Master of Public Health

Integrative Learning Experience (ILE) Handbook: MPH 6991/2: Professional Paper I/II

2024-2025 Academic Year

Table of Contents

Abbreviations

APA	American Psychological Association
APHA	American Public Health Association
APE	Applied Practice Experience
CEPH	Council on Education for Public Health
CHHB	Community Health & Health Behavior
DPH	Department of Public Health
ECU	East Carolina University
Epi	Epidemiology
HPAL	Health Policy, Administration, and Leadership
ICMJE	International Committee of Medical Journal Editors
ILE	Integrative Learning Experience
IRB	Institutional Review Board
MLA	Modern Language Association
MPH	Master of Public Health
PA	Primary Advisor
Pro	Professional
SH	Semester Hours
UMCIRB	University and Medical Center Institutional Review Board

I. Overview

Per the **Council on Education for Public Health's (CEPH) 2024 Accreditation Criteria**, MPH students must complete an **integrative learning experience (ILE**; Criterion D7) that demonstrates synthesis of CEPH foundational and CEPH-approved, concentration-specific competencies. In ECU's **Department of Public Health (DPH),** students meet this requirement by sequentially completing MPH 6991 then 6992 near the end of their program of study (e.g., in the final year or terms).

The ILE is a culminating experience, where students must produce **a high-quality written product,** referred to by ECU's DPH faculty as the **Professional (Pro) Paper**. The student's written product should be appropriate for the *student's educational and professional objectives*. Moreover, CEPH encourages students to develop and deliver their Pro Paper in a manner that is useful to external partners, such as non-profit or governmental organizations.

II. Department Contacts

Table 1. ILE Leadership		
Role	**Name**	**Contact**
Department Chair	Suzanne Lazorick, MD, MPH	lazoricks@ecu.edu
MPH Program Director	Marla Hall, PhD, MCHES	hallmarl14@ecu.edu
ILE Coordinator	Dr. Rashmita Basu	basur19@ecu.edu
Student Services Coordinator	Rhonda Onorato	onorator20@ecu.edu

III. ILE Course Descriptions

The prerequisites, semester hours, and a description of each ILE course is outlined in the 24-25 **ECU Graduate Catalog** and below:

MPH 6991: MPH Professional Paper 1 (2 SH)[1]

a. **Prerequisites**
   i. MPH 6000, MPH 6002, MPH 6011,
   AND
   One (1) of the concentration-specific research methods courses (see Table 2)
   ii. **OR** the consent of instructor

b. **Course Description:** Includes applied learning exercise on the implementation of public health and epidemiologic research methodology. Students develop a research proposal (6991).

[1] May be repeated, but only 3 s.h. may count towards the degree.

MPH 6992: MPH Professional Paper 2 (1 s.h.)[1]

a. **Prerequisites:**
   i. MPH 6000, MPH 6002, MPH 6011,
   AND
   One (1) of the concentration-specific research methods courses (see Table 1)
   AND
   MPH 6991
   ii. **OR** the consent of instructor

b. **Course Description:** Includes applied learning exercise on the implementation of public health and epidemiologic research methodology. Students implement their research proposal developed in MPH 6991, analyze their results, and write a public health **research article** that is ready for submission to a peer-reviewed scientific journal.

Table 2. MPH Concentration Research Courses

Concentration	Course	S.H.
Health Policy, Administration and Leadership (HPAL)	MPH 6020: Research Methods	3
Epidemiology (Epi)	MPH 6702: Epidemiology Methods	3
Community Health and Health Behavior (CHHB)	MPH 6027: Mixed-Methods Research	3

A. Research Course(s) Prerequisites

Research is a process by which we discover new knowledge, and it has different definitions. In the **Code of Federal Regulations (45 CFR 46.102(d))** pertaining to the protection of **human subjects**, research is defined as a ***systematic*** *investigation (i.e., the gathering and* ***analysis*** *of information) designed to develop or contribute to* ***generalizable*** *knowledge.*[2] A broader definition of research is a *systematic investigation of a subject aimed at uncovering new information (discovering data) and/or interpreting relations among the subject's parts (theorizing).*[3]

Research can be understood as the systematic collection of data or information to develop new knowledge or understanding. However, the research process must be methodical, adhering to a series of pre-designed steps and protocols. For example, to complete the ILE courses successfully, students must be able to:

1. Contextualize a public health problem within the existing scientific literature
2. Articulate how the proposed research will augment current knowledge
3. Develop research question(s)
4. Propose a study to respond to the research question(s)

[2] Office of Research Integrity, Department of Health and Human Services. (n.d.). *Module 1: Introduction: What is research?* https://ori.hhs.gov/content/module-1-introduction-what-research.
[3] Vogt, W.P. (1993). *Dictionary of statistics and methodology.* Sage Publication.

