

Professional Paper Guidelines for

MPH 6991 and MPH 6992

ECU, Brody School of Medicine, Department of Public Health
2009 – 2010

This document summarizes the relationship between MPH 6991 and MPH 6992. A background of the goals of the two courses is described. Next, a general outline for the content of the proposal (MPH 6991) and paper (MPH 6992) are provided. The student should read and follow these guidelines carefully.

Pre-requisites for MPH 6991 are: 6000, 6002, 6011, and 6020. The pre-requisite for MPH 6992 is completion of MPH 6991 and all other core courses (MPH 6010, MPH, 6013, MPH 6035 & BIOS 7021).

The professional paper is the capstone learning experience for the Master of Public Health program. This culminating experience “requires a student to synthesize and integrate knowledge acquired in coursework and other learning experiences and to apply theory and principles in a situation that approximates some aspect of practice.”¹

Students will accomplish this by planning, implementing, and reporting results of a practice-based, action-oriented public health research project. The professional paper consists of two linked courses: MPH-6991 and MPH-6992. The goal of the 2 s.h. MPH-6991 Professional Paper I course is a well constructed proposal for a research project that can be completed the following semester in the 1 s.h. MPH-6992 Professional Paper II course.

The range of topics reflects both diversity of the field of public health as well as the diversity of MPH students and their interests. It may or may not include the collection of original data. The form and style of the paper will vary depending on the type of project chosen.

Research for the professional paper may be:

1. An epidemiological investigation
2. Description and analysis of a significant public health problem affecting a population not previously examined
3. Description and analysis of an emerging public health issue
4. A proposal or plan for a new community health intervention
5. Description of development and/or evaluation of a new public health program
6. An evaluation of an existing community health program
7. Clinical effectiveness/outcomes research
8. An analysis of public health policy

¹Council on Education for Public Health, Accreditation Criteria, Public Health Programs, Amended 2005, Criterion 2.5. Culminating experience.

9. Planned and structured advocacy for political action to promote public health
10. Legislative research for drafting new public health legislation
11. Research for legal action to promote public health
12. The creation of a strategic plan for a community health agency
13. A case study of the administration of a public health program or agency
14. A history of a public health problem or program
15. A literature review of a significant public health issue
16. A similar project suggested by the student.

The specific format for type of paper chosen should be negotiated with the section instructor (i.e., primary professor) assigned to direct the student's paper.

The Internship (MPH-6903) provides the ideal setting to develop the conceptual framework, research or evaluation questions, and objectives for the project, including an opportunity for collection of data. Students are not limited to the internship as the setting for the project; they may select another setting.

In the 1 s.h. MPH-6992 Professional Paper 2, students will implement the work proposed in MPH 6991. This includes replacement of section on expected outcomes with actual findings from implementation of the work in the results section. If relevant, students are encouraged to structure the professional paper for publication in a peer-reviewed journal. All professional papers are retained by the MPH program and available to current students and the academic and practice community for at least five years.

MPH-6991 and 6992 have multiple sections directed by a primary professor who is a member of the program's core faculty and provides primary guidance in developing the proposal, conducting the research project, and writing the paper. Students will be assigned to a section instructor who is the *primary professor*. The student should select another professor or practitioner for advice on methods and/or substantive expertise, termed the *content advisor(s)*. If the paper is related to the student's internship, the content advisor should be the practitioner who supervised the field experience.

The paper will be presented orally at the end of the semester for MPH-6992 in a 20 minute presentation with an additional 10 minutes allowed for questions. The presentations will take place within formally scheduled sessions, similar to oral presentations given at public health conferences, moderated by a core faculty member assigned to that session.

A. General Guidelines for MPH-6991 – Professional Paper 1 (2 s.h.). The Proposal

1. Course objectives:

Upon completion of this course, students will be able to:

1. Understand the structure of a research proposal and prepare a basic public health research or evaluation proposal.
2. Conduct a scientific literature review.
3. Develop public health survey materials and data collection tools.
4. Improve scientific writing skills.
5. Learn the key components of managing public health data.
6. Understand the structure of a public health research paper.
8. Improve presentation skills.

2. Course organization:

The MPH 6991 professional paper proposal (henceforth referred to as “proposal”) is a two credit required course. There are no more than 4-two hour sessions at the beginning of the semester, which are mandatory for each student to attend. The purpose of these sessions is to orient the student on the organization and content of the proposal. The sessions will cover, but are not limited to:

- Identifying a proposal topic and title
- Defining the research question or objectives
- Designing a conceptual model/ framework
- Conducting a literature review
- Planning methods of qualitative and quantitative research
- Collecting data
- Analyzing data
- Obtaining IRB approval
- Preparing a timeline
- Expectations for MPH 6992.

