Wright State University Master of Public Health

Capstone Guidelines

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Capstone Director:

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Capstone Guidelines

The Capstone is an integrative learning experience (ILE) required to complete a master of public health (MPH) degree at Wright State University. The Capstone requires the student to integrate knowledge gained and demonstrate the skills acquired through their course work and applied practice experience into a project related to the student's academic goals and professional/career interests. Ideally the Capstone will benefit the community or a particular target population.

Capstone Options

I.

- Research Capstone (see Page 4)
 - 1. For students who would like to publish their project, attend a PhD program, or have a more indepth research experience.
 - 2. Complete in two semesters by registering for PPH 7990 (ILE I) and PPH 7991 (ILE II), 3 credit hours each in consecutive semesters.
- II. Course Capstone (see Page 9)
 - 1. For students who would like more electives/certificates.
 - 2. Complete in one semester by registering for an approved Capstone course.
 - 3. Capstone courses include: PPH 7150 Applied Epidemiology (Chronic Diseases) (Spring), PPH 7160 Advanced Biostatistics (Spring), PPH 7170 Epidemiology II (Fall), and PPH 7440 Public Health Project Management (HPE concentration only) (Spring).
- III. Independent Project Capstone (See Page 10)
 - 1. For students who would like to complete an advanced public health project in a topic area not included in an approved Capstone course, or for students who would like to enhance a project from a previous course or the applied practice experience.
 - 2. Complete in one semester by registering for PPH 7990 (ILE I).

Comparison of WSU MPH Capstones (ILE)

	Research	Course	Independent Project	
Courses needed	PPH 7990 ILE I & PPH	PPH 7150, PPH 7160,	PPH 7990 ILE I	
	7991 ILE II	PPH 7170, or PPH 7440		
Credit hours	6	3	3	
Why choose this?	Increased research	Opportunity to take	Advanced knowledge in	
	experience/publications;	more electives and/or	a specific area	
	plan to get a PhD	earn certificates	_	
Committee	Chair and reader(s)	Faculty Instructor	Chair	
Minimum # of	At least 3 foundational	At least 3 foundational	At least 3 foundational	
competencies attained	and 2 concentration	and 2 concentration	and 2 concentration	
End Product	Research paper	Course project	Applied project	
Poster	Yes	Yes	Yes	
When do you register	ILE I in fall of Year 2 &	Fall or spring depending	Fall or spring of Year 2	
	ILE II in spring of Year	on course selected		
	2			

Objectives

At the conclusion of the Capstone, the student should be able to:

- 1. Demonstrate a synthesis of public health <u>foundational</u> (at least 3) and <u>concentration</u> (at least 2) competencies (see Appendix A). Students, in consultation with faculty, will select foundational and concentration competencies appropriate to his/her educational and professional/career goals.
- 2. Produce a high-quality written product that is appropriate for the student's educational and professional/career goals.
- 3. Communicate the findings of the Capstone through a poster presentation.

Requirements before Capstone Registration

- 1. Students must complete the six (6) foundational MPH courses and the applied practice experience should be started prior to registering for their Capstone project. Exceptions can be made for students completing the MPH in < 2 years with approval from the Capstone director.
- 2. Prior to registration, students must meet with the Capstone director to discuss Capstone options and how those can meet professional/career goals. The Capstone director will help the student identify a Capstone faculty chair, if applicable.
- 3. CITI Training. All students are required to have successfully completed CITI Training before registering for Capstone. Register at: <u>https://about.citiprogram.org/en/homepage/</u>, enter Wright State as organization and complete registration (select Student Researcher option). Take the Basic Human Subjects Social/Behavioral Focus module (listed in Step 6) and also the optional Conflicts of Interest plus Responsible Conduct of Research for Social & Behavioral Investigators modules (listed in Step 7). On completion of CITI Training a certificate is provided as proof of completion. Upload the certificate to Dropbox in Pilot for the MPH Program.
- 4. A concept paper/proposal (Appendix B) must be submitted to and approved by the Capstone director prior to registration of PPH 7990 (ILE I) or a Capstone course. If applicable, students will be added to Pilot for PPH 7990 once they have met with the Capstone director; this does not indicate that the student is registered for the credit hours.

Deliverables

- 1. <u>Synthesis of Competencies.</u> Capstone projects require a synthesis of Competencies Grid to be completed when you begin your Capstone and then updated at the end. This grid will vary depending on the type of Capstone (see Appendix C).
- 2. <u>IRB Decision Chart.</u> All students will use IRB decision charts to determine if the project requires an IRB: <u>https://www.hhs.gov/ohrp/sites/default/files/full-2016-decision-charts.pdf</u>
- 3. <u>High Quality Written Product.</u> Capstone projects require a high-quality written product that is appropriate for the student's educational and professional/career objectives. This product must be assessed by a MPH program faculty. American Psychological Association (APA) formatting should be the default formatting method used (see Appendix D). See Capstone Options section (p. 2) for details.
- 4. <u>Poster.</u> Completed Capstone projects will be presented at a poster session during the semester that the student completes the Capstone. Alternatives to the poster presentation may be made with approval from the Capstone director.

Student Obligations

- 1. Complete the requirements to register for Capstone. Registration will not be available until the requirements have been completed and documentation submitted to Capstone director.
- 2. Maintain appropriate contact with the project chair (if applicable) and factor in reasonable timeframes for review of submitted drafts. "Appropriate contact" is to be defined by mutual agreement between the student and his/her faculty chair. Students should factor approximately 7 to 10 calendar days turn around for review.
- 3. Submit all deliverables of the Capstone in a timely fashion. Deadlines for deliverables will be communicated to students enrolled in appropriate ILE section or Capstone course. Work submitted late can result in a delay of graduation.
- 4. Complete the requirements for Capstone in the term in which he/she is registered for the credit hours. If the requirements are not completed, the student must meet with the Capstone director to create a plan detailing how the project will be completed the following term. The student will be required to register for PPH 7992 (one credit hour) in each subsequent term until the Capstone requirements are met.

Capstone Director Obligations

- 1. Meet with the student prior to registration of Capstone to discuss options, help the student identify a faculty chair (if applicable), and mentor the student on the Capstone process.
- 2. Provide Capstone guidelines, deadlines for deliverables, and content to help the student complete his/her project.
- 3. Assist the faculty chair and student on the Capstone process when requested.
- 4. Collect Capstone deliverables, coordinate the poster session, and enter grades for ILE credit hours, when applicable.

Capstone Option Details

I. Research Capstone: Two semesters (PPH 7990 & PPH 7991)

Students selecting the Research Project option are required to complete six (6) credit hours of integrative learning experience. Students selecting this option should start working on their Capstone when they are at least two semesters from completing their MPH program of study. This is an applied research project that is completed by registering for both PPH 7990 (ILE I) and PPH 7991 (ILE II), taken consecutively at three (3) credit hours each.

Research Project Option Objectives (In addition to the overall Capstone objectives provided on page 1)

- 1. Demonstrate detailed knowledge of a public health issue.
- 2. Apply learned knowledge, skills, and abilities to pose a research question regarding a public health issue.
- 3. Select, prepare, and use appropriate methods to answer a public health question.
- 4. Demonstrate the ability to interpret and present results of the research question effectively.

5. Discuss your results in the context of the literature in a standard research paper format.

Research Capstone as Applied Research

Applied research involves the investigation of a research question that is based on the synthesis of the current peer-reviewed literature. Answering the research question includes analysis of data using appropriate quantitative or qualitative methods and provides adequate interpretation of results. Applied research involves formulation and testing of a hypothesis, collection and analysis of data, study design of test and control groups with strictly controlled parameters, and well-defined variables. The student must propose a methodology that is capable of answering the research question. Data for the research may come from secondary sources or be collected by the student using a survey or other discipline-based methodology. Students are responsible for the data analysis for their research.

Guidance Committee

Each student's Capstone will be supervised by a two- or three-member faculty guidance committee. The chair of the student's guidance committee must be a Wright State University graduate faculty member* with knowledge and expertise regarding the student's proposed research topic and shall have primary responsibility for guiding the student's research. The second member of the guidance committee will serve as a consultant and reader. The reader may be a faculty member or another person named by the chair of the guidance committee who has special knowledge of the proposed research topic. The role of the second member will be as a critical reader and content reviewer. At least one member of the guidance committee members, then the Capstone director may act as a third reader. Guidance committees are constructed so that students have appropriate support for their specific planned project. This also negates the need for outside statistical consulting.

*Note: The Capstone faculty chair must be a Graduate School faculty member. Contact the MPH program coordinator to confirm membership as soon as chair is selected.

ILE I (PPH 7990) for Research Project

ILE I Deliverables, Part 1, First Month

1. Competencies

- Students should familiarize themselves with the foundational and concentration competencies (see Appendix A) as they plan their Capstone project.
- Students must work with their guidance committee during the first month of ILE I to choose at least 3 foundational and 2 concentration competencies to achieve as part their Capstone experience.
- The Capstone Competency Synthesis Form will be due in Dropbox in Pilot for PPH 7990 ILE I within one month of the beginning of the semester (Appendix C).
- 2. Project Timeline
 - Students should work with their guidance committee to draft a project timeline that identifies significant milestones for the research project and estimated dates for completion of each (i.e. lit review completion; IRB application submission).
 - The project timeline will be due in Dropbox in Pilot for PPH 7990 ILE I within one month of the beginning of the semester.

- 3. Statement of Purpose
 - The statement of purpose or research question(s) is intended to clearly and succinctly state the purpose of the research project.
 - Each purpose or research question to be examined should be limited to one brief paragraph.
 - The statement of purpose will be due in Dropbox in Pilot for PPH 7990 ILE I within one month of the beginning of the semester.
- 4. Institutional Review Board (IRB)
 - All students will use IRB decision charts to determine if the project requires an IRB: <u>https://www.hhs.gov/ohrp/sites/default/files/full-2016-decision-charts.pdf</u>
 - The decision chart for the Capstone project will be due in Dropbox in Pilot for PPH 7990 ILE I within one month of the beginning of the semester (see example in Appendix E).
 - If the proposed research involves testing of human or animal subjects, or involves an interview, survey, questionnaire or medical records review of human subjects, specific approval must be granted by the IRB *prior to the initiation of the research*.

ILE I Deliverables Part 2, due near the end of the semester. Dates will be provided to students enrolled in ILE I.

1. Preliminary Manuscript

This is the first half of the final Capstone research project manuscript. Length of the preliminary manuscript will depend on topic and typically ranges from 15 to 30 pages in length. The student must prepare and submit a written preliminary manuscript to the chair of his/her approved guidance committee during ILE I (PPH 7990). The committee may require several drafts of the preliminary manuscript prior to approval. The preliminary manuscript must be in APA format and include the following sections:

- *Title Page* (include the names of your committee members and his/her role)
- Acknowledgements Page (optional; placeholder until final manuscript completed)
- *Table of Contents* (placeholder until final manuscript is completed)
- *Abstract* (placeholder until final manuscript completed)
- *Introduction* (one to three pages) A brief overview of the project including a summary of the background leading to the research question or purpose for the research.
- *Statement of Purpose or Research Question(s)* Each purpose or question to be examined should be limited to one brief paragraph.
- *Review of Literature* (five to fifteen pages) Identifies and reviews literature and previous research which defines the scope of the proposed research and directly impacts the purpose or question proposed by the research. This section should include a synthesis and discussion of the reviewed literature to identify strengths, weaknesses, trends, opportunities, etc., which affects the research purpose or methodology.

- *Methods* Describes the methodology utilized for sampling, measurement, data collection and analysis. The methodology must be appropriate for either quantitative or qualitative data analysis. IRB approval, confirmation of exempt status of the project, or non-human subjects' content should be described.
- *References* The preliminary manuscript should provide complete references for all cited work in APA format.
- *Appendices* Support materials should be included as appropriately identified appendices.

The preliminary manuscript must be submitted in Dropbox in Pilot for PPH 7990 ILE I for an originality check before permission will be provided to register for ILE II (PPH 7991).

- 2. PPH 7990 (ILE I) Checklist
 - The guidance committee will review the preliminary manuscript and complete the Research Project ILE I checklist (see Appendix F) demonstrating that all required sections of the preliminary manuscript are satisfactory.
 - The signed ILE I checklist should be scanned and uploaded by the student to Dropbox in Pilot for PPH 7990 ILE I for review by the Capstone director.
 - The student will be provided permission to register for PPH 7991 ILE II only after providing a copy of the ILE I checklist.
- 3. Competencies

An updated/revised Capstone Competency Synthesis Form (if changes were made) will be due in Dropbox in Pilot for PPH 7990 ILE I (Appendix C) before the student is given permission to register for PPH 7991 ILE II.

ILE II (PPH 7991) for Research Project

After a student receives permission from the Capstone director to register for ILE II (PPH 7991), the student should begin the procedures outlined in the methods section of the preliminary manuscript. It is the student's responsibility to maintain sufficient interaction with his/her guidance committee to assure a successful and timely conclusion of the project.

ILE II Deliverables for Research Project

1. Final Manuscript

The final manuscript includes the preliminary manuscript with added results, discussion, conclusions and recommendations, and any needed updates to the literature review. Several revised drafts may be required by your committee for final approval. The approval of the manuscript by the guidance committee will be documented on the Research Capstone Final Score Sheet/ Grade Form (see Appendix H).

The final manuscript should include the following sections:

• *Title Page* (include the names of your committee members and his/her role)

- Acknowledgements Page This is not a required section, but can be included if you choose to acknowledge your guidance committee members, family or any other individuals who significantly supported you in your research efforts.
- *Table of Contents* Formatted using guidelines provided in the APA formatting checklist (Appendix H).
- *Abstract* An overview of the manuscript. The abstract should be no more than 250 words and includes five to seven keywords not part of the title.
- *Introduction, Purpose Statement, Literature Review, and Methods* These sections are carried forward from the preliminary manuscript written during PPH 7990 into the final manuscript with appropriate modifications. However, occasionally, implementation of the project yields unanticipated results and necessitates a refocus and re-statement of portions of these sections.
- *Results* This section presents the descriptive and/or inferential data included in the research. The results and correct statistical analyses are displayed using tables and figures.
- *Discussion* This section interprets the results and provides an analysis of the data. It discusses the main findings of the research project and relates the findings to the purpose of the research and literature review. It discusses the public health implications of the findings and conclusions and makes relevant recommendations. This section also discusses any limitations in the study and makes recommendations regarding the limitations.
- *References* All references cited in the manuscript must be properly referenced in APA format.
- Appendices Support materials such as IRB letters, survey/interview instruments, letters of support etc., should be included.
- 2. PPH 7991 (ILE II) Checklist
 - The guidance committee will review the final manuscript and fill-out the ILE II checklist (see Appendix I) demonstrating that all required sections of the final manuscript are satisfactory to start working on a poster. The guidance committee will also complete the Research Capstone Score Sheet (see Appendix G). The score sheet will provide direction on which sections need improvement, i.e., any section with a "0" or "1" will require faculty comments for additional edits.
 - The signed ILE II checklist should be scanned and uploaded by the student to Dropbox in Pilot for PPH 7991 (ILE II) for review by the Capstone director.
 - Capstone director will provide the student with the poster template once the signed ILE II checklist has been received.
- 3. Competencies
 - An updated/revised Capstone Competency Synthesis Form (if changes were made) will be due in Dropbox in Pilot for PPH 7991 ILE II (Appendix C) before the poster template is given.

- 4. Poster Presentation
 - The student is required to prepare an academic poster and present his/her research during the poster session. Alternatives to the poster presentation may be made with approval from the Capstone director.
 - Poster sessions will be scheduled during regular business hours on the Wednesday or Thursday afternoon (e.g. 3-5pm) in the week of finals each term.
 - Final manuscripts with all requested corrections are due 14 days after the student's poster presentation.

II. Course Capstone: One semester

Students selecting this option will complete an applied project as part of an advanced second year course that has been designated for the Course Capstone. Students selecting the Course Capstone option are required to register for two (2) additional electives (6 credit hours) to achieve the 42 credit hour requirement for an MPH. Students selecting this option will elect to take their Capstone when they are in one of the last two semesters of their MPH program.

In order to meet the overall objectives of the Capstone (see Page 2) students completing the Course Capstone will be required to 1) demonstrate a synthesis of competencies and 2) prepare an academic poster and present his/her research during the poster session.

Capstone Course instructors will provide information and deadlines for synthesis of competencies and posters. The following courses are approved as a Capstone course: Epidemiology II (PPH 7170 - Fall), Applied Epidemiology (Chronic Diseases) (PPH 7150 - Spring), Advanced Biostatistics (PPH 7160 - Spring) or Public Health Project Management (HPE concentration) (PPH 7440 - Spring).

Capstone Course Project Option Objectives

In addition to the overall Capstone objectives provided on Page 1, additional objectives for the Capstone project will be determined by the Capstone Course instructor.

Guidance Committee

The student's guidance committee will include the course instructor for the second year class project and an additional faculty, as needed.

Deliverables

- 1. The student must receive a passing grade for both the course and the project to use it for the Capstone.
- 2. Synthesis of Competencies
 - The Capstone Competency Synthesis Form will be completed and submitted with guidance from the Capstone Course instructor (Appendix C).
- 3. Poster Presentation
 - The student is required to prepare an academic poster and present his/her Capstone project during the poster session. Alternatives to the poster presentation may be made with approval from the Capstone director.
 - Poster sessions will be scheduled during regular business hours on the Wednesday or Thursday afternoon (e.g. 3-5pm) in the week of finals each term.

• Final Capstone projects with all requested corrections are due 14 days after the student's poster presentation.

III. Independent Project: One semester (PPH 7990)

Students selecting the Independent Project option are required to complete three (3) credit hours of integrative learning experience (PPH 7990 ILE I). Students selecting the Independent Project option will be required to register for one (1) additional elective (3 credit hours) to achieve the 42 credit hour requirement for an MPH. Students should start working on their Capstone when they are in one of the last two semesters of their MPH program. The approval of the manuscript by the guidance committee will be documented on the Independent Project Capstone Final Score Sheet/ Grade Form (see Appendix L).

Most independent projects should not require an IRB. If an IRB is required then the student should either switch to the Research Project Capstone or have their IRB approved before starting PPH 7990.

Independent Project Option Objectives

In addition to the overall Capstone objectives provided on Page 1, additional objectives include:

- 1. Demonstrate detailed knowledge of a public health issue.
- 2. Integrate and apply learned knowledge, skills, and abilities to complete a public health project.
- 3. Includes at least one project objective that meets the academic goal or professional/career interest of the student. This objective should be determined with guidance from the chair of the project.

Examples of Independent Projects

- 1. Enhancing a project from an MPH course
 - To enhance a project, the student must add and integrate a minimum of two additional competencies to the current project, with a minimum of 5 competencies (3 foundational and 2 concentration-related).
- 2. Enhancing or building upon an APE project
 - To enhance or build upon an APE project, the student must add and integrate a minimum of two additional competencies to the current project (the additional competencies can be either foundational or concentration-related).
- 3. Developing a project in a specific content area that meets the academic goals or professional/career needs of the student. Examples of this include but are not limited to: an emergency preparedness document/plan, an evaluation plan, a grant proposal, a policy statement, or a communications project (i.e., video, guide, etc.). The project must synthesize a minimum of five (5) competencies (3 foundational and 2 concentration-related) and must have a high-quality written product associated with it.

Note: The required final presentation for the Capstone cannot count as one of the two additional competencies needed for enhancement.

Guidance Committee

Guidance committees are constructed so that students have appropriate support for their specific planned project. Each student's Independent Project will have a faculty chair. The chair of the student's Independent Project must be a Wright State University graduate faculty member* with knowledge and expertise regarding the student's proposed project topic, and shall have primary responsibility for guiding the student's project. If needed, an additional faculty reader may be added as a member of the guidance committee. The reader may be a faculty member or another person named by the chair of the guidance committee who has special knowledge of the proposed project. The role of the second member will be as a critical reader and content reviewer. At least one member of the guidance committee needs to be an MPH faculty member. Independent projects that are enhancements of previous projects should include the faculty of the previous project as either the chair or reader.

*Note: The Capstone faculty chair must be a Graduate School faculty member. Contact the MPH program coordinator to confirm membership as soon as chair is selected.

First Two Weeks

- 1. Competencies
 - Students should familiarize themselves with the foundational and concentration competencies (see Appendix A) as they plan their Capstone project.
 - Students must work with their chair during the first two weeks and complete one of the following options:
 - A. For enhancing a course or APE project: choose at least two (2) additional competencies to an existing course project or APE and decide how those competencies will be achieved. A minimum of at least three (3) foundational and two (2) concentration competencies are required if enhancing a course project and a minimum of seven (7) if enhancing or building upon an APE project.

Or

- B. For students developing a project: students must work with their guidance committee during the first two weeks of ILE I to choose at least three (3) foundational and two (2) concentration competencies to achieve as part their Capstone experience.
- The Capstone Competency Synthesis Form will be due in Dropbox in Pilot for PPH 7990 ILE I within two weeks of the beginning of the semester (Appendix C).
- 2. Project Timeline
 - Students should work with their guidance committee to draft a project timeline that identifies significant milestones for the independent project and estimated dates for completion.
 - The project timeline will be due in Dropbox in Pilot for PPH 7990 ILE I within two weeks of the beginning of the semester.
- 3. Statement of Purpose
 - The statement of purpose is intended to clearly and succinctly state the purpose of the independent project.
 - Each purpose or question to be examined should be limited to one brief paragraph.

- The statement of purpose will be due in Dropbox in Pilot for PPH 7990 ILE I within one month of the beginning of the semester.
- 4. Institutional Review Board (IRB)
 - Most Independent Project Capstones will not need an IRB. All students will use IRB decision charts to verify that their project does not require an IRB using the decision charts or must submit their IRB approval letter <u>https://www.hhs.gov/ohrp/sites/default/files/full-2016decision-charts.pdf</u>
 - The decision chart or IRB approval letter for the Independent Project will be due in Dropbox in Pilot for PPH 7990 ILE I within two weeks of the beginning of the semester (Appendix D).

ILE I Deliverables for Independent Project

1. High Quality Written Product

The student must prepare and submit a high quality written product to the chair of his/her approved guidance committee during ILE I (PPH 7990). Length of the written product will depend on the topic and typically ranges from 15 to 30 pages in length. The committee may require several drafts of the preliminary written product prior to approval. APA formatting should be used in most manuscripts (see Appendix D). Exceptions to APA formatting can be made for projects that require a different type of formatting with approval of Capstone faculty. Sections of the manuscript will vary according to project but should all include:

- *Title Page* (include the names of your committee members and his/her role)
- Acknowledgements Page (optional)
- Table of Contents
- *Abstract* (summary of your project, not more than 250 words)
- *Statement of Purpose* Each purpose or question to be examined should be limited to one brief paragraph.
- Body—The main content of the Independent Project
- *References* The written product should provide complete references for all cited work in APA format.
- *Appendices* Support materials should be included as appropriately identified appendices.

The manuscript must be submitted in Dropbox in Pilot for PPH 7990 ILE I for an originality check that must be satisfactory before passing ILE I (PPH 7990).

- 2. PPH 7990 (ILE I) Checklist/Assessment
 - The guidance committee will review the manuscript and complete the Independent Project ILE I checklist (see Appendix J) demonstrating that all required sections of the manuscript are satisfactory. The guidance committee will also complete the Independent Project Capstone Score Sheet (see Appendix K). The score sheet will provide direction on which sections need improvement, i.e. any section with a "0" or "1" will require faculty comments for additional edits.
 - The signed ILE I checklist should be scanned and uploaded by the student to Dropbox in Pilot for PPH 7990 ILE I for review by the Capstone director.

• The Capstone director will provide the student with the poster template once the signed ILE I checklist has been received.

3. Competencies

• The Capstone Competency Synthesis Form will be due in Dropbox in Pilot for PPH 7990 ILE I within two weeks of the beginning of the semester (Appendix C). An updated/revised form will be due near the end of the semester before the poster template is given.

4. Poster Presentation

- The student is required to prepare an academic poster and present his/her Independent Capstone during the poster session. Alternatives to the poster presentation may be made with approval from the Capstone director.
- Poster sessions will be scheduled during regular business hours on the Wednesday or Thursday afternoon (e.g. 3-5pm) in the week of finals each term.
- Final manuscripts with all requested corrections are due 14 days after the student's poster presentation.

WSU MPH Program Foundational and Concentration Competencies Checklist for Capstone

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 con	text
 Select quantitative and qualitative data concerton methods appropriate for a given public health con Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programm 	
software, as appropriate	ning and
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 system national and international settings	ns across
6. Discuss the means by which structural bias, social inequities and racism undermine health and creat achieving health equity at organizational, community and systemic levels	e challenges to
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, or implementation, or critique of pul policies or programs	blic health
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 partne influencing public health outcomes	rships for
14. Advocate for political, social or economic policies and programs that will improve health in divers	se 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 present academic, non-peer audience with attention to factors such as literacy and health literacy	ation to a non-
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 he	alth
Systems Thinking	
22 Apply systems thinking tools to visually represent a public health issue in a format other than stand	dard narrative

22. Apply systems thinking tools to visually represent a public health issue in a format other than standard narrative

Concentration Competencies

Po	pulation Health Concentration
	1. Analyze quantitative data using multivariable adjusted regression analysis.
	2. Apply quantitative research methodology to research a current health issue.
	3. Organize and deliver an effective presentation on a population health issue using an emerging and advanced communication strategy.
	4. Illustrate an unmet need of population health through the synthesis of data, literature, and knowledge of policies and systems.
	5. Constructively address disagreements about values, roles, goals, or actions that arise among public health issues.
He	ealth Promotion and Education Concentration
	1. Demonstrate program implementation skills.
	2. Create a health communications campaign.
	3. Monitor the implementation of health promotion programs and policies.
	4. Conduct process, impact, and outcome evaluations of health promotion programs and policies.
	5. Identify and manage resources to lead a health promotion project.
Ep	idemiology Concentration (New - Beginning Fall 2025)
	1. Describe patterns of health-related events and identify the risk and protective factors associated with those events in specified populations
	2. Differentiate between the ability of different epidemiological study designs to support casual inferences
	3. Implement epidemiological methods to evaluate and reduce sources of bias common in epidemiologic research
	4. Execute an analytic epidemiological study
	5. Formulate a research question and develop an appropriate data analysis plan to answer that question
	6. Demonstrate proficiency in the use of a statistical software package for tabular data presentation, data visualization, and data analysis
	7. Analyze quantitative data using multivariable adjusted regression models
	8. Differentiate between confounding, effect modification, and mediation and appropriately incorporate them in data analyses
	9. Analyze existing sources of nationally representative epidemiologic data using appropriate weighted statistical methods
	10. Appraise the epidemiologic literature considering how certain biases may impact the interpretation of findings
	11. Communicate epidemiologic findings orally and in a visually appropriate manner

Capstone Concept Form

Complete before ILE I (PPH 7990) or Capstone Course registration

Student Name:			
Concentration (circle one): Health Pr	romotion & E	ducation; Popula	tion Health
Date of meeting with Dr. Kinzeler:		(Date)	
Type of Capstone (circle one):	Research;	Independent Project	Course;
For Research Capstone (Two seme 1. Type of Project (check one option □ Data analysis □ Systematic review □ Best practices □ Other Specify:	n below): (Ref	-	
2. Chair:			
3. Description of Proposed Project:			
For Course Capstone (One semest	er)		
1. Class for Project:			
For Independent Capstone (One set 1. Type of Project (check one optio □ Enhanced Class Project	on below):	ifv course number	
□ Enhanced Applied Practice E	Experience		
2. Chair:			_
3. Description of Proposed Project:			

Capstone Competency Synthesis Form

Complete the first two weeks after beginning semester for Independent and Course Capstones

OR

Complete one month after beginning ILE I (PPH 7990) semester for Research Capstone Update/revise at the end of the Capstone semester

Students, in consultation with faculty, will select foundational (at least 3) and concentration (at least 2) competencies appropriate for his/her educational and professional/career goals to demonstrate a synthesis of competencies aligned with project.

Student Name:

Concentration:

Project Title (if known):

Selected Competencies	Description of how the competencies will be synthesized

Note: The Independent Option will require two additional competencies (either foundational or concentrationrelated) if enhancing or building upon a project. A minimum of five (5) must be selected if enhancing a project from a previous course or a minimum of seven (7) if enhancing or building upon an APE project.

Complete and sign at beginning of Capstone:

We agree that the indicated competencies will be achieved during the Capstone.

Student Signature

Date

Capstone Faculty Chair/ Course Director Signature

Date

APA Formatting Report

Student:	Date:	
Chair:		

Issue	Needs Attention	Directions	Notes
Originality Check		 Conducted by Results: Action: 	
Margins		• 1 inch top, bottom, left, right	
Font Style and Size		• Times New Roman, 12-point for Running Head, Page Numbers, and Text Body	
Running Head		 All pages SHORT TITLE ALL CAPS No more than 50 characters Top left of paper 	
Page Numbers		• Top right, start with title page	
Line Spacing		 Double spacing throughout (Tables, table titles, figures, figure captions, and references can be single-spaced, as this often makes them easier to read) No additional line spacing before or after paragraphs 	
Paragraph Indention		• Half-inch	
Title Page (Note: Pages are described here in the order in which they should appear)		 Title is centered Capitalization: first letter of each word capitalized (except the words "the, of, and," etc.) First Name, Middle Initial, Last Name, centered 	
Acknowledgements		 Start on new page This section is optional Don't forget to thank study participants if applicable. 	
Table of Contents		 Start on new page Dots (not periods) between words and page numbers (use the tab key; see Table of Contents information below) Include all Level I headings and appendices 	

Abstract Introduction	 Start on new page after Table of Contents; label in bold No indenting of paragraphs 250 words (not counting keywords) <i>Keywords:</i> (add 5 to 7 words), indent text Start on new page after Abstract
	• Heading is title of manuscript centered, title case, and bold
Tables	 Table must be referenced in the text prior to the table's appearance in the manuscript Table must be placed in the text immediately after the paragraph in which it is introduced Table titles go <i>above</i> each table. Table number bold, normal font Table title italics, not bold (title case) Abbreviations must be explained in text (<i>Notes:</i>) underneath the table itself, even if they are explained in the text. No vertical lines
Figures	 Figure must be referenced in the text prior to the table's appearance in the manuscript Figure must be placed in the text immediately after the paragraph in which it is introduced Figure captions go <i>above</i> each figure Figure number bold, normal font Figure title italics, not bold (title case) Abbreviations must be explained in text (<i>Notes:</i>) underneath the figure itself, even if they are explained in the text. When possible, font should be Times New Roman 12 point. Can be smaller if necessary, but must be readable. Can be of a different font if from another source and not changeable.
References	• Start on new page after the end of the manuscript; label in bold

	 All references listed in the text must appear in the reference list; use hanging indent At first appearance in text, citations must list all authors unless there are 3 or more authors. At second and subsequent appearances, these citations use the "et al." form. Citations with 3 or more are listed using the "et al.' form at first and all subsequent uses. To cite agencies that usually appear as acronyms: Write out the full agency name at first appearance, followed by the acronym in square brackets and the appropriate year (and page number, if a quote). Thereafter you can cite it using only the acronym. References cited following APA style
Direct Quotations	 Page numbers given for all text in quotations Less than 40 words: In text with quotation marks More than 40 words: Block quotation used
Appendices	 IRB approval attached as Appendix or Completed decision tree All appendices introduced in text
Page Order	Final manuscript order is as follows:Title page, Acknowledgements, Tableof Contents, Abstract, Introduction,Statement of Purpose, LiteratureReview, Methods, Results, Discussion,Conclusion/Recommendations,References, Appendices. (Page breakbetween each section except betweenIntroduction and Conclusion)
Headings	Heading levels formatted appropriately

The following sections include helpful information concerning common formatting errors. Please note that some of our specific guidelines differ from typical APA style because of the Integrative Learning Experience (ILE) format. For example, abstracts and keywords are not a typical part of an APA document but are required in a Capstone project.

Table of Contents

The following is presented verbatim from Fleming, Grace. (2013). *Lining Up Dots in a Table of Contents: About.com, Homework/Study Tips*. Retrieved from http://homeworktins.about.com/od/computertins/ss/liningupdots.htm

http://homeworktips.about.com/od/computertips/ss/liningupdots.htm

- Type in the name of your first chapter. Then space once and type the page number for that chapter. Don't type any dots!
- Repeat this for each chapter. Just type the name--space once--then type the number.
- Next, you will highlight a line.
- Right click on the highlighted area and a menu list will pop up.
- Select "Paragraph" from the list that pops up.
- A box will appear. Select the "Tabs" button at the bottom. At this point you should be looking at a box entitled **Tabs**.
- In the box for "Tab stop position" type 5 as indicated by the blue arrow.
- In the "alignment" area, select **right** as indicated by the yellow arrow.
- In the "leader" area, select the choice for dots.
- You are almost done. Select OK.

You have just set up the page so that pressing the tab on your computer will insert a segment of uniform dots. Place your cursor between a chapter name and the page number in your table of contents. Press the "tab" button, and the dots will appear! Do this with each chapter on your TOC.

References

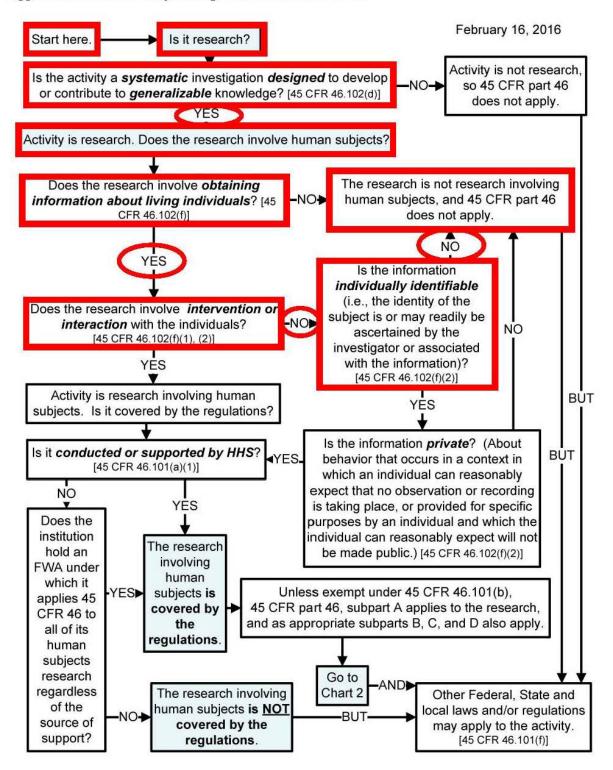
How to cite agencies usually cited as acronyms:

- First in-text citation (World Health Organization [WHO], 1978) or World Health Organization (WHO, 1978). Subsequent in-text citation of the same source/article (WHO, 1978)
- Reference:

World Health Organization (WHO). (1978). Declaration of Alma Ata. Retrieved from www.who.int/hpr/archive/docs/almaata.html

CADMIUM AND BONE MINERAL DENSITY

Appendix A: Human Subject Regulations Decision Chart



2

Research Capstone - Checklist for ILE I Completion & Enrollment in ILE II

Chairs: Please indicate the completion of each Required and Recommended ILE item in the table below. All required items must be received in APA format to be considered as complete.

If any **Required** item is not completed by the official end of the term, the student will not be permitted to register for PPH 7991 in the subsequent semester^{**}. All parties should note that further revision of these items may be required for the Capstone to be accepted as ready for presentation in ILE II.

Required Item	Notes	Complete	In Progress
CITI Training	Take the Social/Behavioral Investigator		
http://www.med.wright.edu/ra/citi	& Conflicts of Interest & Commitment.		
WSU APA Style and Formatting Guide	Consult this resource for document		
	formatting on the MPH website under		
	Student Resources		
Core and Concentration Competencies	Speak with your chair and concentration		
	director about these competencies		
The sections below each get their own titled section in the document.	*Indicates page break needed.		
Title Page*	Include ABREV TITLE and page		
-	number (starting with 1)		
Acknowledgements Page*	Optional.		holder: written of manuscript
Table of Contents*	Use Tabs function with dots	at conclusion	i of manuscript
Abstract*	Limited to 250 words (counted by MS	Make a place	holder: written
Abstract	Word under Review tab). <i>Keywords</i>		n of manuscript
	(five to seven) not part of word count.	at conclusion	i of manuscript
Introduction	One to three pages.		
Statement of Purpose	One paragraph.		
Review of Literature	Synthesis of peer reviewed literature with		
Review of Enerature	discussion of findings using analysis,		
	comparison, and contrasts.		
Methods	Methodology, research question(s),		
Methods	variables of interest defined, IRB		
	application must be drafted by end of		
	term (if needed).		
References*	Must be in APA format; Use of <i>Refworks</i>		
References	or similar program (Mendeley, EndNote)		
	is recommended.		
Appendices*	IRB approval must be included or proof		
Appendices	of exempt status or non-human-subject		
	status. Core and concentration		
	competency checklists to be completed.		
Identify and invite Capstone Reader	competency enceknots to be completed.		
Project timeline for ILE II			
Format check w/ Capstone Director	ILE I document must be turned into		
romat check w/ Capstone Director	Capstone director for format check at end		
	of ILE I.		
Recommended Items			

Student Name:

Chair Signature: _____ Date: _____

**Students are required to register for one credit hour (PPH 7992) each term until approved to register for ILE II.

RESEARCH CAPSTONE SCORE SHEET FORM

Student Name:

Project Title:

Project Manuscript			Scoring*		
Abstract	Overview of the manuscript. Limit to 250 words.	0	1	2	3
Acknowledgement(s) - Optional	Acknowledge your guidance committee members, family or any other individuals who significantly supported you in your research efforts. (Optional)	0	1	2	3
Introduction	Overview of the project with an emphasis on rationale and purpose. Limit to one (1) page maximum	0	1	2	3
Purpose Statement (or Research Questions)	State the purpose(s) of the project. Each purpose or question to be examined should be limited to one brief paragraph.	0	1	2	3
Review of Literature	Review of the scope of the literature. Synthesize and discuss reviewed research to identify strengths, weaknesses, trends, and opportunities. Provide theoretical and/or conceptual rationale.	0	1	2	3
Methods Appropriate to quantitative or	A. Sampling and Subjects/Participants Identifies subjects, sampling, rules for exclusion/inclusion, power analysis (as needed).	0	1	2	3
qualitative data as applicable	B. Measurement Identification of independent and dependent variables. All variables defined and operationalized. Valid measurement tools for all variables.	0	1	2	3
	C. Data Collection and Analysis Method of data collection and specific statistical analyses.	0	1	2	3
	D. IRB or LACUC approval (if required)	0	1	2	3
Results	Presents descriptive and inferential data. Includes the use of tables and/or figures. Uses the correct statistical analysis.	o	1	2	3
Discussion	Discussion and interpretation of main findings. Public health implications and recommendations. Limitations of the study.	0	1	2	3
References	Complete references in APA format on all cited works.	0	1	2	3
Appendices	Must contain competencies checklists and any support materials such as IRB letters, instruments, letters of support, raw data.	0	1	2	3
Poster Presentation					
Prepare Poster and Present	Rationale, purpose, methods, key findings and recommendations. Minimum of five (5) minutes with time for questions and answers.	0	1	2	3

*Scoring: 0 = Poor; 1 = Fair; 2 = Good; 3 = Excellent

Students cannot have any "0's" in order to pass; "N/A" can be used for "optional" or "if required" categories. Faculty must provide additional comments on second page of Capstone Score Sheet Form when a "0" or "1" is recorded.

RESEARCH CAPSTONE SCORE SHEET FORM/ FACULTY COMMENTS

Section	Comments

RESEARCH CAPSTONE FINAL SCORE SHEET/ GRADE FORM

Student Name:

Project Title:

Project Manuscript			Scoring*			
Abstract	Overview of the manuscript. Limit to 250 words.	0	1	2	3	
Acknowledgement(s) - Optional	Acknowledge your guidance committee members, family or any other individuals who significantly supported you in your research efforts. (Optional)	0	1	2	3	
Introduction	Overview of the project with an emphasis on rationale and purpose. Limit to one (1) page maximum	0	1	2	3	
Purpose Statement (or Research Questions)	State the purpose(s) of the project. Each purpose or question to be examined should be limited to one brief paragraph.	0	1	2	3	
Review of Literature	Review of the scope of the literature. Synthesize and discuss reviewed research to identify strengths, weaknesses, trends, and opportunities. Provide theoretical and/or conceptual rationale.	0	1	2	3	
Methods Appropriate to quantitative or	A. Sampling and Subjects/Participants Identifies subjects, sampling, rules for exclusion/inclusion, power analysis (as needed).	0	1	2	3	
qualitative data as applicable	B. Measurement Identification of independent and dependent variables. All variables defined and operationalized. Valid measurement tools for all variables.	0	1	2	3	
	C. Data Collection and Analysis Method of data collection and specific statistical analyses.	0	1	2	3	
	D. IRB or LACUC approval (if required)	0	1	2	3	
Results	Presents descriptive and inferential data. Includes the use of tables and/or figures. Uses the correct statistical analysis.	0	1	2	3	
Discussion	Discussion and interpretation of main findings. Public health implications and recommendations. Limitations of the study.		1	2	3	
References	Complete references in APA format on all cited works.	0	1	2	3	
Appendices	Must contain competencies checklists and any support materials such as IRB letters, instruments, letters of support, raw data.	0	1	2	3	
Poster Presentation						
Prepare Poster and Present	Rationale, purpose, methods, key findings and recommendations. Minimum of five (5) minutes with time for questions and answers.	0	1	2	3	

*Scoring: 0 = Poor; 1 = Fair; 2 = Good; 3 = Excellent

Students cannot have any "0's" in order to pass; "N/A" can be used for "optional" or "if required" categories. Faculty may provide additional comments on second page of Capstone Final Score Sheet / Grade Form, if desired.

RESEARCH CAPSTONE FINAL SCORE SHEET/ GRADE FORM

Student Name:		
Concentration:		
Project Title:		
Completion of this form attests that the student has satisfa	ctorily complete	d the Capstone:
Final Grade: Pass Fail: (check one)		
Required Signatures:		
Guidance Committee Chair	Date	
Guidance Committee Co-Chair (if applicable)	Date	
Guidance Consultant / Reader	Date	
Guidance Consultant/ Second Reader (if applicable)	Date	
Director, Capstone	Date	
Faculty Comments:		

ILE II Checklist to Support Participating in End of Term Poster Session This checklist is the student's responsibility: each student must meet with her/his chair to discuss this timeline and completion of all items.

If any **Required** item is not completed, the student will not be permitted to present**.

Poster sessions are held the last Friday afternoon of each term during regular business hours.

All parties should note that minor revision of these items may be required. Final manuscripts are due no later than 14 days after poster session. A final grade will be assigned when the final manuscript is approved.

