

Course Directors

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The **Culminating Experience** is a graded course which consists of four elements that focus on the synthesis and summary of data acquired through epidemiologic research or surveillance activities. The four elements are: (a) Concept Paper, (b) Proposal, (c) Final Report, and (d) Oral Presentation. These elements are fully described in the Appendix – Guidelines for Culminating Experience Elements.

MPH students are required to demonstrate proficiency in the application of the skills they acquire during their academic programs through the **Practicum** (PubH 6014.13) and the **Culminating Experience** (PubH 6015.13). The two courses can be linked but this is not a departmental requirement. In addition, they can be taken simultaneously or sequentially, in which case the Practicum would come first.

Course Prerequisites

- PubH 6002 Biostatistical Applications for Public Health
- PubH 6003 Principles and Practice of Epidemiology
- PubH 6047 Design of Health Studies
- PubH 6005 Policy Approaches to Public Health

Co-Requisites

- PubH 6249 Use of Stat Packages for Data Management/Data Analysis
- PubH 6014.13 Epidemiology and Biostatistics Practicum
- PubH 6252 Advanced Epidemiologic Methods

Recommended Course

- PubH 6004 Environmental and Occupational Health

- PubH 6007 Social and Behavioral Science Methods

Other prerequisites

- Students must take the online training courses relating to research with human subjects (CITI) and personal health information (HIPAA). (see SPHHS Student Practicum Guidebook for details)
- Students must have participated in the Department of Epidemiology and Biostatistics mandatory Practicum orientation
- If applicable, students must have submitted IRB paperwork before participating in the Practicum.

Student responsibilities

1. Before registering for the Culminating Experience, students should talk to the Practicum Director to discuss their plans and interests.
2. The first step in the Culminating Experience is identification of a topic. In some cases students work on a topic during the Practicum that can be linked and continued to fulfill the requirements of the Culminating Experience. At other times they may decide to choose a new topic.
3. The first requirement of the Culminating Experience is the development of a concept paper which describes the work that will be done and how it will be carried out. (See Appendix for Concept Paper template)
4. The Concept Paper is reviewed and approved by the Site Preceptor, GW Faculty Advisor, and the Practicum Director to assess the appropriateness of its scope as well as its feasibility.
5. Once the Concept Paper is approved, the student expands the Concept Paper into a Proposal which requires the approval of the GW Faculty Advisor and Site Preceptor. (See Appendix for Proposal guidelines)
6. Students work with their GW Faculty Advisor and Site Preceptor to determine whether IRB review is required. If it is, an IRB submission must be assembled (See Appendix for guidance)
7. Students should submit their Concept Paper, Proposal and IRB paperwork (if applicable) by the end of the first semester of the Culminating Experience.
8. Students will produce a Final Report which expands on their Proposal by including their results and discussion. (See Appendix for guidelines for the Final Report) The GW Faculty Advisor must receive an advanced draft of the report four weeks before the student intends to make their Oral Presentation.
9. Once the GW Faculty Advisor and Site Preceptor give authorization, the students work with their GW Faculty Advisor and Practicum Director to schedule their Oral Presentation. Students are encouraged to invite their Site Preceptors to their Oral Presentations.
10. Students must provide the GW Faculty Advisor with a copy of their PowerPoint presentation two weeks before the scheduled date of their Oral Presentation. (See Appendix)

Deliverables

As they progress through the CE, students are required to provide the PD with electronic copies of the final versions of the Concept Paper, Proposal and Final Paper so that these can be saved in the students' electronic folders.

Course Objectives – Upon completion of the course, students will be able to:
1. Identify and assess patterns of emerging diseases to postulate hypotheses and to identify appropriate strategies in order to evaluate the impact of health problems.
2. Enumerate and apply underlying principles and methods to design, plan, and conduct epidemiologic studies including observational and experimental designs, screening programs, public health surveillance, and other epidemiologic designs.
3. Apply epidemiological and biomedical concepts in identifying and describing the determinants and the distribution of disease in human populations.
4. Synthesize data and relevant literature to interpret findings in a causal framework, write manuscripts, and make oral presentations.

Required Texts

None. Students will conduct research to support their research project or public health practice activity.