Each student is assigned to a section of MPH 6991. The primary professor for the paper is the MPH 6991 instructor for that section for that semester. In consultation with the primary professor, students will establish dates and deadlines for the major sections of the proposal based on the academic calendar for that semester. This will allow the primary professor to review student progress and provide feedback. The student must set up meetings with the primary professor for specific guidance.

The student may also identify a content advisor who is not the primary professor (section instructor), who will serve to provide expertise on the substantive topic area. For example, if Dr. Lea is the primary professor for a proposal on immunization rates in children, then Dr. Simmeonson may be the content advisor, since she is a pediatrician working in public health practice. Typically the final proposal to which a grade will be assigned is due after Thanksgiving in the Fall semester and two weeks prior to the last class day of the Spring semester.

3. Roles and Responsibilities:

The roles and responsibilities of each person involved in the MPH 6991/2 process are outlined below.

Primary Professor:

- Define MPH 6991/2 components clearly.
- Establish clear benchmarks/timeline for the semester of proposal writing.
- Assist student's development of a sound methodological framework to answer research question/topic.
- Provide timely and constructive feedback/input for scientific questions posed by students.
- Check on the student's progress on the timeline.
- Assist in complex data analysis if necessary.
- Communicate with the content advisor about the students' progress and about attending the final MPH 6992 presentation.

Student:

- Develop a solid topic (see FINER acronym below).
- Lead development of a sound methodological framework to answer research question/topic
- Implement feedback from primary professor and content advisors a timely fashion.
- Adhere to benchmarks set by the primary professor.

Content Advisor:

- Provide input on public health implications of research topic.
- Guide the student regarding sound methodology.
- Provide timely input to drafts of proposal and professional paper.
- Attend (via phone, over the web, or in person attendance) the student's final oral presentation (MPH 6992).

4. MPH-6991 Grading:

1. Organization (10%) – Follows syllabus organizational headings and sections contain appropriate material.
2. Clarity (10%) – Writing is clear and concise; not redundant or circular.
3. Background and Significance (15%) – Student understands the literature and how the proposed project potentially adds to the literature.
4. Methods (30%) – Data collection protocol is thorough; employs reliable and valid quantitative measurement tools and/or detailed qualitative methodology.
5. Theoretical and/or Logic/Conceptual Model (10%) – Linear layout and provides clear explanation of relationships.
6. Expected outcomes (10%) – Student lays out table templates or other expected outcomes which demonstrates that student can transition from methods to results and analysis section.
7. Responsiveness to timelines/deadlines met (15%) – Submits high quality work according to established timeline, maintains good communication with primary professor, and implements primary professor/content advisor feedback in a timely fashion.

5. Structure of the professional paper proposal (MPH-6991):

A topic for the Professional Paper should be identified early in the MPH program. The choice of may be a curiosity that the student brought to the program or one provoked or elicited in coursework or the field experience. It may be a topic that the student developed into a research proposal in the Research Methods course. It must, however, be *feasible* to address in no more than two semesters and within the student's means. The topic should be *interesting* and *novel* to the student. The method for examining the topic must be *ethical*. Any research involving human subjects must be approved by the University and Medical Center Institutional Review Board (see section on IRB approval process) Last, but not least, the topic must be *relevant* to public health - something that can be applied and lead to or inform action to improve the health of the public. The acronym, *FINER*, standing for the italicized words above, can guide selection of topic.

Based on the topic, there may be variation in the components of each proposal, but there are some components that the majority of public health research proposals include. The following provides a structural guideline.

The professional paper proposal should include:

Signature page: Includes the title of the proposal, student's name, IRB number if applicable, and places for the primary professor and content advisors to sign off their approval of the professional paper proposal. (Appendix 1)

Cover page: Includes the title of the proposal, student's name, primary professor and content advisor, date and the semester. (Appendix 2).

