

Epidemiology - MPH

Group 1: Cycle 1 - Fall 2017 - Summer 2019

Currently status is: Report Accepted

ASSESSMENT REPORT FOR Group 1: Cycle 1 - Fall 2017 - Summer 2019

Mission Statement

The specific mission of the MPH in Epidemiology is to prepare students with a medical background to apply epidemiologic skills in a practice setting.

Goal 1.

Graduates of this program will be exposed to and demonstrate an understanding of a variety of public health areas including health promotion and education, environmental health sciences, health administration, epidemiology and biostatistics.

Curriculum Map

Curriculum

The primary courses that address the first part of this goal are the three required SPH core courses: ENHS 660, Concepts of Environmental Health Sciences; HSPM 700, Approaches and Concepts of Health Administration; and HPEB 700, Public Health Education Concepts. The more department-specific competencies are obtained in two general areas: students are exposed to fundamental biostatistics concepts in BIOS 701 and BIOS 757, and to epidemiological concepts in EPID 701, EPID 741, and EPID 798. Secondary courses specific to the discipline include BIOS 745 and EPID 730.

NOTE: All MPH programs are in the process of being re-designed for AY2019-20 to meet new accreditation criteria. A new plan will be developed for the 2019-21 cycle.

Learning Outcome 1.

Students will demonstrate an understanding of a) fundamental principles and practices in health promotion, education, and behavior; b) organization, principles, and practices in health administration; c) principles and practices in epidemiology, and tools for translating epidemiological findings into public health action; d) public health statistical applications; e) environmental health from the perspective of the earth as a complex, dynamic system.

MPH rationale - goal 1, LO1

Measures and Criteria

1a. The culminating assignment for HPEB 700 is a paper involving critical evaluation of a health education/promotion program. The assignment requires students to apply methods and skills to evaluate the evidence base that exists for addressing public health problems. A grading rubric is used in grading this assignment. The average score for this assignment should be at least 80 (i.e., B).

1b. The integrative assignment covering health administration organization, principles, and practices for HSPM 700 is a set of four cases requiring students to demonstrate proficiency in assessing a public health management problem, reviewing current evidence-based practice, and proposing a solution. These cases require theoretical and practical knowledge in such areas as financial management, quality improvement, marketing, leadership, motivation, and management. A grading rubric for each exercise is used in assessing student performance. The average score for these case assignments should be at least 80%.

1c. The final assignment for EPID 701 will include a critique of an epidemiological study. The MPH student will analyze the appropriateness of the study design, identify the strengths and weaknesses of the study and will provide and justify recommendations to improve it. The average score for this assignment should be at least 80%.

1d. The three exams for BIOS 701 will include questions to be used for assessment purposes. One set of questions will address the fundamental concepts of identifying null and alternative hypotheses, and

determining the most appropriate statistical test. The second set of questions will require calculating a test statistic and/or identifying this from computer printout, and interpreting the results of the analysis in the context of the problem. The average score for these questions across all three exams should be at least 80%.

1e. The final exam for ENHS 660 will include a series of questions that address the fundamental concepts of Environmental Health Sciences. The average score for these questions should be at least 80%.

Methods

This is an overarching learning outcome for all MPH programs offered by the Arnold School and is assessed at the school level, rather than at the program level (see attached rationale).

Each spring, the school's Director of Evaluation and Academic Assessment requests results from the program directors for each of the above courses. Because this learning outcome is assessed across MPH programs, data from all students in the courses are used.

Annual results are primarily reviewed by faculty in the department offering the course for potential revisions. Each department has at least one internal curriculum committee. However, other departments offering the MPH degree will also assess how each core course works within the curriculum and may either adjust the course sequencing with the curriculum or request the department offering the course to consider revisions to the course based on how the discipline-specific content is integrated across courses.

At the school level, results are reviewed across the seven MPH programs and any suggested changes must be reviewed and approved by the Academic Programs Committee and the Associate Dean of Faculty Affairs and Curriculum. Aggregate data is essential for this assessment.

Results

1a. HPEB 700

- Fall 2017 - average score 96%
- Fall 2018 – average score 89%

1b. HSPM 700

- Fall 2017 - average score 99%
- Spring 2018 - average score 98%
- Fall 2018 – average score 100%

1c. EPID 701

- Fall 2018 – average score 100%

1d. BIOS 701

- Fall 2018 –unavailable

1e. ENHS 660

- Fall 2017 - average score 82%
- Spring 2018 – average score 94%
- Summer 2018 – average score 92%
- Fall 2018 - no MPH students
- Spring 2019 - average score 97%

These criteria were met.

Use of Results

The Council on Education in Public Health (CEPH), the accrediting body for schools and programs of public health adopted new curriculum standards MPH programs. As a result, the Arnold School has completely redesigned the core MPH curriculum and developed new competencies (learning outcomes) for the individual MPH programs. These new programs will be implemented beginning fall 2019. As a result,

completely new academic assessment plans will be developed for the next two-year cycle.

The results of assessments from the past two years will be used to inform these new plans, along with the new MPH criteria.

Goal 2.

MPH program graduates will understand concepts of epidemiology relating to study design, implementation and evaluation of investigation.

Curriculum

Students will be primarily exposed to these topics in the following Epidemiology core courses: EPID 701 (Concepts and Methods of Epidemiology) and EPID 741 (Epidemiologic Methods) and secondarily in EPID 758 (Application of Epidemiology in Public Health), EPID 730 (Public Health Surveillance Systems) and BIOS 757 (Intermediate Biometrics).

Learning Outcome 1.

Students will differentiate between common epidemiologic study designs.

Measures and Criteria

All master's students are required to take a comprehensive exam during their second year in the program. The exam is offered at the beginning of the spring semester. Since we have very few MPH students, we will evaluate the questions from the last three to five years that specifically address this learning outcome. At least 75% of students will average higher than 75% on the chosen questions.

Methods

Every question on each student's exam is graded by two faculty, who provide their scores to the exam committee. The examination committee aggregates scores across all questions and calculates the final score for each student. Student level as well as program level data will be collected. The examination committee chairperson is responsible for aggregating all the information and providing a summary report for the faculty. Depending on the results, the faculty may deem that curriculum changes need to be made. MPH student data will be collected separately from MSPH student data for learning outcome purposes only. The compiled results will be discussed in the EPID division faculty meeting at the beginning of the next academic year and curriculum changes, if needed, will be recommended for discussion with the full faculty. Division meetings are held twice a semester; department faculty meetings are monthly.

Results

Percent who averaged higher than 75% on the chosen questions on the comp exam:

AY2015-16 through AY2017-18 (3 years): 3/3 students (100%)

AY18-19: 2/2 (100%)

4-year average: 5/5 (100%)

This criterion was met.

Use of Results

See Use of Results under G1.LO1.

Learning Outcome 2.

Students will demonstrate the ability to calculate and interpret measures of association.

Measures and Criteria

Data from the last three to five academic years will be used to assess each student. Questions from EPID 741 exams that pertain specifically to calculating and interpreting measures of association will be used to evaluate this learning outcome. At least 75% of students will average greater than 75% on these questions.

Methods

The faculty member who teaches EPID 741 will grade each examination and determine the score for each question as well as an average score. Student level as well as program level data are collected. MPH student data will be separated from MSPH student data and tabulated separately. The compiled results will

be discussed in the EPID division faculty meeting at the beginning of the next academic year and curriculum changes, if needed, will be recommended for discussion with the full faculty. Division meetings are held twice a semester; department faculty meetings are monthly.

Results

Percent who averaged higher than 75% on the related questions on EPID 741 exams.

AY2015-16 through AY2017-18 (3 years): 4/4 students (100%)

AY2018-19: 6/7 (86%)

4-year average: 10/11 (91%)

This criterion was met.

Use of Results

See Use of Results under G1.LO1.

Goal 3.

MPH program graduates will gain a broad understanding of diversity and culture, ethical principles, program planning and systems thinking.

Curriculum

MPH students will be exposed to concepts necessary to be proficient in these skills primarily in EPID 758 (Application of Epidemiology in Public Health) and secondarily in EPID 741 (Epidemiologic Methods I) and EPID 745 (Seminar in Epidemiology).

Learning Outcome 1.

Students will understand basic ethical principles pertaining to public health research and practice.

Measures and Criteria

Data from the last three to five academic years pertaining to ethical principles will be used to assess this learning outcome. Specifically, questions from the EPID 758 final exam will be examined. At least 75% of students will average > 75% on the questions which pertain to this learning outcome.

Methods

The faculty member who teaches EPID 758 will grade each examination and determine the score for each question as well as an average score for each student. Student level as well as program level data are collected. MPH student data will be separated from MSPH student data for the purposes of evaluating learning outcomes. The compiled results will be discussed in the EPID division faculty meeting at the beginning of the next academic year and curriculum changes, if needed, will be recommended for discussion with the full faculty. Division meetings are held twice a semester; department faculty meetings are monthly.

Results

Percent who averaged higher than 75% on the chosen questions on the EPID 758 final exam.

AY2015-16 through AY2017-18 (3 years): 4/4 students (100%)

AY18-19: 2/2 (100%)

4-year average: 6/6 (100%)

This criterion was met.

Use of Results

See Use of Results under G1.LO1.

Learning Outcome 2.

Students will describe the roles of history, power, privilege and structural inequality in producing health disparities.

Measures and Criteria

Data from the last three to five academic years will be used to assess each student. Questions from the EPID 758 final exam which pertain to health disparities will be used. At least 75% of students will average > 75% on the questions which pertain to this learning outcome.

Methods

The faculty member who teaches EPID 758 will grade each examination and determine the score for each question as well as an average score for each student. Student level as well as program level data are collected. MPH student data will be separated from MSPH student data for the purposes of evaluating learning outcomes. The compiled results will be discussed in the EPID division faculty meeting at the beginning of the next academic year and curriculum changes, if needed, will be recommended for discussion with the full faculty. Division meetings are held twice a semester; department faculty meetings are monthly.

Results

Percent who averaged higher than 75% on the chosen questions on the EPID 758 final exam.

AY2015-16 through AY2017-18 (3 years): 1/4 students (25%)

AY2018-19: 2/2 (100%):

4-year average: 3/6 (50%)

This criterion was not met.

Use of Results

Due to low enrollment numbers in our MPH degree program (6 in last 4 years, of whom 3 dropped out after first semester), we have struggled to have enough data to accurately determine whether students have successfully met the criteria for each learning outcome. At our 2017 accreditation site visit, CEPH mentioned our degree programs with very low enrollment, one of which was the epidemiology MPH program. Our department decided to expand our admission eligibility criteria to allow undergraduate students to directly matriculate into this degree. As a result, we have enrolled 6 MPH students for fall 2019, which matches the number of students we enrolled in the previous 4 years.

Beginning fall 2019, a similar learning outcome will be covered in the core curriculum for all MPH students. We believe larger enrollment, coupled with content being covered in the core curriculum, will result in students successfully learning this content. See also Use of Results under G1.LO1.

Learning Outcome 3.

Students will explain how the findings of a program evaluation can be used.

Measures and Criteria

Data from the last three to five academic years pertaining to program evaluation will be used to assess each student. Specifically, questions from the EPID 758 final exam will be examined. At least 75% of students will average > 75% on the questions which pertain to this learning outcome.

Methods

The faculty member who teaches EPID 758 will grade each examination and determine the score for each question as well as an average score for each student. Student level as well as program level data are collected. MPH student data will be separated from MSPH student data for the purposes of evaluating learning outcomes. The compiled results will be discussed in the EPID division faculty meeting at the beginning of the next academic year and curriculum changes, if needed, will be recommended for discussion with the full faculty. Division meetings are held twice a semester; department faculty meetings are monthly.

Results

Percent who averaged higher than 75% on the chosen questions on the EPID 758 final exam.

AY2015-16 through AY2017-18 (2 years): 4/4 students (100%)

AY2018-19: 1/2 (50%)

4-year average: 5/6 (83%)

This criterion was met.

Use of Results

See Use of Results under G1.LO1.

Learning Outcome 4.

Students will explain how individuals, social networks, organizations and communities may be viewed as systems in the analysis of public health problems.

Measures and Criteria

Data from the last three to five academic years pertaining to systems thinking will be used to assess each student. Specifically, questions from the EPID 758 final exam will be examined. At least 75% of students will average > 75% on the questions which pertain to this learning outcome.

Methods

The faculty member who teaches EPID 758 will grade each examination and determine the score for each question as well as an average score for each student. Student level as well as program level data are collected. MPH student data will be separated from MSPH student data for the purposes of evaluating learning outcomes. The compiled results will be discussed in the EPID division faculty meeting at the beginning of the next academic year and curriculum changes, if needed, will be recommended for discussion with the full faculty. Division meetings are held twice a semester; department faculty meetings are monthly.

Results

Percent who averaged higher than 75% on the chosen questions on the EPID 758 final exam.

AY2015-16 through AY2017-18 (3 years): 4/4 students (100%)

AY2018-19: 2/2 (100%)

4-year average: 6/6 (100%)

This criterion was met.

Use of Results

See Use of Results under G1.LO1.

Goal 4.

MPH program graduates will have adequate knowledge in biostatistical procedures as well as be competent in information technologies and data management required to be successful in public health practice settings.

Curriculum

MPH program students will be exposed to topics necessary to be proficient in these skills primarily in BIOS 701 (Introduction to Biostatistics), BIOS 710 (Data Management), and BIOS 757 (Intermediate Biometrics) and reinforced in EPID 741 (Epidemiologic Methods I).

Learning Outcome 1.

Students will create and manipulate datasets and analyze data using appropriate statistical methods and software packages.

Measures and Criteria

Data from the last three to five academic years will be used to assess each student for this learning outcome. Specifically, questions from the BIOS 710 final examination which pertain to creating and manipulating datasets as well as analyzing data will be evaluated for this particular learning outcome. At least 75% of students will average >75% on these questions.

Methods

The faculty member who teaches BIOS 710 will grade each examination and determine the score for each question as well as an average score for each student. Student level as well as program level data will be collected. MPH student data will be separated from MSPH student data and tabulated separately. The compiled results will be discussed in the EPID division faculty meeting at the beginning of the next academic year, and curriculum changes, if needed, will be discussed with the BIOS division faculty. Division meetings are held twice a semester.

Results

Percent who averaged higher than 75% on the chosen questions on the BIOS 710 final exam.

AY2015-16 through AY2018 (3 years): 5/5 students (100%)

AY2018-19: 4/4 (100%)

4-year average: 9/9 (100%)

This criterion was met.

Use of Results

See Use of Results under G1.LO1.

Learning Outcome 2.

Students will demonstrate proficiency in creating tables and reports using appropriate software packages.

Measures and Criteria

Data from the current academic year will be used to assess each student for this learning outcome.

Specifically, questions from the BIOS 710 final examination which pertain to creating tables and reports will be evaluated for this particular learning outcome. At least 75% of students will average >75% on these questions.

Methods

The faculty member who teaches BIOS 710 will grade each examination and determine the score for each question as well as an average score for each student. Student level as well as program level data will be collected. MPH student data will be separated from MSPH student data and tabulated separately. The compiled results will be discussed in the EPID division faculty meeting at the beginning of the next academic year, and curriculum changes, if needed, will be discussed with the BIOS division faculty. Division meetings are held twice a semester.

Results

Percent who averaged higher than 75% on the chosen questions on the BIOS 710 final exam.

AY2015-16 through AY2018 (3 years): 5/5 students (100%)

AY2018-19: 4/4 (100%)

4-year average: 9/9 (100%)

This criterion was met.

Use of Results

See Use of Results under G1.LO1.