Key Definitions – Course Participants

Students – Students identify and develop a topic applying and integrating the knowledge and skills they have obtained through epidemiologic research or surveillance data. At times this data comes from the student’s Practicum.

Site Preceptor – The individual in the field who supervises the student’s work and provides input to the GW Faculty Advisor on the student’s performance, through an evaluation.

GW Faculty Advisor – A member of the GW SPHHS Department of Epidemiology and Biostatistics faculty who works with the student throughout the process to ensure that the student’s project and work meet Departmental standards. The GW Faculty Advisor is responsible for portions of the student’s final evaluation and grade.

Practicum Director – guides student through Practicum-CE process.

Method of Instruction

Students are actively involved in the integration of knowledge and skills gained in their MPH program under the supervision of the Site Preceptor and the GW Faculty Advisor. The student’s progress in accomplishing the four basic elements of the course is tracked with the use of the Student Checklist, which assists students by outlining the specific steps needed to complete the Practicum and Culminating Experience. The Student Checklist is available on the Practicum and Culminating Experience Resource Page:

<http://www.gwumc.edu/sphhs/departments/epibio/practicum.cfm>

Methods of Evaluation

Students will be assessed on how well they accomplish the objectives for the Culminating Experience through the evaluation of their (a) Concept Paper, (b) Proposal, (c) Final Report, and (d) Oral Presentation. The Site Preceptor completes an evaluation of the student's performance. The GW Faculty Advisor also contributes to the final grade, as do Faculty attending the students' presentations.

Grading Scale

Students will be assessed and graded on how well they accomplish the objectives for the Culminating Experience through the evaluation of the following elements:

- Concept Paper and Proposal –25%
- Final Report – 35%
- Oral Presentation – 20%
- Final evaluation – 20%

Each of the required elements will be graded separately by the GW Faculty Advisor and the Site Preceptor. The Oral Presentation will be graded based on feedback from the GW Faculty Advisor and Departmental faculty attending the final presentation.

The table below shows the overall and proportional contribution of the GW Faculty Advisor, Site Preceptor and Practicum Director/GW Faculty in calculating the student's final grade for the CE.

Element	Overall Proportion of Grade	GW Faculty Advisor (%)	Site Preceptor (%)	Practicum Director/GW Faculty in attendance (%)
CE Prep: Concept Paper, Proposal, IRB submission, if applicable	25%	15	10	--
Final Report	35%	25	10	--
Oral Presentation	20%	10	0	10
Final evaluation	20%	10	10	--
Total	100%	60	30	10

Final letter grades will be assigned based on the following scale:

- A 95-100%
- A- 90-94%
- B+ 85-89%
- B 80-84%
- B- 75-79%
- C+ 70-74%
- C 65-69%

C- 60-64%
F <60%

Class Policy: Attendance/Participation

This is not a classroom experience but one where students work semi-independently, under the supervision of their preceptor and GW Faculty Advisor.

Academic Integrity

Please review the University's policy on academic integrity, located at www.gwu.edu/~ntegrity/code.html All graded work must be completed in accordance with The George Washington University Code of Academic Integrity.

Academic dishonesty is defined as cheating of any kind, including misrepresenting one's own work, taking credit for the work of others without crediting them and without appropriate authorization, and the fabrication of information. Common examples of academically dishonest behavior include, but are not limited to, the following: cheating; fabrication; plagiarism; falsification and forgery of University academic documents; facilitating academic dishonesty.

Students with Disabilities

If you feel you may need an accommodation based on the impact of a disability, please contact me privately to discuss specific needs. Please contact the Disability Support Services Office at 202.994.8250, Suite 242 Marvin Center, <http://gwired.gwu.edu/dss> , to establish eligibility and to coordinate reasonable accommodations.

APPENDIX

Guidelines for Culminating Experience Elements

1. Title Page

A Title Page must be included with each of the written documents (Concept Paper, Proposal, and Final Report) submitted to your GW Faculty Advisor, Site Preceptor, and through Blackboard. The proper format of the Title Page should be:

TITLE

DATE

Protocol Approved by
The George Washington University
Institutional Review Board IRB #
(if applicable)

Submitted by:
Student Name
Contact Information

Preceptor Name
Contact Information

GW Faculty Advisor Name
Contact Information

In Partial Fulfillment of the Requirements
For the Masters of Public Health Degree
Department of Epidemiology and Biostatistics
The George Washington University
School of Public Health and Health Services

2. Concept Paper: 2-3 pages double-spaced (including references)

Please follow this template by maintaining the headings of each section. If they are not applicable, please explain why.

- a. Title Page: as above
- b. Background: brief review of the literature, public health significance, and justification of need for the activity to be carried out (gaps in research area).
- c. Scope: explicit statement of what will be done during the Culminating Experience.

- d. Principal Aims and Hypotheses: Clear statement of the principal aims and research hypotheses to accomplish these goals.
- e. Methods: outline of the proposed analytic methods, including:
 - a. study design: Type of study or activity to be conducted (e.g. case-control study or surveillance project).
 - b. data sources - defend adequacy in terms of the availability and quality of data; quantity of data
 - c. variables: principal independent and dependent variables, and potential confounders
 - d. statistical analysis methods
 - e. human subjects protection issues
- f. Deliverables: report of research or public health practice activity
- g. Discussion: of the public health significance of the proposed project.
- h. Timeline: for the project or activity and a description of projected meetings with field preceptor and GW Faculty Advisor.
- i. References

3. Proposal: about 5-10 pages double-spaced pages

The proposal represents an expansion of the approved Concept Paper. In addition to the above elements which should be described in greater detail, a scientific abstract using standard *New England Journal of Medicine (NEJM)* format should be included after the Title Page.

4. Institutional Review Board (IRB) Review

Students must work with their GW Faculty Advisor to decide whether the topic for a proposed Practice Activity must be submitted for IRB approval. If IRB Review is required, students must work with their GW Faculty Advisor, the Practicum Director, and the Office of Human Research (OHR) to obtain access to the appropriate forms; OHR has a Blackboard course which has forms and worksheets to assist students. Once an IRB submission has been prepared, the GW Faculty Advisor should review it, sign it if needed, and the package should then be submitted to the Practicum Director for review and signature in lieu of the Chair's signature.

The IRB is a committee mandated by federal law to protect the rights and welfare of human subjects participating in research activities. The IRB achieves its primary function, protecting the rights and welfare of subjects participating in research, by educating researchers.

Human Subject Research course requirements – please consult the SPHHS Student Practicum Guidebook.

Other institutions with their own IRBs: Students will sometimes work with institutions other than GWU that have their own IRB. The general rule is that students still have to complete

an IRB submission for GW once the IRB used by the site has approved the project. Students should include the other IRB's documentation of project approval.

For students conducting research at Children's National Medical Center (CNMC), submissions are made directly to the CNMC IRB. There is no need for a submission to the GW IRB because there is an agreement between the two institutions and the CNMC IRB will notify the GW IRB of any submissions.

5. Final Report Guidelines – about 18-20 double-spaced pages

The Final Report follows the outline of a published research paper, and represents an expansion of the Proposal. It should include the following elements:

- a. Title Page
- b. Abstract *
- c. Background
- d. Hypothesis and Principal Aims/Scope
- e. Methods: including study design, data sources, variables, statistical analysis methods, and human subjects protection issues
- f. Results: a description of the data and the principal findings
- g. Discussion: of the public health significance of the proposed project
- h. Conclusions and recommendations
- i. Tables and Figures
- j. References
- k. Appendices: e.g., data collection instruments

*The abstract should follow the outline below using *NEJM* format with a word limit of 250 words:

- a. Background/Objectives
- b. Methods
- c. Results
- d. Conclusions

6. Oral Presentation Guidelines

Students are expected to prepare a concise, 20-minute oral presentation using PowerPoint slides. The basic outline of the talk should include a Title Slide, Background, Hypotheses or Objectives, Methods, Results, Summary and/or Conclusions, Recommendations, and Acknowledgments. The number of slides presented should be limited to about 20, as each slide takes about one minute to present. Each presentation will be followed by a 10-minute question and answer session with Department faculty and other students.

At least two weeks prior to the scheduled presentation date, students must provide a copy of and review their PowerPoint presentation with their GW Faculty Advisor. The GW Faculty Advisor and Site Preceptor must authorize the student's presentation to the Practicum Director via email.

The student must also provide an abstract of the written report to the Practicum Director one week before the presentation is scheduled so that announcements can be made to Department faculty and students.