The title tells "What you are going to do?" by person, place, and time. It should be clear and concise. A reader should understand the aim, the target population, and the dependent variable(s) if hypotheses are investigated. (80-100 characters)

Introduction: "What is the problem and why is it important?" This section gives a brief description of the problem. Students should state the importance of the problem from a public health perspective and justify their decision for proposing this study. (1 page)

Background: "What has been reported on this problem?" This section supports the introduction by summarizing the scientific background relevant to the problem. The background will also show how the student's investigation addresses the research needs in the area. Students will select scientific literature from various journals, textbooks, and other published material to support their proposal. (2 pages maximum)

Goals and objectives: "What are you planning to investigate and accomplish?" It states the broader long term goal(s) for the project. To reach these goal(s), students need to identify their measurable objective(s). Just one specific goal and no more than three objectives are recommended. (1 page)

Conceptual Model: Every paper must have one of the following: conceptual model, conceptual framework, or logic model for describing the problem or process and/or grounding the inquiry. This conceptual model of hypothesis is a visual display of the context of your project.

Methods: “What will be explored, described, or explained? How are you going to implement the proposal in MPH 6992??” This section is the detailed explanation of the activities that will be undertaken to obtain results or findings. How will you answer your research questions or measure your evaluation outcomes? The process should be explained as if giving detailed instructions to a reader interested in duplicating the study. (4 pages maximum).

Target population: “In which population are you going to do this study?” The target population should be defined in clear terms addressing time, geographic location, and demographic indicators. What is the unit of analysis?

Study population: Select a representative sample or group from the target population and explain: What inclusion and exclusion criteria will be used to select the study population? How the sample size will be determined? What sampling method will be used? If a comparison group is included, similarly describe eligibility criteria and for inclusion in the sample.

If you are conducting qualitative research, how will you select a purposeful sample? Note the overall purpose of the qualitative inquiry.

Data collection: “How are you going to collect data?” Explain the sources of data and details of the data collection methodology, e.g., secondary data, original data collection, survey research, in-depth interviews, focus group discussions, biometric measurements, data abstraction forms, log books, etc. Describe design of a data collection instrument, if relevant: include testing of the instrument, collection of data using the instrument, and data management.

Data analysis: Describe development of a data dictionary or codebook and operationalization of variables.

Variables: “What are the dependent and independent variables?” Based on data collection, explain the independent variables used in analysis to answer the research question. To reach proposed study goals and objectives, students need to develop a dependent and independent variable list for the study. Each variable must be clearly defined and operationalized in terms of definitions and coding. What statistical methods and techniques will be employed; descriptive or inferential? Details on the data analysis including the software packages (e.g., SAS, SPSS) and the analytical techniques should be explained.

For qualitative research, this would include selecting major themes/topics to explore, your plan for coding each interview (double-coding using independent coders), and qualitative data analysis package used (N’Vivo, AtlasTI). This section would also include an outline of inductive versus deductive analysis strategy.

Expected Results/ Outcomes: “What are the anticipated outcomes of the project?” This section summarizes the end products of the study, how public health practice might be informed and improved. Based on the analysis plan, develop drafts of tables or figures you are likely to use in the results section, e.g., shell tables with column and row headings, title of figures, and x-and y-axis of graphs. For qualitative research, include a table of potential themes/topics and salient quotes to illustrate each theme. (1/2 page)

Limitations and strengths: “What are the strengths and weaknesses of the study?” State the limitations and strengths of the study plan and briefly explain how limitations may affect the study results.

Timeline: “What is your schedule?” Each proposed activity should be planned chronologically (weekly or monthly) with critical events identified. Each student will develop an individualized timeline of activities to be conducted during the MPH-6991 and MPH 6992 semesters and submit it to his/her primary professor by the end of the second week of the semester. It is the student’s responsibility to report deviations from the timeline to the primary professor.

Human subjects: All students must contact the Brody IRB office to determine if IRB approval is needed for the project. Please do this early in the semester, since a formal application for review of your proposal is required if human subjects are involved. This process is tedious and requires filling out forms that will be submitted to the IRB office for approval. Studies collecting data from human participants must have Institutional Review Board (IRB) approval number assigned to the project or an exemption (in writing) prior to starting the data collection. Students should contact Ms. Suzanne Sparrow in the Brody IRB office via e-mail at sparrows@ecu.edu or at 252-744-1785. The IRB website is www.ecu.edu/irb. The final proposal must include UMC-IRB Approval number or letter granting exempt status limitations. The federal website for the protection of human subjects is worth reviewing: <http://www.hhs.gov/ohrp/>

References: The source of all literature cited in the proposal is referenced in a format appropriate for submission to a professional journal, i.e., MLA, APA or biomedical format, depending on the contextual discipline in which the work is done. Advice of the primary professor should be sought. Other literature, articles, book chapters, books, and unpublished material consulted but not cited should be listed as a Bibliography.