5. Complete an Institutional Review Board (IRB) application, if applicable
6. Implement the research protocol
7. Compare the research findings with the existing scientific literature
8. Discuss how research findings contribute to our understanding of the public health problem
9. Draft ***a high-quality written product*** that (a) summarizes the research (b) for peer-review (c) by a relevant scientific journal
10. Present the major research findings to the faculty and MPH student body[4]

For that reason, the research methods class for each concentration is an important foundational course for the ILE. It offers guidance on scientific writing and the logical framework necessary for crafting a scientific proposal. Moreover, course learning activities describe how to select an appropriate research method based on the research question. For the ILE, students may select from various types of research to conduct, including descriptive studies, experimental or quasi-experimental studies, evaluation studies, systematic literature reviews, or white papers. Pro Paper students are strongly encouraged to review materials from their research methods class to develop a strong research proposal.

Appendix A provides examples of appropriate types of ILEs and titles of recently completed projects. In addition, all completed ILE written products are retained by the MPH program and available to current students and the academic and practice community.

IV. Preparing for ILE Coursework

A. Choosing a Public Health Topic

Ideally, students should identify a public health issue to address in their ILE prior to enrolling in MPH 6991. The range of public health issues students choose to address reflects the diversity of the field of public health as well as the MPH student body and their interests.

When choosing a topic, students should reflect on how the topic aligns with their goals to enhance certain public health skills, defined by the program's competencies. Skills may be related to:

- Data collection (quantitative and/or qualitative),
- Statistical analysis, data management, and computing,
- Program evaluation, and/or
- Skills needed for a particular type of job.

[4] Students are encouraged to structure their presentation after guidelines provided by relevant regional, state, or national public health conferences.

Also, the student must consider if the public health topic allows them to develop a *FINER* proposal:

- ***F**easible*
  - The research timeline should be ≤ two semesters.
  - The student must have the means and capacity to implement the proposed study.
- ***I**nteresting* and ***N**ovel* (i.e., innovative)
  - The proposed research should have the potential to augment current scientific knowledge about the public health issue.
- ***E**thical*
  - Research involving human subjects must be approved by the University and Medical Center Institutional Review Board (IRB).
- ***R**elevant*
  - The research should support the *student* reaching educational and professional goals
    - What competencies does the student want to enhance?

i. Internship-Related Topics

Ideally, the ILE will be useful to external partners, such as non-profit or governmental organizations. Students enrolled in their **internship** (**MPH 6903** or **MPH 6904/6905**) **before or at the same time** as the ILE should consider linking it to their internship (i.e., **Applied Practice Experience; APE**). The APE provides an ideal setting to add meaningfully to the work students are already doing by identifying a data need, for example. However, the APE and the ILE must have different objectives. This approach requires planning the APE and ILE **prior** to starting the APE. Students should express interest in this option early with their MPH academic advisor to plan.

ii. Faculty Research-Related Topics

The faculty have co-created a list of possible ILE topics based on (1) perceived data needs, (2) their research interests, (3) and areas of expertise. This list is available on the ILE page of the Department of Public Health (DPH) website.

iii. Professional Organization-Related Topics

- **Healthy People 2030** sets data-driven national objectives to improve health and well-being over the decade. The document includes 358 core — or measurable — **objectives** as well as developmental and research objectives.

- The **American Public Health Association (APHA)** highlights public health problems at the forefront of their agenda on the **Topics & Issues** page. In addition, APHA members collaborate in three main groupings to promote the mission and fulfill the strategic goals of APHA. Clicking on a specific member section, forum, or caucus will take you to an "about" page that includes a summary of the public health issues on which the groups focus.

1. **Member Sections** are the primary professional units of the association. Each of the 33 sections represents a major public health discipline or public health program.

2. **Forums** are membership units composed of APHA members who are working together on a specific issue that is:
    i. important to public health,
    ii. crosses disciplinary and Section boundaries,
    iii. requires expertise that may reside in more than one Section, and
    iv. supports APHA's mission.

3. **Caucuses** are groups of at least 25 APHA members or people who hold a particular position on an issue important to APHA. The Association has two types of caucuses:
    i. Members coalesce around shared identities or membership in socially defined groups
    ii. Members share special interests, worksite issues, and/or social justice issues.

B. ILE Advisors

i. Primary Advisor

Students are encouraged to consult with various faculty members to explore potential ILE topics and then select the faculty member with whom they wish to collaborate, who will become their **primary advisor (PA)** after completing the ILE Agreement and Concept Form: Part 1. To complete the form, the student should:

1. Complete the first page of the form,
2. Review the PA/Student Agreement with their PA,
3. Sign the form,
4. Save the form (adding their last name to the name of the file), and
5. Emailing the form to their PA.