Required Item	Notes	Target Completion	Completed
The Required Item column shows	the order of the sections in the project, each		
titled and separate from the next (
Title Page*	Include ABREV TITLE and page number (starting with 1)	ILE I	ILE I
Acknowledgements Page*	Optional		
Table of Contents*	Use Tabs function with dots		
Abstract*	Limited to 250 words (counted by MS Word under Review tab) no indentions or bold; include <i>Keywords</i> (not part of 250 words).		
Introduction	Use full title of manuscript; one to three pages	ILE I	ILE I
Statement of Purpose	One paragraph	ILE I	ILE I
Review of Literature	Synthesis of peer reviewed literature and discussion of findings using analysis, comparison and contrasts.	ILE I	ILE I
Methods	Methodology, research question(s), variables of interest defined, sampling clearly described, IRB approval.	ILE I	ILE I
Data Analysis and Results			
Discussion (with Limitations)	Must include limitations of study, public		
and Conclusion or	health implications of the findings, and		
Recommendations	conclusion or recommendations based on the findings (conclusion or recommendations one to two page maximum).		
References*	Must be in APA format; use of <i>Refworks</i> is recommended. Students and chairs should confirm that all references cited in text appear in the reference list and vice versa.		
Appendices*	IRB approval must be included or proof of exempt status or non-human-subject status. Core and concentration competency checklists reviewed with Capstone chair.		
Complete manuscript review with <i>Turnitin</i> software, no issues with plagiarism or patch writing	Poster template provided once a complete manuscript has been uploaded and reviewed via <i>Turnitin</i> in Pilot. Final poster due to Capstone director two weeks prior to poster session.		

Student Name:

Chair Signature: _____ Date: _____

Independent Project Capstone - Checklist for ILE 1 Completion

Chairs: Please indicate the completion of each Required and Recommended ILE item in the table below. All required items must be received in APA format to be considered as complete.

If any **Required** item is not completed by the official end of the term, the student will need to register for PPH 7992 in the subsequent semester^{**}. All parties should note that further revision of these items may be required for the Capstone to be accepted as ready for presentation.

Required Item	Notes	Complete	Incomplete
CITI Training	Take the Social/Behavioral Investigator		
http://www.med.wright.edu/ra/citi	& Conflicts of Interest & Commitment.		
WSU APA Style and Formatting Guide	Consult this resource for document		
	formatting on the MPH website under		
	Student Resources		
Core and Concentration Competencies	Speak with your chair and concentration		
	director about these competencies		
The sections below each get their own	*Indicates page break needed.		
titled section in the document.			
Title Page*	Include ABREV TITLE and page		
	number (starting with 1)		
Acknowledgements Page*	Optional.		
Table of Contents*			
Abstract*	Limited to 250 words (counted by MS		
	Word under Review tab). Keywords		
	(five to seven) not part of word count.		
Statement of Purpose	One paragraph.		
Body	Main content of project		
References*	Must be in APA format; Use of Refworks		
	or similar program (Mendeley, EndNote)		
	is recommended.		
Appendices*	Core and concentration competency		
	checklists are completed and provided to		
	MPH program coordinator.		
Identify and invite Capstone Reader			
Format check w/ Capstone Director	ILE I document must be turned into		
	Capstone director for format check at end		
	of ILE I.		
Recommended Items			
<i>Refworks</i> training			

Student Name:

Chair Name:

Chair Signature: _____ Date: _____

**Students are required to register for one credit hour (PPH 7992) each term until approved to register for ILE II.

INDEPENDENT PROJECT CAPSTONE SCORE SHEET FORM/ FACULTY COMMENTS

Student Name:

Project Title:

Project Manuscript			Scoring*			
Title Page*	Include ABREV TITLE and page number (starting with 1)	0	1	2	3	
Acknowledgements Page*	Optional	0	1	2	3	
Table of Contents*		0	1	2	3	
Abstract*	Limited to 250 words (counted by MS Word under Review tab). <i>Keywords</i> (five to seven) not part of word count.	0	1	2	3	
Statement of Purpose	One paragraph	0	1	2	3	
Body	Main content of project	0	1	2	3	
References*	Must be in APA format	0	1	2	3	
Appendices*	Core and concentration competency checklists are completed for inclusion by MPH program coordinator	0	1	2	3	

*Scoring: 0 = Poor; 1 = Fair; 2 = Good; 3 = Excellent

Students cannot have any "0's" in order to pass; "N/A" can be used for "optional" or "if required" categories.

Faculty must provide additional comments when a "0" or "1" is recorded.

Section	Comments	

INDEPENDENT PROJECT CAPSTONE FINAL SCORE SHEET / GRADE FORM

Student Name:

Project Title:

Project Manuscript			Scoring*				
Include ABREV TITLE and page number (starting with 1)	0	1	2	3			
Optional	0	1	2	3			
	0	1	2	3			
Limited to 250 words (counted by MS Word under Review tab). <i>Keywords</i> (five to seven) not part of word count.	0	1	2	3			
One paragraph	0	1	2	3			
Main content of project	0	1	2	3			
References* Must be in APA format		1	2	3			
Core and concentration competency checklists are completed for inclusion by MPH program coordinator	0	1	2	3			
	(starting with 1) Optional Limited to 250 words (counted by MS Word under Review tab). Keywords (five to seven) not part of word count. One paragraph Main content of project Must be in APA format Core and concentration competency checklists are completed for inclusion by MPH program	Include ABREV TITLE and page number (starting with 1) 0 Optional 0 Limited to 250 words (counted by MS Word under Review tab). Keywords (five to seven) not part of word count. 0 One paragraph 0 Main content of project 0 Must be in APA format 0 Core and concentration competency checklists are completed for inclusion by MPH program 0	Include ABREV TITLE and page number (starting with 1)01Optional01Image: Descent conductive cond	Include ABREV TITLE and page number (starting with 1)012Optional012Optional012Limited to 250 words (counted by MS Word under Review tab). Keywords (five to seven) not part of word count.012One paragraph012Main content of project012Must be in APA format012Core and concentration competency checklists are completed for inclusion by MPH program012			

*Scoring: 0 = Poor; 1 = Fair; 2 = Good; 3 = Excellent

Students cannot have any "0's" in order to pass; "N/A" can be used for "optional" or "if required" categories.

Faculty may provide additional comments, if desired.

Comments

INDEPENDENT PROJECT CAPSTONE FINAL SCORE SHEET/ GRADE FORM

Student Name:	
Concentration:	
Project Title:	
Completion of this form attests that the student has satisf	actorily completed the Capstone:
Final Grade: Pass Fail: (check one))
Required Signatures:	
Guidance Committee Chair	Date
Guidance Committee Co-Chair (if applicable)	Date
Guidance Consultant / Reader	Date
Guidance Consultant/ Second Reader (if applicable)	Date
Director, Capstone	Date

Please return completed Independent Project Capstone Final Score Sheet/ Grade Form to MPH Program Coordinator.