Appendices: Sample survey tools, questionnaires, consent forms, and other related documents for the proposal should be added as an appendix.

6. Summary of the professional paper proposal preparation process:

1. Select the study topic
2. Select the content advisors
3. Develop the timeline for the proposal
4. Acquire knowledge, skills, and resources needed to complete the proposal and project
5. Submit the proposal for primary professor’s and content advisors’ approval
6. Submit the proposal for the Institutional Review Board (IRB) approval

B. General Guidelines for MPH-6992 – Professional Paper 2 (1 s.h.). Writing the Paper

1. Course objectives:

The objectives for MPH 6992 include implementation of the paper proposal by following the timeline developed in MPH 6991. You will implement the project you proposed in 6991 to generate the findings/outcomes/results section of the paper, summarize and discuss your findings, submit a written report, and present your project publicly.

2. Course organization:

There are not organized class sessions. See your instructor's syllabus or timeline for the dates that drafts are due. The final presentations will be scheduled during exam week for each professional paper section.

3. Paper Structure:

The professional paper will typically be in the public health research article format. If the student chooses to submit the paper for publication in a peer-reviewed journal, the primary professor will supervise and guide him/her.

The IMRAD format (which is the acronym for “introduction, methods, results, and discussion”) is the most common format for public health research papers and should be used in writing the professional paper. The following instructions summarize the structure of this format. Students can read further details on this format from the International Committee of Medical Journal Editors (ICMJE) web page at <http://www.icmje.org/>.

If the student wishes to submit the paper for publication, each peer-reviewed journal has a convention for format which can be found on the particular journal's website. Primary professors will facilitate preparation of journal submission. Paper length will vary. Focus on being succinct yet including sufficient detail so that others could replicate your results. (Suggest 12 – 20 pages of text for most papers.)

The professional paper should include:

Professional paper signature page: This page includes the title of the paper and names of all professors/advisors, with an area for their signatures. This will be used for final approval of your paper. (Appendix 3)

Professional paper cover page: This page is similar to the cover page used for the proposal. Students should state the title, their name, and the semester. The names, affiliations, and academic credentials of the professors/advisors should appear on this page. (Appendix 4)

Abstract: Summarizes the background, methods, results, and the conclusion of the paper. Use the “structured” format for the abstract, which is limited to 200 words and summarize each section with separate headings.

Introduction: This section is the combined summary of “introduction”, “background”, and “goals and objectives” from the proposal. It gives a brief description of the problem, the importance of the problem, and the goals and objectives. The Literature review in the proposal

should be omitted from the introduction, except to use citations from literature to support introductory statements. Find a good reference that you think is worth emulating in terms of content.

Methods: This section contains the methods from the proposal. In some situations, the methods to implement the proposal may have changed by the time the paper is written. This section should reflect what was actually done in terms of methods.

Results: Gives the observed findings and the objective results of the analyses without any interpretation. Students should use tables and figures combined with the text to summarize the data. Tables and figures may be incorporated into the text or placed at the end of the paper consistent with relevant journal guidelines. For the results section, fill out the shell tables and figures as articulated in the proposal.

Discussion: Students should summarize in 1-2 sentences their major findings. The next paragraphs should discuss their results in the context of previously published findings. This is where you describe his/her what you found in your results agrees or disagrees with studies cited in the literature review. This section also includes your speculation about why or why not your results agree/disagree with prior findings. Next, both strengths and limitations of the study must be discussed. Students should conclude the discussion with the study's contributions to public health practice, community health and scientific literature, and give recommendations for future research.

Conclusion: Not more than a short paragraph, this section should give the “take home” message from the study.

References: Only works cited are listed in final paper. An appendix of other literature consulted, published and unpublished, may be listed as a Bibliography.

Tables and figures: Tables and figures placed at the end of the paper should be printed on separate sheets.

4. Summary of the professional paper preparation process:

Obtain IRB approval

1. Conduct the research project
2. Prepare the data base
3. Enter and clean data
4. Analyze the data
5. Review the data with professor/advisors
6. Re-write the introduction and methods as necessary
7. Write the results section, prepare tables and figures
8. Double check introduction, methods, and results
9. Write the discussion and conclusion
10. Prepare the reference citation list and bibliography
11. Write the abstract and prepare a cover page and a signature page
12. Submit an electronic version of the paper for suggested revision and/or approval by primary professor and content advisors. Follow the section-specific syllabus for deadlines.