The PA will save the form that the student has completed, electronically sign the form, save it again, and email the completed form to the ILE Coordinator.

Likewise, the ILE Agreement and Concept Form: Part II must be completed by the midpoint of the MPH 6991 semester. This second part involves detailing the concept and potential data sources for the student's ILE paper and selecting the competencies to be addressed during the proposed study (see Appendix B).

The PA will work closely with the student to establish dates and deadlines for the major sections of the proposal in MPH 6991 and the paper in MPH 6992, according to the academic calendar. This allows the PA to monitor the student's progress and provide necessary feedback. Students are responsible for scheduling meetings with their PA to receive specific guidance. The PA ensures that the student's ILE proposal, including the artifact (i.e., written product) meets **2024 CEHP Accreditation Criteria**.

While rare, it is possible for a student to change their PA during the ILE coursework (MPH 6991/6992). In such cases, the student should consult with their ***academic advisor*** and the ***student services coordinator***. The student, along with their academic advisor, the **ILE coordinator**, and the requested PA, must complete the Change of Primary Advisor form, which is then submitted to the student services coordinator.

ii. Content Advisor

Additionally, the student may choose to identify a **Content Advisor**, separate from the PA, who will provide expertise on the specific topic area. The Content Advisor need not be a faculty member or affiliated with the ECU Department of Public Health but must agree to serve in this role upon the student's request. The Content Advisor should possess expertise in the student's chosen topic or analytical methods, and may assist with data collection, offer insights on public health implications, or contribute to other aspects of the project.

At the beginning of the MPH 6991 semester, the student, PA, and Content Advisor should meet to define the scope of the proposal, including the research question, the need for IRB approval, data sources, methodologies, data collection, data analysis, publication expectations, and the roles and responsibilities of each participant. Students are responsible for taking notes at the meeting, translating notes into meeting minutes, and sending the minutes to their advisor(s) for approval.

For projects involving human subjects research, the PA or Content Advisor should serve as the principal investigator, not the student. Still, the student is expected to actively participate in the IRB submission process. The PA and student should also establish a plan for closing out the study in ePirate.

The student is responsible for maintaining communication with the Content Advisor, securing the advisor's approval for the proposal, keeping the advisor informed of progress and any changes, and providing the advisor with drafts of the proposal and paper throughout the two semesters.
The Content Advisor should offer timely feedback, including edits and suggestions to improve the final product. Likewise, the student is expected to address or respond to this feedback promptly. The Content Advisor should also attend the student's final poster presentation if possible.

The Content Advisor does not assign grades, participate in grading, or make final decisions regarding MPH 6992, such as determining whether the student can present their poster or whether the ILE paper meets course requirements.

If there are expectations to submit the professional paper for publication, this should be discussed throughout the process. The PA, Content Advisor, and student should agree on authorship order for all planned publications. The student should have the opportunity to be the first author but may choose not to take the lead. If the student declines or delays manuscript submission, the Primary or Content Advisor may assume first authorship.

For a summary of the roles and responsibilities of the student, PA, and content advisor, see Appendix C.

C. Course Enrollment

After receiving the completed ***ILE Concept and Agreement Form: Part I***, the student services coordinator will register the student for MPH 6991. The student cannot enroll themselves.

V. MPH 6991

A. Objectives & Competencies

The primary goal of MPH 6991 is to produce a well-constructed research proposal that will be completed by the end of the following semester during MPH 6992. In consultation with their PA, students will select a total of five foundational **AND** concentration competencies to address in the ILE (MPH 6991/2). The selected competencies should be relevant to the ILE proposal and *align with the student's educational and professional goals*. The PA and student will collaborate to document the chosen competencies in the **ILE Agreement and Concept Form: Part 1** (completed during course registration) and two MPH 6991 assignments: (1) **ILE Competency Demonstration Plan** and (2) **MPH 6992 Rubric**.

The PA will assess the selected competencies for MPH 6991/2 by reviewing and critiquing the professional paper proposal, final paper, and poster. Competency progress will be reported only if the student is not making adequate progress. In such cases, the primary advisor will notify the department chair, academic advisor, student services coordinator, and the student. The advisor will then collaborate with the student to develop a remediation plan.

Towards the end of MPH 6992, students will present their ILE project (in person or virtually) to DPH faculty, staff, and student. At the conclusion of MPH 6992, the PA will grade the final draft of the student's paper using the **MPH 6992 Rubric,** created by the student in MPH 6991. Lastly, the PA will attest to the student's competence in the **Professional Paper Submission Form**.

