature that identifies important areas for future research and potential research questions that are unanswered in the existing literature on a topic related to the student’s specialization.
- Evaluation Report – a report on an evaluation of an existing public health program, policy, or initiative, which may include process, outcomes, and impact assessments and/or cost analyses.
- Policy Analysis - an analysis of a current or proposed health policy. The project could include perspectives on economics and financing, need and demand, politics/ethics/law, or quality/effectiveness.
- Statistical Research - a design, analysis, and interpretation of secondary data to address a specialization-related problem or issue. Primary data collection is discouraged because of the length of time required. Appropriate IRB approval needs to be obtained for any project that uses data gathered from human subjects, and, at the University of North Dakota, all secondary data analysis projects require IRB approval.

### **Attachments**

The *Scholarly Project Manual* contains the following:

- Attachment A: MPH 995: Scholarly Project Checklist
- Attachment B: Topic Proposal Guide for a Research Project
- Attachment C: Scholarly Project Assignments and Schedule in MPH 550: Population Health Research Methods
- Attachment D: Assignments and Schedule for MPH 995: Scholarly Project

- Attachment E: School of Graduate Studies instructions for the Topic Proposal for the Scholarly Project. These can also be accessed at: <http://graduateschool.und.edu/files/docs/topic-proposal.pdf>

**Scholarly Project Manual**  
**Attachment A:**  
**Checklist for MPH 995: Scholarly Project**

A complete Scholarly Project includes:

- Copy of the Topic Proposal, signed by the Faculty Advisor and Committee member
- IRB Application for data analysis projects
- Final syntax file for the analysis, annotated, if data analysis is conducted
- Paper that can/will be submitted for publication
- Instructions to Authors for the selected peer-reviewed journal
- PowerPoint used in oral presentation of project

These components of the Scholarly Project must be given to Ashley Evenson, the MPH Program Manager, before a grade can be assigned.

**Scholarly Project Manual**  
**Attachment B:**  
**Topic Proposal Guide for a Research Project**

Include all of these categories in your proposal with headers and in this order:

- **Background**
  - What is your topic?
  - What does current published research tell us about this topic?
    - What do we know about this topic?
    - What don't we know?
  - How does the project advance the literature in this area? What contributions does it make to the literature?
  
- **Research Question(s)**
  - Based on the review of the literature and what is unknown or unclear about the topic
  
- **Methods**
  - *Data*
    - Where are you getting the data (e.g., BRFSS)?
    - What agency, organization, or person originally collected/developed the data?
    - How were the data collected (e.g., telephone survey, personal interview)?
    - What population does the sample represent (e.g., all U.S. mothers with a child < 5 in the household)?
    - How large is the sample?
    - Are the data publicly available or do you need IRB approval?
  
  - *Research Design (e.g., cross-sectional, prospective, case-control)*
  
  - *Variables and their Measures*
    - Dependent variable(s)
    - Independent variable(s)
    - Confounding variables
  
  - *Analysis*
    - Methods
    - Software (e.g., SAS v9.4)
  
  - *Other*
    - What are the strengths and weaknesses of the data, research design, and sample for the proposed project?
    - Potential contribution(s) of proposed project

**Scholarly Project Manual**  
**Attachment C:**  
**Scholarly Project Assignments and Schedule**  
**in MPH 550: Population Health Research Methods**

MPH 550: Population Health Research Methods is structured towards submitting MPH Scholarly Project Proposals to the Graduate School, as well as completing a large portion of each student's final Scholarly Project. As such, it requires close communication with the student's primary Faculty Advisor throughout the course. This will ensure a stronger and more efficient Scholarly Project process by incorporating advisor guidance early and frequently, thus avoiding errors, problems, and re-work in the project. Each student is required to meet with their advisor at least three times during the semester to discuss and mutually agree on the following sub-goals of the project:

1. Selection of research question and dataset (by Week 3)
2. Identification of specific variables and data management steps (by Week 5)
3. Discuss literature review, motivation for the study, and preliminary results (by Week 13)

It is the student's responsibility to initiate these meetings with their faculty advisor, in a way that is considerate of the advisor's time and workload. When presenting material to the advisor, students must present and/or explain it conceptually because the advisor will not necessarily understand R code and output. In addition to the above basic communication requirements, each advisor may have additional requirements throughout the semester (e.g. weekly meetings), and it is the student's responsibility to verify this at the beginning of the semester. Due to the importance of involving the faculty advisor throughout the Scholarly Project process, this communication will account for 10% of the final grade (to be determined jointly by the faculty advisor and Dr. Selya).

## Scholarly Project Manual

### Attachment D:

#### Example of Assignments and Schedule for MPH 995: Scholarly Project

Students will meet regularly with their Faculty Advisor, who also serves as their Course Instructor for MPH 995. **The example assignments and schedule may differ at the discretion of each Faculty Advisor/Course Instructor. The Faculty Advisor/Course Instructor will decide whether to meet and review assignments with each student, individually, or all students, simultaneously, in a classroom setting.**

Weekly assignments are cumulative and build towards the completed Scholarly Project. Students are expected to discuss each assignment with their Faculty Advisor/Course Instructor after submission of an assignment, and to incorporate feedback in a timely manner. **All students must submit their final Scholarly Project paper one week prior to their oral presentation**, in order to allow all MPH Faculty to familiarize themselves with the projects prior to the presentations. **Oral presentations will comprise 20% of the final grade for MPH 995: Scholarly Project.** The remainder of the grade is determined by each individual Faculty Advisor based on assignments and other considerations.

**Assignment 1:** Project Status Report (due before Week 2's class). Collect relevant materials from MPH 550 (cumulative R, SAS, or SPSS script, list of confounders, analysis results). Submit a 1-page summary summarizing the following:

- The dataset that you are using
- The population that you are studying
- The main independent and dependent variables, the research questions, and the hypotheses
- Summary statistics for the main independent and dependent variables
- Basic findings from inferential statistical tests
- Variables (e.g. confounders) that you plan to include in your final project
- Additional analyses that you plan to include in your final project

**Assignment 2:** Final Variable Selection (due before Week 3's class). Submit descriptive statistics for all of the variables that you plan to include, and state whether each variable is the independent variable, the dependent variable, or a confounder or moderator.

**Assignment 3:** Final Model (due before Week 4's class). Run your final model, then write up and interpret your results, following the provided guidelines for writing up statistical results.

**Assignment 4:** Draft of Methods (due before Week 5's class). Starting with your MPH 550 paper and materials, add additional necessary information about variables, data management, and analyses. Submit a complete draft of your Methods section.

**Assignment 5:** Draft of Results (due before Week 6's class). Starting with your MPH 550 paper and materials, write up all descriptive and inferential statistical results, using tables and/or figures as appropriate. Submit a complete draft of your Methods section.

**Assignment 6:** Journal Selection (due before Week 7's class). Select an appropriate journal for which to format your Scholarly Paper (and optionally submit it). Submit the name of the journal, the website for the journal, and a brief explanation of why you think this is a good fit for your research question.

**Assignment 7:** Draft of Introduction (due before Week 8's class). Starting with your MPH 550 paper and materials, incorporate all prior feedback (minimally, from MPH 550) and update as necessary to reflect your current research question and variables. Submit (1) a complete draft of your Introduction, and (2) a "rebuttal letter" that details how and where you incorporated prior feedback.

**Assignment 8:** Formatting Guidelines (due before Week 9's class). Find your selected journal's Instructions for Authors and submit a document that describes the following guidelines for your journal:

- Limits on word count (abstract and/or body of the text)
- A list of required sections (e.g. Abstract, Introduction, Methods, Results, Discussion)
- Any details on the organization, hierarchy, or formatting of section headings
- Guidelines for placement and formatting of figures and tables
- The journal's provided examples of how in-text citations and bibliography references should appear

**Assignment 9:** Draft of Discussion, Part 1 (due before Week 11's class). Draft and submit the first part of your Discussion section, including 1) summary of main findings, 2) relation to previous literature (e.g. confirm, extend, and/or contradict?), 3) possible explanations of findings, backed up by literature, and 4) anything else suggested by your Faculty Advisor/Course Instructor.

**Assignment 10:** Draft of Discussion, Part 2 (due before Week 12's class). Draft and submit the remainder of your Discussion section, including 1) directions for future research, 2) strengths and limitations of your study, 3) implications for public health, 4) conclusions if applicable to your journal, and 5) anything else suggested by your Faculty Advisor/Course Instructor.

**Assignment 11:** Draft of Abstract (due before Week 13's class). Draft and submit the Abstract of your paper, following your journal's guidelines (e.g. word limit, structured vs. unstructured).

**Assignment 12:** Formatting Check (due before Week 15's class). Submit a 2-column document that compares your formatting checklist (from A8 and in consultation with your Faculty Advisor/Course Instructor and your journal's Instructions for Authors) with the corresponding characteristics of your full manuscript.

**Assignment 13:** Final Manuscript (due before Week 16's class). Assemble your final manuscript, incorporating feedback from your Faculty Advisor/Course Instructor from previous assignments. Submit 1) your final manuscript and 2) a "rebuttal letter" detailing where and how you incorporated previous feedback from Faculty Advisor/Course Instructor and peers.

**Assignment 14:** Practice Presentation (due during Week 17's class). Create and submit your presentation slides (and/or other presentation materials) for next week's practice presentations. Presentations should include the following sections:

- Title slide with author names
- Introduction (background, motivation, research question, and hypothesis)
- Methods (brief description of dataset, study sample, variables, and analyses)
- Results (univariate and multivariate figures and statistics)
- Discussion (summary, relation to previous literature, implications, strengths, limitations, and future studies)