13. Revise the proposal according to suggestions of primary professor and content advisors.
14. Ask primary professor, content advisors, and Department Chair to indicate their approval by signing the signature page.
15. Have the final version spiral bound and present the bound copy to the MPH office. Keep a copy for yourself. Send an electronic copy to your primary professor.
16. Prepare the presentation slides
17. Present the paper orally

*****NOTE: Final grades will not be entered into Banner until the MPH office has a hard copy of your final bound professional paper and an electronic copy.***

5. MPH-6992 Grading:

The professional paper article will be evaluated and graded for MPH-6992.

All students will present their work in a 20 minute oral presentation and discuss it with other students and the faculty. These presentations will be the part of the evaluation.

1. Organization (10%) – Follows syllabus organizational headings and sections contain appropriate material.
2. Clarity (10%) – Writing is clear and concise; not redundant or circular.
3. Introduction (5%) – Student has narrowed down the background and significance to a concise summary of the literature and how the proposal project potentially adds to the literature.
4. Methods (20%) – Data collection protocol is thorough; employs reliable and valid quantitative measurement tools and/or detailed qualitative methodology; has implemented methodology correctly and written it up clearly.
5. Results (20%) – Student clearly lays out results in tables or other format. Student clearly articulates results without repeating results in tables verbatim.
6. Discussion (25%) – Summarizes research findings, integrates findings into existing literature (agreement/disagreement with previous findings), limitations and strengths, future work, and public health implications.
7. Presentation (10%) – Slides are clear, uses a readable, large font; Student does not read from slides and finishes on time.

Grading scale: A, 90-100; B, 80-89; C, 70-79; F, <70

Appendix 1 – MPH 6991, Sample signature page for approval of Professional Paper Proposal

Approval of MPH Professional Paper Proposal

Student _____

Working title of paper as stated on proposal:

UMC-IRB # _____ (if required)

The attached proposal for the professional paper is approved and the student is to proceed with the work necessary to complete the paper, seeking guidance as necessary, according to the schedule outlined in the proposal.

APPROVED BY:
PRIMARY PROFESSOR:

date

PROFESSIONAL PAPER CONTENT ADVISORS:

date

date

date

Appendix 2 – MPH 6991, Sample proposal cover page

Testing for Acute Retroviral Syndrome at a County Medical Center

Tanya L. Sanders, BS
Department of Public Health
Hardy Building, 1709 W. Sixth Street
Brody School of Medicine
East Carolina University
Greenville, NC 27834
MPH-6991 Professional Paper I

Primary Professor:

C. Suzanne Lea, PhD MPH
Department of Public Health

Advisor:

Thomas Kerkering, MD
Chief Division of Infectious Diseases

Fall 2006

Appendix 3 – MPH 6992, Sample signature page for approval of Professional Paper

1-1/2 inches from top of page to first line of title

THE EFFECT OF DAILY PHYSICAL EDUCATION
ON BODY MASS INDEX OF 8TH GRADE STUDENTS
AT E.B. AYCOCK MIDDLE SCHOOL

by
Thomas F. Wood
December 2004

APPROVED BY:
PRIMARY PROFESSOR:

(type name here) (date)

CONTENT ADVISORS:

(type name here) (date)

(type name here) (date)

(type name here) (date)

CHAIR, DEPARTMENT OF PUBLIC HEALTH:

(type name here) (date)

Appendix 4 – MPH-6992, Sample title page

Testing for Acute Retroviral Syndrome at a County Medical Center

Tanya L. Sanders, BS
Department of Public Health
Hardy Building, 1709 W. Sixth Street
Brody School of Medicine
East Carolina University
Greenville, NC 27834
MPH-6992 Professional Paper 2

Primary Professor:

C. Suzanne Lea, PhD MPH
Department of Public Health

Advisor:

Thomas Kerkering, MD
Chief Division of Infectious Diseases

Fall 2006

Appendix 5 – MPH-6992, Sample article cover page

Testing for Acute Retroviral Syndrome at an Academic Medical Center

Tanya L. Sanders B.S., MPH 1, Thomas M. Kerkering, MD, 2

1. Department of Public Health, Brody School of Medicine, East Carolina University, Greenville, NC 27834
2. Chief Division of Infectious Diseases, Infectious Diseases and International Traveler's Clinic, Brody School of Medicine, East Carolina University, Greenville, NC 27834

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Running Head:

Word count:

Key words:

Abstract word count:

Figures:

Tables: