Please attach a narrative (not to exceed 4 pages, excluding appendices) addressing the following:

- What are the student learning outcomes? Please provide a numbered list.
- Which learning outcomes were assessed?
- How were they assessed? (Programs must use at least one direct assessment of student learning.)
- Undergraduate programs should assess at least one University Undergraduate Learning Outcome (UULO) each year, which may or may not overlap with a program learning outcome.
- Graduate programs should assess at least one outcome related to one of the following graduate level requirements each year:
  - student engagement in research, scholarship, creative expression and/or appropriate high-level professional practice.
  - activities requiring originality, critical analysis and expertise.
  - the development of extensive knowledge in the field under study.
- What was learned from the assessment results?
- How did the program respond to what was learned?

Please limit the narrative portion of your report to no more than four pages. You may attach appendices with data, tables, charts, or other materials as needed. Please explain the relevant conclusions from any appendices in your narrative. Please contact the Office of Academic Assessment if you have questions or need assistance.
1. What are the student learning outcomes?

1. Design and conduct independent research that generates new knowledge, and is characterized by conceptual and methodological rigor.
2. Demonstrate excellence in applying the theoretical and problem solving aspects of public health in their specialty area.
3. Demonstrate ethical choices, values and professional practices implicit in public health decisions.
4. Demonstrate a comprehensive understanding of major local, national, and global public health issues in their field of specialization.
5. Demonstrate a preparedness to pursue a lifetime of self-directed learning and professional development.
6. Communicate knowledge and research findings to appropriate professional, scientific, policy, and lay audiences and demonstrate skills in translating research into practice or health policy.

2. Which learning outcomes were assessed?

Each of the student outcomes listed above are directly assessed throughout the curriculum through critical discussion, research papers, group projects, and examinations. The learning outcome associated with communication of knowledge and research findings (number 6) that we have focused on stresses the importance of communicating PhD level knowledge and research appropriately as well as demonstrating application of research into practice. For example, student outcomes associated with this can be seen in the doctoral comprehensive exam, qualifying exam and dissertation.

3. How were they assessed?

Direct Assessment
All SCHS PhD students must pass a comprehensive exam after completion of their core coursework in the program (see Appendix B). This exam is meant to assess students’ ability to synthesize fundamental public health principles with integration of doctoral level coursework. The exam consists of questions for the five core areas of public health including environmental health, social and behavioral health, epidemiology, biostatistics, and health care administration and policy. These questions require students to communicate their comprehension of materials as well as to demonstrate application of these principles. For example, the epidemiology questions require students to convey concepts central to research methods and statistics in the health sciences. Students are also required to plan a research study under certain conditions with an emphasis on sample, methodology, and analysis of limitations. The biostatistics questions require students to analyze data and communicate these findings in clear and understandable terms.

Students are also required to pass a doctoral qualifying exam prior to presenting their oral prospectus. This oral exam is used to assess students’ dissertation projects for rigor, publication potential, and impact on the field of public health. Students present a short PowerPoint presentation outlining their project in terms of scope, limitations, usefulness, design, methodology, and analysis of limitations. The committee members question the student after the presentation for clarity. Students are scored on a scale of pass, pass with conditions and fail.

Indirect Assessment
The PhD exit survey is administered at the end of a student’s program and is a self-report measure covering various topics including how well students feel they can accomplish program competencies (Appendix A). Students rate their competence on a scale of poorly (1), adequately (2), well (3), very well (4), and with distinction (5). The competency associated with this learning outcome is competency 1 (see Appendix A). Students were asked to rate themselves on three
items related to communications and informatics. All three of the items were rated as with distinction (5) on average.

How well do you feel you can:

1. Collect, manage and organize data to produce information and meaning that is exchanged by use of signs and symbols.
2. Gather, process, and present information to different audiences in-person, through information technologies, or through media channels.
3. Strategically design the information and knowledge exchange process to achieve specific objectives.

4. Graduate programs should assess at least one outcome related to one of the following graduate level requirements each year:
   - student engagement in research, scholarship, creative expression and/or appropriate high-level professional practice.
   - activities requiring originality, critical analysis and expertise.
   - the development of extensive knowledge in the field under study.

All PhD students are required to demonstrate extensive knowledge of their specialty during their dissertation process. This process includes a prospectus, which summarizes the first three chapters of the dissertation, in both written and oral presentations, and a qualifying exam. These are graded on a scale of pass, pass with conditions, and fail. The comprehensive exam is taken after core courses are completed while the qualifying exam is taken immediately prior to presenting their oral prospectus. When students complete all program requirements as well as pass their qualifying exam and prospectus, they advance to candidacy. Students then conduct their original research, present the research in written form, and complete their oral defense in order to graduate. These steps allow for assessment of all three of these graduate level requirements throughout the process.

5. What was learned from the assessment results?

The indirect assessment demonstrated that doctoral students feel that they are very knowledgeable in public health principles pertaining to communication and informatics. Results from the comprehensive exam demonstrated that the new take-home format of the exam was more conducive to performance, provided students with more opportunity to demonstrate knowledge, and was more indicative of real world situations. Results of the qualifying exam indicate that this process is essential for student success in the dissertation process. The qualifying exam provides faculty a chance to evaluate students’ dissertation project ideas prior to the oral public prospectus stage. This has been helpful for students as they receive feedback on their proposed project, which allows them time to make changes prior to their prospectus, which reduces the risk of failure due to methodological issues.

6. How did the program respond to what was learned?

The comprehensive exam was previously given in an in class format which was limiting to students and not exemplary of real world situations. After careful review, the exam was reconfigured to be a take home exam in which students have one week to submit their answers. We also discontinued two questions, ethics and transmission of infectious disease, that were not representative of the independent core areas of public health but rather subspecialties. Another change that occurred was that the committee, which scores the doctoral qualifying exam, was broadened to include not only the students’ advisory committee but also two randomly selected qualified faculty members from department. This was done to provide students the opportunity to present their project to a small sample of qualified faculty, other than the committee they were working with, for unbiased feedback.
**PhD Core Competencies**

By graduation, students should be able to demonstrate all of their specialty area and MPH competencies as well as the following:

<table>
<thead>
<tr>
<th>Competency Number</th>
<th>Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHD 001</td>
<td><strong>Communication and Informatics</strong></td>
<td>Design and conduct independent research that generates new knowledge, and is characterized by conceptual and methodological rigor.</td>
</tr>
<tr>
<td>PHD 002</td>
<td></td>
<td>Demonstrate excellence in applying the theoretical and problem solving aspects of public health in their specialty area.</td>
</tr>
<tr>
<td>PHD 003</td>
<td><strong>Professionalism</strong></td>
<td>Demonstrate ethical choices, values, and professional practices implicit in public health decisions.</td>
</tr>
<tr>
<td>PHD 004</td>
<td><strong>Leadership</strong></td>
<td>Demonstrate a comprehensive understanding of major local, national, and global public health issues in their field of specialization.</td>
</tr>
<tr>
<td>PHD 005</td>
<td></td>
<td>Demonstrate a preparedness to pursue a lifetime of self-directed learning and professional development.</td>
</tr>
<tr>
<td>PHD 006</td>
<td><strong>Policy</strong></td>
<td>Communicate knowledge and research findings to appropriate professional, scientific, policy, and lay audiences and demonstrate skills in translating research into practice or health policy.</td>
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</table>
Appendix B

Comprehensive Exam Study Guide
Fall 2016

All doctoral students are required to complete a Written Comprehensive Examination upon completion of the core courses of the program. The examination is designed to assess the student’s ability to synthesize knowledge, as demonstrated by the selection and integration of information from the core courses and is evaluated by written discussion in response to examination questions. This will be followed up by Part 2 Oral Qualifying Examination which will be scheduled individually upon completion and passing of the written exam.

The exam will be a take home open note style exam. You will have one week to complete it. It will be available (emailed electronically) by 9am Friday and due back in (emailed electronically) by the following Friday at 9am (no late exams will be accepted). Each question will be graded subsequently by faculty in those respective specialty sections. While it is encouraged to form study groups pre-exam, you must work independently and turn in individual work! Team efforts will result in potential removal from the PhD program. Please understand what constitutes plagiarism.

ENV – Environmental Health (EOH 740)
BIOS - Biostatistical Methods (EAB 703)
EPI – Epidemiology and Public Health (EAB 705)
SBH – Program Planning and Grant Writing (HED 720)
HCA – Survey of US Health Care Systems (HCA 701)

This is your opportunity to demonstrate the depth and breadth of your knowledge of the core foundations of public health.

Instructions:

1. **Do not put your name anywhere on the exam, including in the document header.**
   The PhD coordinator will be assigning a random student number to each exam. The graders will be completely blinded with regard to whose exam they are grading.

2. Answer each of the questions in enough detail:
   a. Read the question multiple times before starting to make sure you understand what is being asked of you
   b. Make sure that each part of the question being asked is addressed in enough detail for the grader to know that you fully understood what was being asked, and nothing was left unclear or ambiguous.
   c. Use the necessary number of pages in order to answer the questions at a doctoral level of knowledge (for example, it usually requires more than two double spaced pages per question to demonstrate that level of knowledge)

3. Reference as appropriate (use APA format)

4. Please page number your exam
5. Return as a word document – no PDFs please
6. Use parentheses when quoting material
7. Double space your answers, and separate your major responses within each question with new paragraphs
8. Do not reference instructors by name throughout your exam. Reference what book or source the material came from that the instructor used
9. Make sure to spell check your answers – grammar and spelling are critical, and excessive issues with them can constitute a failed grade response.
10. Provide your references separately at the end of each question section.
11. Send your exam back as one document with your last name in the file name (for example: Moonie_Comp_F2016). Do not send 5 separate attachments!

Grading Criteria:
• There are three levels for the grade: Pass; Pass with Conditions; and Fail. See Table 1. The Conditional Pass is used at the discretion of the grader. If a student receives a “pass with conditions” they must follow up with written follow up and retake of the items in question.
• A student who fails one question area (out of the five), must retake the failed question area before the end of the semester or must retake the full exam in the following semester. Students who fail any part of the retake will need to meet with their advisor and the Associate Dean. They may be separated from the program.
• Students failing two or more question areas must meet with their advisor and the Associate Dean and then retake the entire exam in the following semester. If the student fails any part of the retake, they may be separated from the program.
Question Content Guide

ENV – Environmental Health EOH 740 (Buttner or Cruz)
Students should review the concepts of environmental and human health in fundamental areas, such as water pollution, air pollution, hazardous waste, and vector-borne diseases. Understand how global processes, such as climate change, can have effects across multiple aspects of environmental and human health. Understand the public health impact of categories of pollutants, such as pesticides, and be able to discuss practical alternatives that are being used to improve public health in the future.

BIOS – Biostatistical Methods EAB 703 (Shan or Moonie)
Understand how to run basic parametric and non-parametric tests in SPSS, and interpret the statistical content of those analyses. Understand what statistical test in necessary to test a research hypotheses with given types of data distributions and variables. Understand hypothesis testing, and how variables are scaled (continuous, ranked, categorical, ordinal etc …)

EPI – Epidemiology and Public Health EAB 705 (Bungum or Pinhero)
Understand different types of study designs, and which one is best suited for a particular research study (cohort, case control etc …). Understand strengths and weaknesses of each study design. Understand epidemiologic studies in scientific literature. Know how to calculate appropriate rates after identifying the correct type of study design (AR, PAR, RR, OR etc …)

HCA – Survey of US Health Care Systems HCA 701 (Cochran)
Students should understand how health care policy is developed and the different roles and responsibilities of interested/affected partners. Students should also be able to discuss the current US Health Care system from provider and user perspectives and the implications of the 2010 ACA.

SBH – Program Planning and Grant Writing HED 720 (Drs. Thompson-Robinson, Dodge-Francis, Sheggog)
Planning, implementing, and evaluating health promotion programs are core functions of SBH. Students should know models of program planning and how to apply these models in the planning of health promotion programs, including examples of information needed for application and writing appropriate objectives.
**Table 1. Grading Criteria**

<table>
<thead>
<tr>
<th>Pass</th>
<th>Pass with Conditions</th>
<th>Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall: The student has demonstrated a clear understanding of the material</td>
<td>The student achieved most of the criteria listed for a pass, yet failed to fully explain a few items (in any particular question) to the doctoral level. This may be as applies to any of the relevant categories (overall, appropriateness, accuracy and/or structure)</td>
<td>Overall: The student did not respond to the question at the doctoral level. Either inadequate depth is provided or else the incorrect information is provided</td>
</tr>
<tr>
<td>Appropriateness: The writer fulfills or exceeds all of the assigned content requirements.</td>
<td>Appropriateness: The writer fails to address the important requirements of the assignment.</td>
<td></td>
</tr>
<tr>
<td>Accuracy: The writer's knowledge of the subject is accurate and clear throughout.</td>
<td>Accuracy: The writer's knowledge of the subject is generally inaccurate. The writer answers a different question than what is actually asked of them.</td>
<td></td>
</tr>
<tr>
<td>Structure: The writer focuses and orders the material to convey a unified point or effect (either stated or implied). The text is clearly legible. The format is both appropriate and attractive. The writer has no problems with grammar or misspelling</td>
<td>Structure: The writer provides little or no focus or order (either stated or implied) to the material. The text is generally illegible. The format is unacceptable. The writer’s misspellings are frequent enough to be distracting, regardless of the length or complexity of the text.</td>
<td></td>
</tr>
</tbody>
</table>

*Failing more than one question will result in a failed exam. The entire exam will need to be retaken by the subsequent semester.*

**Failed one question: the student will be reassigned a different question in that content area, and will have one more chance to pass the new question.**

***Conditional outcome: the student will have one chance to correct the conditions of the question that was ambiguous to the grader, and resubmit the question again for grading***

****Conditional passes and failed questions must be made up within the same semester in which the exam was originally taken. Conditions not met the second time and/or a second failed outcome may result in separation from the program.