

## UNIT REPORT

**Epidemiology (PhD) - Reviewer's Report - Academic Data**

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## Epidemiology (PhD)

### PhD in Epidemiology Program Mission

**Mission:**

The mission of the University of Florida Department of Epidemiology is to improve health globally through education, training, research and service. As a leader in the field, the Department aims to: Advance the field's theoretical and empirical base through rigorous multidisciplinary epidemiology research that monitors health globally. Prepare the next generation of scientific leaders to design and conduct ethical, relevant and innovative epidemiological studies. Train a public health workforce committed to working with diverse communities to bring about outcomes that matter. Develop and refine epidemiological measures and methods in that address the dynamic and complex factors impacting public health globally.

**Start:** 07/01/2017**End:** 06/30/2018

### PG1 Enrollment

**Goal:** The PhD in Epidemiology Program will Educate and train professionals in Epidemiology.**Evaluation Method:**

We plan to achieve this goal by maintaining an average of no more than 1.5 pre-doctoral students per graduate faculty member.

**Results:**

During the 2017-2018 fiscal year, we have a total of 24 pre-doctoral students, and 33 graduate faculty members, for an average of 0.72 pre-doctoral students per graduate faculty member. We exceeded our set goal. Next year, we have changed our goal to maintaining an average of at least 1.0 pre-doctoral student per tenured faculty member per cohort, or an average of at least 4.0 pre-doctoral students per tenured faculty member overall.

**XOn Campus:** true**XProgram CIP:** 26.1309**XOnline:** false**XOther Site:** false**XIf Other Site:**

### PG2 Diversity of Pre-doctoral Students

**Goal:** We will recruit male and female students of various racial and ethnic backgrounds to maintain student diversity in the department.**Evaluation Method:**

We will maintain a 1:1 ratio of male and female students in the program. At least 10% of the PhD student population will be racial/ethnic minorities as defined by NIH Policy to Enhance Diversity.

**Results:**

During the 2017-2018 fiscal year, our ratio of male to female students was 1:1.18. We achieved this goal.

During the 2017-2018 fiscal year, 20.83% of our student population belonged to an underrepresented racial/ethnic minority group as defined by NIH Policy to Enhance Diversity. We exceeded this goal.

**XOn Campus:** true**XProgram CIP:** 26.1309**XOnline:** false**XOther Site:** false**XIf Other Site:**

### PG3 Retention of Pre-doctoral students

**Goal:** We will retain pre-doctoral students through the entire program and limit attrition.**Evaluation Method:**

We will retain 87% of students through the completion of the PhD program, not including attrition due to serious medical illness.

**Results:**

The program director and the program chair reviewed the results. During the 2017-2018 fiscal year, we retained 100% of our doctoral students in the program. We exceeded our set goal.

**XOn Campus:** true

**XProgram CIP:** 26.1309

**XOnline:** false

**XOther Site:** false

**XIf Other Site:**

## PG4 Program Visibility

**Goal:** We will contribute to the science of Epidemiology by publishing innovative epidemiologic research in high-impact peer-reviewed journals.

### Evaluation Method:

We will publish 6 articles per tenure-track faculty member in the Department per year.

### Results:

The program director and the program chair reviewed the results. During the 2017-2018 fiscal year, we had an average of 7.83 publications per tenured/tenure-track faculty member. We exceeded the set goal.

**XOn Campus:** true

**XProgram CIP:** 26.1309

**XOnline:** false

**XOther Site:** false

**XIf Other Site:**

## SLO1 Research Studies

### Outcome:

Design epidemiologic research studies and analyze data to answer health-related research questions that are currently relevant to the population.

**SLO Area (select one):** Skills (Grad)

### Assessment Method:

1a. All students will be required to pass a written preliminary exam after completion of their core coursework. This exam includes questions on study design and analysis. Written preliminary exams are assessed using a common rubric by Graduate faculty in the Department of Epidemiology. Level of achievement: 95% of PhD students who take the written preliminary exam. 1b. All students will be required to pass a Written Area Exam and an Oral Area Exam that relates Epidemiologic concepts to their specific research topic of interest. Written and Oral Area exams are assessed using a common rubric by members of the student's Supervisory Committee. Level of achievement: 95% of PhD students who take written and oral area exam. 2. All students develop and defend a Dissertation Proposal that includes a discussion of the planned study design and analysis. Doctoral dissertation proposals are assessed using a common rubric by members of the student's Supervisory Committee. Level of achievement: 85% of PhD students who defend their dissertation proposal. 3. All students write and defend a Doctoral Dissertation that includes a discussion of their completed study design and analysis. Doctoral Dissertations are assessed using a common rubric by members of the student's Supervisory Committee. Level of achievement: 95% of PhD students who defend their Doctoral Dissertation.

**SLO Not Assessed This Year:** false

### Results:

1a. The criterion for success is 95% of students passing the Written Preliminary Exam.

During the 2017-2018 fiscal year, 3 out of 3 students who took the Written Preliminary Exam passed the exam, for a percentage of 100%.

This meets the criterion for success.

1b. The criterion for success is 95% of students passing the Written and Oral Area Exams.

During the 2017-2018 fiscal year, 7 out of 7 students passed their Written and Oral Area Exams, for a percentage of 100%.

This meets the criterion for success.

2. The criterion for success is 85% of PhD students successfully defending their Dissertation Proposal.

During the 2017-2018 fiscal year, 8 out of 8 students successfully defended their Dissertation Proposal, for a percentage of 100%.

This meets the criterion for success.

3. The criterion for success is 95% of students successfully defending their Doctoral Dissertation.

During the 2017-2018 fiscal year, 6 out of 6 students successfully defended their Doctoral Dissertations, for a percentage of 100%.

This meets the criterion for success.

**Start:** 07/01/2017

**End:** 06/30/2018

**Threshold of Acceptability:** 92

**How many students did you assess for this outcome?:** 24

**How many students met the outcome?:** 24

**What percentage of students met the outcome?:** 100

**Does this meet your threshold of acceptability?:** Yes

## SLO2 Independent Research

**Outcome:** Prepare to become an independent researcher in the field of Epidemiology.

**SLO Area (select one):** Skills (Grad)

### Assessment Method:

All students are expected to set and meet one goal per year in post-degree planning. This is assessed by the student's Research Mentor and Academic Advisor on the student's IDP and Monitoring Plan. Level of achievement: 80% of PhD students who complete the IDP and Monitoring Plan.

**SLO Not Assessed This Year:** false

### Results:

Please note that we do not expect graduating students to complete an IDP or a Monitoring Plan, so the 8 students who graduated in the 2017-2018 fiscal year are not reflected in this number.

The criterion for success is 80% of students who complete the IDP and Monitoring Plan setting and meeting one goal per year in post-degree planning.

16 out of 16 students who completed the IDP and Monitoring Plan set and met one goal per year in post-degree planning, for a percentage of 100%.

This meets the criterion for success.

**Start:** 07/01/2017

**End:** 06/30/2018

**Threshold of Acceptability:** 80

**How many students did you assess for this outcome?:** 16

**How many students met the outcome?:** 16

**What percentage of students met the outcome?:** 100

**Does this meet your threshold of acceptability?:** Yes

## SLO3 Epidemiology Concepts

**Outcome:** Illustrate a thorough understanding of epidemiology concepts.

**SLO Area (select one):** Knowledge (Grad)

### Assessment Method:

1a. All students will be required to pass a written preliminary exam after completion of their core coursework. This exam includes questions on study design and analysis. Written preliminary exams are assessed using a common rubric by Graduate faculty in the Department of Epidemiology. Level of achievement: 95% of PhD students who take the written preliminary exam. 1b. All students will be required to pass a Written Area Exam and an Oral Area Exam that relates Epidemiologic concepts to their specific research topic of interest. Written and Oral Area exams are assessed using a common rubric by members of the student's Supervisory Committee. Level of achievement: 95% of PhD students who take written and oral area exam. 2. All students develop and defend a Dissertation Proposal that includes a discussion of the planned study design and analysis. Doctoral dissertation proposals are assessed using a common rubric by members of the student's Supervisory Committee. Level of achievement: 85% of PhD students who defend their dissertation proposal. 3. All students write and defend a Doctoral Dissertation that includes a discussion of their completed study design and analysis. Doctoral Dissertations are assessed using a common rubric by members of the student's Supervisory Committee. Level of achievement: 95% of PhD students who defend their Doctoral Dissertation.

**SLO Not Assessed This Year:** false

### Results:

1a. The criterion for success is 95% of students passing the Written Preliminary Exam.

During the 2017-2018 fiscal year, 3 out of 3 students who took the Written Preliminary Exam passed the exam, for a percentage of 100%.

This meets the criterion for success.

1b. The criterion for success is 95% of students passing the Written and Oral Area Exams.

During the 2017-2018 fiscal year, 7 out of 7 students passed their Written and Oral Area Exams, for a percentage of 100%.

This meets the criterion for success.

2. The criterion for success is 85% of PhD students successfully defending their Dissertation Proposal.

During the 2017-2018 fiscal year, 8 out of 8 students successfully defended their Dissertation Proposal, for a percentage of 100%.

This meets the criterion for success.

3. The criterion for success is 95% of students successfully defending their Doctoral Dissertation.

During the 2017-2018 fiscal year, 6 out of 6 students successfully defended their Doctoral Dissertations, for a percentage of 100%.

This meets the criterion for success.

**Start:** 07/01/2017

**End:** 06/30/2018

**Threshold of Acceptability:** 92

**How many students did you assess for this outcome?:** 24

**How many students met the outcome?:** 24

**What percentage of students met the outcome?:** 100

**Does this meet your threshold of acceptability?:** Yes

## **SLO4 Professional Behavior**

### **Outcome:**

Display ethical behaviors, cultural sensitivity, teamwork, professional conduct and communication, and build academic skills such as grant writing.

**SLO Area (select one):** Professional Behavior (Grad)

### **Assessment Method:**

1. All students who have completed at least one year of the program are expected to submit at least three peer-reviewed papers per year and be first-author on at least one of them. This is assessed by the student's Research Mentor and Academic Advisor on the student's IDP and Monitoring Plan. Level of achievement: 70% of PhD students who complete the IDP and Monitoring Plan. 2. All students are expected to set and meet one goal per year in service/professionalism. This is assessed by the student's Research Mentor and Academic Advisor on the student's IDP and Monitoring Plan. Level of achievement: 80% of PhD students who complete the IDP and Monitoring Plan. 3. Grant writing and professional skills are learned through coursework but tracked throughout the academic year through advisors and mentors for: a) meetings at which they present research as the first author; b) grants submitted or grants they help write for mentors; c) presentations skills that are assessed through monthly student brown bags. Level of achievement: a) 95% of students will present research as a first author at least once per year; b) 80% of students will submit grants or help write grants for mentors. Mentors, advisors, and the PhD Program Assistant will officially review progress toward these milestones twice yearly during academic advising opportunities and during the PhD program Assessment Cycle.

**SLO Not Assessed This Year:** false

### **Results:**

Please note that we do not expect graduating students to complete an IDP or a Monitoring Plan, so the 8 students who graduated in the 2017-2018 fiscal year are not reflected in this number.

1. The criterion for success is 70% of PhD students who have completed at least one year of the program, who complete the IDP and Monitoring Plan, submitting three peer-reviewed papers and being first-author on at least one of them.

During the 2017-2018 fiscal year, 9 out of 12 PhD students who who had completed at least one year of the program, who completed the IDP and Monitoring Plan, submitted at least three peer-reviewed papers, for a percentage of 75%.

This meets the criterion for success.

During the 2017-2018 fiscal year, 12 out of 12 PhD students who who had completed at least one year of the program, who completed the IDP and Monitoring Plan, submitted at least one first-authored peer-reviewed papers, for a percentage of 100%.

This meets the criterion for success.

2. The criterion for success is 80% of PhD students who complete the IDP and Monitoring Plan setting and meeting one goal in service/professionalism.

During the 2017-2018 fiscal year, 17 out of 17 PhD students set and met one goal in service/professionalism, for a percentage of 100%.

This meets the criterion for success.

3a. The criterion for success is 95% of PhD students presenting research as a first author at least once.

During the 2017-2018 fiscal year, 13 out of 17 PhD students presented research as a first author at least once, for a percentage of 76.47%.

This does not meet the criterion for success.

3b. The criterion for success is 80% of PhD students submit grants or helping write grants for mentors.

During the 2017-2018 fiscal year, 5 out of 17 PhD students submitted grants or helped write grants for mentors, for a percentage of 29.41%.

This does not meet the criterion for success.

**Start:** 07/01/2017

**End:** 06/30/2018

**Threshold of Acceptability:** 80

**How many students did you assess for this outcome?:** 75

**How many students met the outcome?:** 56

**What percentage of students met the outcome?:** 75

**Does this meet your threshold of acceptability?:** No

## Programmatic Use of Results

**Program:** Epidemiology (PhD)

### Programmatic Use of Results:

Based on our further review of our program goals and SLOs and their completion, we propose the following changes to our assessment plan.

First, we propose to change the way we measure our success in student enrollment. Going forward, we propose to maintain an average of at least 1.0 pre-doctoral student per tenured faculty member per cohort, or an average of at least 4.0 pre-doctoral students per tenured faculty member overall. Tenured faculty are each expected to recruit at least one pre-doctoral student each cohort, and this new evaluation method will ensure that we are meeting that target.

Second, in terms of Diversity of our students, we want to delete the reference to a 1:1 male:female ratio among enrolled students because we believe this is not reflective of the success of the program. We also increased our target enrollment of PhD students who belong to racial/ethnic minorities from 18% of the PhD student population to 20%, as we have been successful in enrolling greater than 20% of our PhD student population from racial/ethnic minorities in the past.

Third, during the planning cycle for the 2017-2018 fiscal year, a new SLO was proposed: Bring "ethics moments" to all meetings for discussions. However, neither an assessment method nor a threshold of acceptability was proposed for this new SLO during the planning cycle for the 2017-2018 fiscal year. In the table below, we propose an assessment method and a threshold of acceptability for this new SLO, to be assessed beginning in the 2018-2019 fiscal year (underlined).

Fourth, we propose stricter assessment parameters (of 100%) for all of our SLOs, as reflected in the table below (changes underlined).

| SLO              | Student Learning Outcome   | Assessment Method  | Level of Achievement  |
|------------------|--|--|---|
| Research Studies | Design epidemiologic research studies and analyze data to answer health-related questions that are currently relevant to the population. | 1a. All students will be required to pass a written preliminary exam after completion of their core coursework. This exam includes questions on study design and analysis. Written preliminary exams are assessed using a common rubric by Graduate faculty in the Department of Epidemiology. | 1a. <u>100%</u> of PhD students who take the written preliminary exam will pass the exam.       |
|                  |  | 1b. All students will be required to pass a Written Area Exam and an Oral Area Exam that relates Epidemiologic concepts to their specific research topic of interest. Written and Oral Area exams are assessed using a common rubric by members of the student's Supervisory Committee.        | 1b. <u>100%</u> of PhD students who take written and oral area exam will pass the exams.        |
|                  |  | 2. All students develop and defend a Dissertation Proposal that includes a discussion of the planned study design and analysis. Doctoral dissertation proposals are assessed using a common rubric by members of the student's Supervisory Committee.  | 2. <u>100%</u> of PhD students who defend their dissertation proposal will defend successfully. |
|                  |  | 3. All students write and defend a Doctoral Dissertation that includes a discussion of their completed study design and analysis. Doctoral Dissertations are assessed using a common rubric by members of the student's Supervisory Committee.   | 3. <u>100%</u> of PhD students who defend their Doctoral Dissertation will defend successfully. |

|                       |   |   |   |
|-----------------------|---|---|---|
| Independent Research  | Prepare to become an independent researcher in the field of Epidemiology.   | 1. All students are expected to set and meet one goal per year in post-degree planning. This is assessed by the student's Research Mentor and Academic Advisor on the student's Individual Development Plan (IDP) and Monitoring Plan.  | 1. <u>100%</u> of PhD students who complete the IDP and Monitoring Plan will set and meet one goal per year in post-degree planning.  |
| Epidemiology Concepts | Illustrate a thorough understanding of epidemiology concepts.   | <p>1a. All students will be required to pass a written preliminary exam after completion of their core coursework. This exam includes questions on study design and analysis. Written preliminary exams are assessed using a common rubric by Graduate faculty in the Department of Epidemiology.</p> <p>1b. All students will be required to pass a Written Area Exam and an Oral Area Exam that relates Epidemiologic concepts to their specific research topic of interest. Written and Oral Area exams are assessed using a common rubric by members of the student's Supervisory Committee.</p>  | <p>1a. <u>100%</u> of PhD students who take the written preliminary exam will pass the exam.</p> <p>1b. <u>100%</u> of PhD students who take written and oral area exam will pass the exams.</p>  |
| Professional Behavior | Display ethical behaviors, cultural sensitivity, teamwork, professional conduct and communication, and build academic skills such as grant writing. | <p>2. All students develop and defend a Dissertation Proposal that includes a discussion of the planned study design and analysis. Doctoral dissertation proposals are assessed using a common rubric by members of the student's Supervisory Committee.</p> <p>3. All students write and defend a Doctoral Dissertation that includes a discussion of their completed study design and analysis. Doctoral Dissertations are assessed using a common rubric by members of the student's Supervisory Committee.</p> <p>1. All students who have completed at least one year of the program are expected to submit at least three peer-reviewed papers per year and be first-author on at least one of them. This is assessed by the student's Research Mentor and Academic Advisor on the student's Individual Development Plan (IDP) and Monitoring Plan</p> <p>2. All students are expected to set and meet one goal per year in service/professionalism. This is assessed by the student's Research Mentor and Academic Advisor on the student's IDP and Monitoring Plan.</p> <p>3. Grant writing and professional skills are learned through coursework but tracked throughout the academic year through advisors and mentors for: a) meetings at which they present research as the first author; b) grants submitted or grants they help write for mentors; c) presentations skills that are assessed through monthly student brown bags. Mentors, advisors, and the PhD Program Director will officially review progress toward these milestones twice yearly during academic advising opportunities and during the PhD program Assessment Cycle.</p> | <p>2. <u>100%</u> of PhD students who defend their dissertation proposal will defend successfully.</p> <p>3. <u>100%</u> of PhD students who defend their Doctoral Dissertation will defend successfully.</p> <p>1. <u>100%</u> of PhD students who have completed at least one year of the program will submit at least three peer-reviewed papers per year and be first-author on at least one of them.</p> <p>2. <u>100%</u> of PhD students will set and meet one goal per year in service/professionalism.</p> <p>3a. <u>100%</u> of students will present research as a first author at least once per year</p> <p>3b. <u>100%</u> of students will submit grants or help write grants for mentors.</p> |
| <u>Ethics Moment</u>  | <u>Bring "ethics moments" to all meetings for discussion.</u>   | <u>1. All students are required to attend a PhD Quarterly Meeting with the Academic Program Assistant, and Program Director, and the Department Chair. Each PhD Quarterly Meeting will include an "ethics moment" for discussion in the last 10 minutes of the meeting.</u>   | <u>1. 100% of PhD Quarterly Meetings will include an "ethics moment" for discussion in the last 10 minutes of the meeting.</u>  |

**Program Results Not Reported This Year:**

## PhD Epidemiology AAP Detail

**End:** 06/30/2018

**Start:** 07/01/2017

**Providing Department:** Epidemiology (PhD)

**Assessment Cycle (All AAPs):**

Analysis and Interpretation: May-June

Program Modifications: Completed by September 1

Dissemination: Completed by October 1

| Year  | 15-16 | 16-17 | 17-18 | 18-19 | 19-20 | 20-21 | 21-22 |
|---|-------|-------|-------|-------|-------|-------|-------|
| <b>SLOs</b>   |       |       |       |       |       |       |       |
| <b>Content Knowledge</b>  |       |       |       |       |       |       |       |
| <b>Demonstrate a thorough understanding of epidemiology concepts.</b>                                     | X     | X     | X     | X     | X     | X     | X     |
| <b>Skills</b>   |       |       |       |       |       |       |       |
| <b>Ability to design and interpret epidemiologic research studies to answer health-related research.</b>  | X     | X     | X     | X     | X     | X     | X     |
| <b>Professional Behavior</b>  |       |       |       |       |       |       |       |
| <b>Display ethical behaviors, cultural sensitivity, teamwork, professional conduct and communication.</b> | X     | X     | X     | X     | X     | X     | X     |

The Assessment Cycle for our revised SLO's is as follows:

Analysis and Interpretation: May-June

Program Modifications: Completed by September 1

Dissemination: Completed by October 1

| Year   | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | 17-18 |
|--|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>SLOs</b>  |       |       |       |       |       |       |       |       |
| <b>Content Knowledge</b>   |       |       |       |       |       |       |       |       |
| <b>Illustrate a thorough understanding of epidemiology concepts.</b>   | X     | X     | X     | X     | X     | X     | X     | X     |
| <b>Skills</b>  |       |       |       |       |       |       |       |       |
| <b>Design epidemiologic research studies and analyze data to answer health-related research questions that are currently relevant to the population.</b>   | X     | X     | X     | X     | X     | X     | X     | X     |
| <b>Prepare to become an independent researcher in the field of Epidemiology.</b>   | X     | X     | X     | X     | X     | X     | X     | X     |
| <b>Professional Behavior</b>   |       |       |       |       |       |       |       |       |
| <b>Display ethical behaviors, cultural sensitivity, teamwork, professional conduct and communication, and build academic skills such as grant writing.</b> | X     | X     | X     | X     | X     | X     | X     | X     |

#### **SLO Assessment Rubric (All AAPs):**

##### **Research (Graduate and Professional AAPs only):**

Doctoral students in our program are expected to write and publish research papers in high-impact peer-reviewed journals and communicate research results with scientists, policy makers, and the public at local, national and international conferences. We also expect doctoral students to develop grant proposals and apply for pre-doctoral fellowships or other grants from NIH and other research institutes. To this end, we require all of our doctoral students to be able to conduct independent research as demonstrated in a dissertation presenting original research to address critical and/or emerging public health and clinical research issues.

Preparation: Doctoral students in our program are assigned their Research Mentor upon admission based on their request. The researcher mentor and the student will annually sign a Mentoring Compact, which outlines expectations for both parts. The Research Mentor will meet with the student to review the PhD Student IDP and Monitoring Plan to evaluate the progress toward goals, and make suggestions for improvements.

In addition to core and selective coursework in Epidemiology and Biostatistics, our doctoral students are required to take several classes that educate them about the skills in developing grant proposal and research papers. All students in the program will take PHC 7727 Grant Writing for Population Health Research, which provides practical instruction in the grant process, with a specific focus on National Institutes of Health (NIH) procedures. This course provides the student with experience in writing parts of the grant application and in reviewing other's grant applications. Students are also required to take the doctoral seminar series courses (PHC 7934 Epidemiology Seminar I and PHC 7000 Epidemiology Seminar II), which help the students understand the historical development, philosophy, culture, and current state of epidemiological practice and science, and which educate the students about constructing research ideas, developing them into full proposals, and discussing auxiliary methods based on students' planned dissertation topics. The Journal Club series (PHC 7901 Epidemiology Literature Review and Critique [Journal Club] and PHC 7902 Scientific Writing for Peer Reviewed Publications [Writing Circle]) also offer the students the training in critically analyzing published literature on research methods and measures, writing papers, and critiquing each other's papers.

Our program also provides doctoral students other resources and supports to prepare them to become a researcher in the discipline. Before their progress to candidacy, doctoral students are encouraged to take independent study with other faculty members in or outside the program. This course provides them the training to be a productive scholar through co-authoring, reviewing, conference and publication venues, etc. In addition, we encourage our students to actively interact with peers, faculty and other researchers from inside and outside the university in developing their research skills through the activities of regular doctoral student's association meeting, department seminar, and annual college research day. The regular doctoral student's association meeting gives our doctoral students a chance to communicate with peers in the program on a regular basis. Through these activities, they can become familiar with other students' research, share information and resources, and help each other deal with the



difficulties of dissertation project development, etc. In the departmental seminar, we regularly invite national or international well-established researchers to give a seminar. It introduces our students to the innovative and pioneering research areas and methods in the field and provides them the opportunity to communicate with these well-known experts. Furthermore, the annual college research day offers our doctoral students the opportunity to present their research findings to the peers and faculty members from other disciplines in the College and encourage their multidisciplinary interactions. Finally, to facilitate presentation of research at academic conferences, we fund doctoral students for a portion of travel to one or two conferences per year through Epidemiology Chair's Travel Award and Graduate Student Council Travel Grants.

**Measurement Tools (Graduate and Professional AAPs Only):**

As a whole, the measurement tools involve a combination of methods.

Current SLO: Demonstrate a thorough understanding of Epidemiology concepts

New SLO: Illustrate a thorough understanding of Epidemiology concepts.

Current SLO: Demonstrate ability to design and interpret epidemiologic research studies to answer health-related research questions

New SLO: Design epidemiologic research studies and analyze data to answer health-related research questions that are currently relevant to the population.

New SLO: Bring "ethics moments" to all meetings for discussions.

The understanding, design, and interpretation SLOs are measured through completion of required coursework with satisfactory grades, and by the PhD qualifying examination series, the dissertation proposal defense, and the final dissertation defense.

The PhD qualifying exam consists of three parts: 1) the Written Preliminary Examination, 2) the Written Area Examination, and 3) the Oral Area Examination.

The Written Preliminary Examination includes a general knowledge component with questions that test conceptual knowledge of epidemiology in an applied way, and also includes the critique of a journal article. This is a common examination given to all PhD students within a given cohort and will assess general knowledge of epidemiology concepts and the ability to interpret an epidemiologic study. Grading is conducted by several faculty within the department and the exam final grade is pass-fail.

The Written Area Examination is administered by the student's doctoral dissertation committee. The exam questions are generated by the committee and approved by the epidemiology curriculum committee. Students are given one week to provide written responses to 3 of 5 questions on the exam. The exams are graded by the supervisory chair with assistance from other dissertation committee members. Students are graded pass-fail on each of the questions, provided an opportunity to resubmit up to 2 questions that are not passed, and ultimately passed or failed on this examination.

The Oral Area Exam is also administered by the student's doctoral dissertation committee. Committee members will grade the student's ability to apply epidemiologic concepts to a specific content area and to interpret epidemiologic work done within a student's more focused areas of research. All committee members will complete a checklist with ratings for each question; the results will be summarized and a score of pass or fail will be determined based on this feedback.

Successful passing of the three-part qualifying examination will demonstrate successful accomplishment of the first two SLOs.

Additional assessment periods occur at the time of the doctoral dissertation proposal defense and the final dissertation defense. Both activities require both a written document and oral discussion that will highlight successful completion of these SLOs. If the student does not appear to have mastered the material, the student will not be allowed to continue in the program.

Current SLO: Display ethical behaviors, cultural sensitivity, teamwork, professional conduct and communication.

New SLO: Display ethical behaviors, cultural sensitivity, teamwork, professional conduct and communication, and build academic skills such as grant writing.

New SLO: Prepare to become an independent researcher in the field of Epidemiology.

The ethical component of this SLO will be assessed by successful passing of a course in biomedical or public health ethics, by completion of IRB training materials related to research in human subjects, and by successfully completing research activities without any expressed concerns related to research activity. Teamwork, professional conduct, and communication is measured through a variety of activities, including successful completion of the PhD seminar series (which requires collaborations in small groups of students, supervised by epidemiology faculty), and by overall participation in departmental activities such as seminar attendance and willing participation in other activities required by the department (such as required teaching assignments). Any activity that is non-professional or inconsistent with the SLO will be documented in writing and placed in a student file. Student service activities and outside professional collaborations will also be documented on each student's annual letter/mentoring report.

**Assessment Timeline (Graduate and Professional AAPs only):**