B. Organization

MPH 6991, Professional Paper I, is a 2-semester-hour required course in which students develop a proposal for their ILE project. The course involves several key steps:

1. Choose the proposal topic.
2. Title the proposal.
3. Identify a Content Advisor (optional).
4. Conduct a literature review on the ILE topic.
3. Define the proposal's research question(s), goals, and objective(s).
4. Develop a conceptual model/framework for the proposal.
5. Select an appropriate method(s) to answer your research question(s).
6. Develop the project's protocol.
7. Obtain Institutional Review Board (IRB) approval, if necessary.
8. Prepare a project timeline.
9. Submit the proposal final draft to the PA (and Content Advisor, if applicable) for approval.

Each PA will provide a syllabus that specifies due dates for proposal milestones/assessments. By the second week of the semester, the student and PA will collaboratively develop a schedule to ensure timely completion of the proposal. Importantly, it is the student's responsibility to report deviations from the timeline to their advisor as soon as possible. Otherwise, advisors will meet with the student at least four times during the semester to provide guidance. Meetings may occur in person, by phone, or through a telecommunications platform that supports video and voice communication. To conclude the course, the PA will outline the expectations for MPH 6992.

C. Structure of the Proposal

The proposal's form and style may vary depending on the research project and should be determined in consultation with the student's primary advisor.
Students are advised to choose either APA or AMA citation style and apply it consistently throughout their proposal. Other citation styles are acceptable if preferred by the advisor or required by a target journal. For assistance with citation styles, students can refer to the ECU Libraries Citation Guide and are strongly encouraged to use a reference or citation manager, such as RefWorks. More information on RefWorks is available on the Laupus Library webpage at Laupus Library. Librarians at Laupus Library are also available for assistance.
While the components of each proposal may vary depending on the topic, several key elements are commonly included in public health research proposals:

Cover Page: Includes the proposal title, student's name, primary and content advisors, date, and semester. The title should clearly and concisely convey the research's aim, target population and the dependent variable(s) if hypotheses are investigated (80-100 characters).

Introduction: Provides a brief description of the problem and its significance from a public health perspective, justifying the need for the proposed study (1 page).

Background: Supports the introduction, summarizes relevant scientific literature, and highlights how the proposed research addresses unmet needs in the field (2-4 pages).

Goal and Objectives: States the broader goal of the project and identifies measurable objectives. Just one goal and no more than three objectives are recommended. As part of the goal and objectives, the student should develop a research question, or a specific purpose for the project. (1 page maximum).

Conceptual Model: Every proposal must include a conceptual model, framework, or logic model to describe the problem and the inquiry process. An explanation of the model should accompany the visual display.

Methods: Details the activities to be undertaken to achieve the research objectives. This section should provide clear instructions for replicating the project and, depending on the type of proposal, include these subsections (4 pages maximum).

- **Target Population:** Defines the group of interest, addressing time, geographic location, and demographics.

- **Study Population:** Describes the sample inclusion and exclusion criteria, recruitment methods, unit of analysis, sample size determination, and sampling method.

- **Study Design:** Outlines the study's design.

- **Data Collection:** Explains data sources and collection methods (e.g. use of data that has already been collected, original data collection, survey research, in-depth interviews, focus group discussions, biometric measurements, data abstraction forms, logbooks), including any instruments used. If relevant, include how the instrument will be tested and how the data will be collected and managed.

- **Variables:** Defines and operationalizes the variables to be analyzed.

Data Analysis: Describes the analysis plan, including the use of statistical methods and software, as well as the approach for qualitative data analysis.

Expected Results/Outcomes: Summarizes anticipated outcomes and their potential impact on public health practice. Drafts of tables or figures to report results should be included (1/2 page).

Limitations and Strengths: Identifies the study's strengths and limitations and discusses their potential impact on the results.

Timeline: Provides a chronological schedule of activities for completing the project, including critical events.

Human Subjects: Includes relevant IRB information, such as the IRB application status and approval details, if applicable.

References: Lists all cited literature in a format suitable for submission to a professional journal. Additional consulted materials may be included in a bibliography.

Appendices: Includes any supplementary materials such as survey tools, questionnaires, or consent forms.

D. Submitting an IRB Application

A human subject is defined as a living individual about whom a researcher—whether professional or student—conducting research either:

1. Obtains information or biospecimens through intervention or interaction with the individual and uses, studies, or analyzes the information or biospecimens, or
2. Obtains, uses, studies, analyzes, or generates identifiable private information or biospecimens. For more detailed information, refer to the federal website for the protection of human subjects.

While all students in MPH 6991 will propose a research project, not all projects will involve human subjects as defined above. The student and their PA must first determine whether the proposed research involves human subjects. If it does not, the student is not required to undergo the IRB process. In cases where the PA is uncertain about whether the research involves human subjects, they should contact the UMCIRB office for clarification.

Students who propose to conduct human subjects research must submit their study to the University and Medical Center IRB (UMCIRB) for prospective review and approval. No research activities, including recruitment, consent, intervention, or interaction with participants, may begin until UMCIRB approval is granted. Students with questions about their proposed research should contact the UMCIRB office via email at UMCIRB@ecu.edu or by phone at 252-744-2914. Further information can be found on the IRB website.

IRB submission must be completed in collaboration with the ILE PA. The following steps outline the process for submitting a human research study to the UMCIRB for review and approval:

1. Register with ePIRATE, the online IRB submission and review system, if not already registered.
2. Complete the mandatory online CITI training.

3. Create and submit the proposal in ePIRATE. The submission must include, but may not be limited to:
    a. A lay summary of the project.
    b. Study team members:
        i. The PA or content advisor should be listed as the Principal Investigator (PI), not the student.
        ii. All persons involved in the student's project should be listed.
4. Project funding and location information.
5. Recruitment plans and informed consent documents, or a justification for a waiver of informed consent.
6. For student projects, a free-standing ILE proposal, thesis, or dissertation proposal must be uploaded, typically including the following:
    a. Literature review.
    b. Hypothesis/Research question.
    c. Goals/Objectives.
    d. Methodology, including recruitment and consent plan.
    e. Risks and benefits, with plans to minimize risks.
    f. Data collection, management, and destruction plan.
    g. Projected number of participants.
    h. Discussion of risks and benefits.

If the student is participating in an existing IRB-approved human subjects study, they do not need to submit a separate IRB application but must be added to the existing IRB documents. The PA and the Principal Investigator on the IRB (if different from the advisor) must agree to this option, and an amendment to the existing study to include the student must be submitted within ePIRATE. Students being added to an existing IRB-approved study must still complete steps #1 and #2 above.

VI. MPH 6992

A. Objectives & Competencies

The objective of MPH 6992 is to implement the project proposed in MPH 6991, adhering to the established timeline. The student will execute the project to produce findings, summarize and discuss the results, submit a written report, and present the project publicly. At the beginning of MPH 6991, the student and PA collaboratively select competencies that will apply to both MPH 6991 and MPH 6992. The PA will assess the student's achievement of these competencies by evaluating the proposal, paper, poster, and oral presentation.

B. Organization

MPH 6992 does not include organized class sessions. The PA will provide a syllabus and timeline specifying draft submission deadlines. If an in-person poster session is planned, the date and time will be scheduled before the semester begins, typically for the end of the semester. The PA will meet with each student at least four times during the semester to offer guidance. These meetings may occur in person, by phone, or through a video and voice telecommunications application.

The course involves several key steps:

1. Conduct the research project and/or data collection following IRB approval, if required.
2. Prepare the database.
3. Enter and clean the data.
4. Analyze the data.
5. Review the data with advisors.
6. Edit and update the introduction and methods sections as necessary.
7. Write the results section, prepare tables and figures, and verify the results.
8. Write the discussion and conclusion sections.
9. Prepare the reference citation list and bibliography, if appropriate.
10. Write the abstract and prepare the cover page.
11. Submit an electronic version of the complete draft of the paper for revision and/or approval by the primary advisor and content advisor.
12. Develop a poster presentation based on the project and submit a draft of the poster to the PA and content advisor for review **at least one week before** the poster session.
13. Present the poster at an in-person poster session or record an 8-10-minute presentation.
14. In collaboration with the PA, complete the **Professional Paper Submission Form** and submit the completed form along with the final paper and poster to the department chair and student services coordinator.
15. Close the study with the IRB, in collaboration with the PA or content advisor (whomever is the PI), if applicable.

C. Paper Structure

The format and style of the ILE paper may vary based on the research project and chosen methods. The student and the PA should agree on the paper's required format at the beginning of the MPH 6992 semester.

It is advisable for students to select either APA or AMA citation style and maintain consistency throughout the paper. Other citation styles are also acceptable if preferred by the advisor or required by a target journal for future submission. For assistance with citation styles, students should consult the ECU Libraries Citation Guide. The use of a reference or citation manager, such as RefWorks (supported by ECU), is strongly recommended throughout the ILE.

The ILE paper may follow the public health research article format, commonly the IMRAD format (i.e., Introduction, Methods, Results, and Discussion). This format is standard for public health research papers. Detailed guidance on this format can be found on the International Committee of Medical Journal Editors (ICMJE) website.

Paper length will vary depending on the topic and study type, but the emphasis should be on clarity and sufficient detail to allow replication of results. It is advisable to model the paper after relevant journals in the field. In general, the format of a research professional paper will include the following components:

Cover Page: This page mirrors the cover page used for the proposal and should include the title, the student's name, semester, and the names, affiliations, and academic credentials of the primary and content advisors (**see Appendix D**)

Abstract: A 200-word summary of the background, methods, results, and conclusion of the paper, using a structured format with separate headings for each section.

Introduction: This section combines aspects of the "Introduction," "Background," and "Goal and Objectives" sections of the proposal. It provides a brief description of the problem, its importance, a summary of relevant scientific literature, and the purpose of the study. The literature review from the proposal should be omitted, except where necessary to support introductory statements.

Methods: This section details the methods used to conduct the study, reflecting any changes made since the proposal. It includes study design, protocol, data collection, biostatistical analysis, and UMCIRB number and determination. If the research did not involve human subjects, that should be stated.

Results: This section presents the objective findings without interpretation, utilizing tables and figures (placed after the reference list) to summarize the data. Data in tables should not be repeated verbatim in the text. (**See Appendix E**)

Discussion: The discussion begins with a summary of the major findings (first paragraph), followed by an analysis of the results in the context of previously published research. This section also addresses the strengths and limitations of the study and discusses contributions to public health practice.

Conclusion: A brief section (one paragraph) summarizing the key takeaways from the project and suggesting directions for future research.

Acknowledgments: A brief section recognizing the contributions of individuals who assisted with the project.

References: Only works cited in the final paper should be listed. An appendix of other consulted literature may be included as a bibliography. Epidemiology papers should use the AMA format.

Figures and Tables: These should be placed after the references on separate pages.

D. Poster Presentation

All students must develop a poster describing their ILE. At the end of the MPH 6992 semester, each student will prepare a poster summarizing their work. While it is strongly encouraged that students present their posters at the in-person poster session, accommodations will be made for those unable to attend. These students will be required to present virtually by recording an 8–10-minute presentation using Zoom, WebEx, MSTEAMS, Studio, or voice-over PowerPoint. The recorded presentation file should be kept under 15 MB to facilitate easy emailing and storage.

The date and time for the poster session will be established at the beginning of the semester. For students participating in the in-person poster session, the following guidelines should be followed:

1. Posters should be printed through the Laupus Library printing services. The department will cover the cost of poster printing.
2. The department will provide an easel, poster board, and pins for displaying the poster during the session.
3. Students are expected to present themselves professionally, both in attire and demeanor, and remain by their poster for the entire session.
4. After the session, students may choose to keep their poster or give it to their primary or content advisor.

Posters should be created using the ECU PowerPoint 42-inch by 48-inch poster template. An annotated version of this template is available on the DPH ILE webpage. The acknowledgment section of the poster should recognize all individuals who assisted with the project, specifying each person's role and contributions.

Students have two options for authorship on the professional paper poster, which should be discussed with the primary and content advisors (if applicable):

Option 1: The student is the sole author. This option is recommended if the student does not plan to present the poster at conferences or professional meetings.

Option 2: The student is the first author, followed by all contributors to the project. This option is recommended if the student intends to present the poster in other professional venues.

E. ILE Submission

The student must revise their paper according to the suggestions provided by the PA and content advisor (if applicable), ensuring that the final draft is delivered to them **no later than one week** before the scheduled presentation day. After finalizing the paper, the student should take the following steps:

1. Request confirmation from the primary advisor that the final paper is approved.
2. Complete Part A of the **Professional Paper Submission Form** and email the completed form, along with the final paper and poster to the advisor. All files should be submitted in PDF format.
3. Request that the PA (or content advisor, if the primary investigator) "close" the study with the IRB through ePirate.

F. Publication

At the beginning of the MPH 6992 semester, the student and **PA** should discuss the potential for submitting the student's paper for publication. If the student intends to pursue publication, authorship and responsibilities must be discussed and agreed upon early in the process among the student and advisors.

VII. ILE Grading Policy

The "S" & "U" Grading System is used. Upon successful completion of MPH 6992, the PA will send a memo to the student services coordinator, who will upload the ILE final drafts into SharePoint/DegreeWorks stating the date work was completed. Once the memo is uploaded, the registrar will code professional paper as "R" -- Successful Completion. The primary advisor will post either an "S" or "U" in Banner. The registrar is the only person who may assign an "R."

- **S** (Satisfactory progress) A special grade reserved for thesis and dissertation research, APE, ILE, practica, and similar courses. The grades in these courses are not included in meeting the cumulative GPA of 3.0 required for graduation.
- **U** (Unsatisfactory progress) A special grade reserved for thesis and dissertation research, APE, ILE, practica, and similar courses. The grades in these courses are not included in meeting the cumulative GPA of 3.0 required for graduation.

VIII. Resources

A. Literature Searches

Heidi Reis serves as the library liaison for Public Health at Laupus Library. Students are encouraged to contact her with any questions regarding literature searches or library resources. She can be reached via email at reish21@ecu.edu. You may also access ECU Libraries' Research Guide for Public Health.

B. Statistical Analysis

Students requiring analytical support have access to various resources. Initially, students should conduct their analyses independently, in consultation with their PA. Following this, the student should discuss with the PA the best options for further analytical support. Potential sources of support include other DPH faculty members or faculty in the Department of Biostatistics. If the student and primary advisor opt to seek assistance from a Biostatistics faculty member, the PA should initiate contact. If the Biostatistics faculty member agrees to provide consultation, they should serve as a content advisor for the student's professional paper.

C. Graduate-Level Writing

The University Writing Center offers consultations and resources to assist students at any stage of the writing process. The Writing Center has locations in both Joyner and Laupus Libraries.

D. UMCIRB

The UMCIRB website provides extensive information and resources, including tutorials on the ePirate system.

IX. Appendices

A. Examples of ILE Types & Titles

Types of professional papers

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. Clinical effectiveness/outcomes research
5. A research question in the clinical research setting
6. A systematic literature review, or a white paper on a specific topic
7. History of a public health problem or program
8. An evaluation of a public health intervention or program
9. An analysis of a public health policy
10. Legislative research for drafting new public health legislation
11. Research for legal action to promote public health

Examples ILE Projects from the 23-24 Academic Year

CHHB

Valquez, A. (Fall 2023). Increasing diabetes knowledge via mHealth among Latinos with Type 2 Diabetes in Eastern NC (PA: Dr. Winterbauer)

Faul, C. (Summer 2024). A meta-ethnography to determine critical constructs of nutrition security (PA: Dr. Pitts)

Epi

Gilkey, L. (Fall 2023). Exploring the mental health benefits of school-based telehealth for students in rural communities (PA: Dr. Simeonsson)

Soracco, D. (Summer 2024). Students' COVID-19 seropositivity levels and practicing mitigation measures. (PA: Dr. Lea)

HPAL

Roland, E. (Fall 2023). Contributing factors impacting end-of-life care utilization for African Americans: A systematic review of the literature (PA: Dr. Little)

Kimball, C. (Spring 2024). Assessing the effects of adding face-to-face pediatric care on the overall reach and effectiveness of the Healthier Lives at School and Beyond telehealth program (PA: Dr. Cummings)

B. MPH Competencies

CEPH Foundational Competencies
Evidence-based Approaches to Public Health
1. Apply epidemiological methods to 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 systemic 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, implementation, or critique 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 the policy-making process, including the roles of ethics and evidence
13. Propose strategies to identify relevant communities and individuals 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 leadership and/or management principles to address a relevant issue
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 to a non-academic, non-peer audience with attention to factors such as literacy and health literacy
20. Describe the importance of cultural humility in communicating public health content
Interprofessional Practice
21. Integrate perspectives from other sectors and/or professions to promote and advance population health
Systems Thinking
22. Apply a systems thinking tool to visually represent a public health issue other than standard narrative

CHHB Concentration Competencies	
	Courses
1. Design a logic model to guide intervention development and data collection for program evaluation	MPH 6600
2. Develop an evaluation plan for health promotion and disease prevention interventions	MPH 6501
3. Apply qualitative and quantitative data analyses to assess programming needs, evaluation, or public health issues	MPH 6500
4. Formulate a collaborative evaluation plan with a community partner to achieve common public health goals	MPH 6605
5. Design a public health project that includes a detailed itemized budget, timeline, and staff training plan for data collection	MPH 6502

Epi Concentration Competencies	
	Courses
1. Critically evaluate public health through application of fundamental principles and methods of epidemiology	MPH 6022
2. Identify and implement appropriate study design, recruitment, data collection, and analysis methods to address an identified public health problem	MPH 6021
3. Identify and apply statistical methods to calculate appropriate epidemiologic measures of association, including confounders and effect modifiers and their use in multivariable analysis	BIOS 7022
4. Perform data management, analysis, visualization, and report generation of existing public health data using SAS to inform public health decisions	MPH 7202
5. Explain epidemiologic results in terms of magnitude, precision, validity, and limitations and identify their relevance to public health guidance	MPH 7202

HPAL Concentration Competencies	
	Courses
1. Address inequities in the prevalence of chronic diseases in rural and minority populations using systems thinking approaches	MPH 6800 MPH 6810
2. Examine and interpret the impact of health cost, access, and quality policies on rural and/or disadvantaged populations	MPH 6800
3. Cultivate leadership skills in strategic planning/management with a focus on reducing disparities in disadvantaged populations	MPH 6810
4. Perform financial analysis for public health interventions	MPH 6810
5. Develop and apply human resources management skills inclusive of diversity and disadvantaged populations	MPH 7010

C. Roles & Responsibilities

Primary Advisor

1. Develop a Canvas site or alternative platform for ILE students, including a syllabus and relevant materials.
2. Clearly define the components of MPH 6991/2.
3. If the student's project is part of a larger study led by the PA, content advisor, or another faculty member, clearly outline the student's specific role and responsibilities.
4. Establish and communicate clear benchmarks and a timeline for each semester.
5. Assist the student in developing a sound methodological framework.
6. Provide timely and constructive feedback on questions and drafts.
7. If IRB approval is required for the student's project, guide the student through the IRB submission process and serve as the Principal Investigator (PI). In some cases, the content advisor may serve as the PI.
8. Encourage the student to enhance their scientific writing skills throughout the writing process, including the use of the University Writing Center.
9. Monitor the student's progress according to the established timeline.
10. Maintain communication with the content advisor regarding the student's progress and ensure their participation in the final MPH 6992 presentation.
11. Assign final grades of S or U for MPH 6991 and MPH 6992.
12. Complete the student's Professional Paper Submission Form and forward it, along with the final paper and poster to the department chair and student services coordinator.

Content Advisor (if applicable)

1. Provide input on the public health implications of the research topic.
2. Guide the student in developing a sound methodology.
3. Meet with the student and PA early in the MPH 6991 semester to define the project and clarify the roles and responsibilities of all parties involved. (The student will draft meeting minutes to document the outcomes of this meeting.)
4. Provide timely feedback on drafts of the proposal and paper.
5. Attend the student's final poster presentation, if possible.
6. The content advisor does not assign grades or participate in grading. However, they may offer editing and other suggestions to enhance the final product.

Student

1. Develop a research topic that is feasible, measurable, and achievable.
2. Conduct a comprehensive literature review on the selected topic, seeking assistance from the PA, content advisor, and ECU librarians as needed.
3. Lead the development of a sound methodological framework to address the research question or topic.
4. Continuously work on improving writing skills, particularly in scientific writing, throughout the writing process. This includes utilizing the services of the University Writing Center as needed.
5. Implement feedback from the PA and content advisor in a timely manner.
6. Complete the proposal and paper efficiently and within the set timelines.
7. Collaborate closely with the PA and content advisor throughout the professional paper process, which includes:
    a. Regularly communicating with the primary advisor and content advisor, including responding to emails promptly.
    b. Communicating any problems encountered and seeking help when necessary.
    c. Adhering to the benchmarks established by the primary advisor and promptly addressing any related issues that arise.

D. Example of Required Title Page

Title of Paper

Name of Student

Department of Public Health
Brody School of Medicine
East Carolina University
Greenville, NC 27834

Primary Advisor
Name, Credentials

Content Advisor
Name, Credentials

MPH 6992 Professional Paper II
Semester Year

E. Examples of Table Shells (or Mock Tables)

A table shell is a structured table that includes a title, the appropriate number of columns and rows, column headings, row headings, and footnotes but does not include any results. Creating table shells early in the research process helps the researcher to make sure they are collecting the right data and also helps to define the analysis plan.

Example of table shell to describe the sample population

Distribution (number and percent) of Demographic Characteristics, Pitt County Smoking Survey, 2013		
Demographic Characteristic	Number	Percent
Age (in years)		
18-44		
45-64		
>=65		
Gender		
Male		
Female		
Race-ethnicity		
Whites, non-Hispanic		
Blacks, non-Hispanic		
Hispanic		
Other		
Education		
<= HS graduate		
Some post-secondary		
College graduate		
Annual household income		
<$35,000		
$35,000- 49,999		
>= $50,000		

Example of table shell to describe univariate statistics of main analysis variables

Prevalence of Current Cigarette Smoking Status and Other Characteristics, Pitt County Smoking Survey, 2013		
	n	Percent
Current cigarette smoking status		
Currently smokes*		
Does not smoke		
Number cigarettes per day**		
Less than 5		
5-10		
11-19		
20 or more		
Participated in Employee Wellness Program***		
Yes		
No		
*Has smoked at least 100 cigarettes in their lifetime and currently smokes cigarettes. **Number of cigarettes smoked on a typical day, among current smokers. ***Participated in any wellness program in the past 12 months offered by their employer.		

Example of table shell to report bivariate statistics.

Prevalence of Current Cigarette Smoking and Number of Cigarettes Smoked per Day by Participation in Employee Wellness Program, Pitt County Smoking Survey, 2013			
	Participated in wellness program*** % (n)	Did not participate in wellness program % (n)	Chi-square p-value
Current cigarette smoking			
Currently smokes*			
Does not smoke			
Number cigarettes per day**			
Less than 5			
5-10			
11-19			
20 or more			
*Has smoked at least 100 cigarettes in their lifetime and currently smokes cigarettes. **Number of cigarettes smoked on a typical day, among current smokers. ***Participated in any wellness program in the past 12 months offered by their employer.			