Learning Outcome 3.

Students will correctly interpret results from statistical analyses.

Measures and Criteria

All master's students are required to take a comprehensive exam during their second year in the program. The exam is offered at the beginning of the spring semester. Since we have very few MPH students, we will evaluate questions from the last three to five comprehensive examinations. At least 75% of students will average > 75% on the chosen questions.

Methods

The examination committee will grade each student's exam and determine the score for each question as well as an average score. Student level as well as program level data will be collected. The examination committee chairperson is responsible for aggregating all the information and putting it into a report for the division faculty at the beginning of the next academic year. MPH student data will be collected separately from MSPH student data for learning outcome purposes only. If weaknesses are noted, the division faculty will discuss strategies specifically targeting those weaknesses which, if agreed upon by the full faculty, will be implemented and assessed during the next academic year. Division meetings are held twice a semester; departmental faculty meetings are monthly.



Results

Percent who averaged higher than 75% on the chosen questions on the comp exam.

AY2015-16 through AY2017-18 (3 years): 2/3 students (67%)

AY2018-19: 2/2 (100%)

4-year average: 4/5 (80%)

This criterion was met.

Use of Results

See Use of Results under G1.LO1.

Goal 5.

MPH program graduates will demonstrate integration of the MPH core competencies and an understanding of public health practice.

Curriculum

MPH program students will be exposed to the topics necessary to develop these skills in EPID 798 (Public Health Practice) and reinforced in EPID 758 (Application of Epidemiology in Public Health).

Learning Outcome 1.

Students will demonstrate practical skills in a public health setting.

Measures and Criteria

All students completing a practicum during the current academic year must submit a written report and do an oral presentation. The report and presentation are assessed by the faculty advisor in consultation with the preceptor and given an overall pass or fail grade. In order to meet this learning outcome, all students completing a practicum will receive a passing score on both their written report and oral presentation. Given the small enrollment, data will be aggregated across the last three to five years.

Methods

At the end of the spring semester, the Graduate Director will collect the data regarding pass/fail for the written report and oral presentation for all MPH practica. These data will be discussed with the epidemiology division faculty at the beginning of the next academic year. If weaknesses are noted, the division faculty will discuss strategies specifically targeting those weaknesses which, if agreed upon by the faculty, will be implemented and assessed during the next academic year. Division meetings are held twice a semester; department faculty meeting are held monthly.

Results

Percent who passed the written report & oral presentation from their practicum.

AY2015-16 through AY2017-18 (3 years): 3/4 students (75%)

AY2018-19: 2/2 (100%)

4-year average: (5/6) 83%

This criterion was met.

Use of Results

See Use of Results under G1.LO1.

Learning Outcome 2.

Students will demonstrate proficiency in public health practice by successfully completing at least two of the following competencies during their practicum: 1. Designing a public health program; 2. Monitoring and evaluating a public health program; 3. Writing progress report for funding agency or reporting authority; 4. Participating in data analysis related to public health program; 5. Participating in applying for funding for public health program; or 6. Participating in public health related service delivery.

Measures and Criteria

The practicum agreement for all students completing their practica during the last two to three academic years will be evaluated for the inclusion of at least two of the above competencies as learning outcomes. In order to meet this learning outcome, all student practicum agreements will contain at least two of the above six competencies as learning outcomes.

Methods

At the end of the spring semester, the Graduate Director will examine all practicum agreements from the two previous academic years to determine whether all the agreements include at least two of the six competencies listed above as learning outcomes. These data will be aggregated and discussed with the epidemiology division faculty meeting at the beginning of the next academic year. If competencies are not being included, faculty and MPH students will be reminded of this requirement. Division meetings are held twice a semester; department faculty meeting are held monthly.

Results

Percent who included at least two of the six competencies as learning outcomes for their practicum.

AY2015-16 through AY2017-18 (3 years): 3/3 students (100%)

AY2018-19: 2/2 (100%)

4-year average: 5/5 (100%)

This criterion was met.

Use of Results

See Use of Results under G1.LO1.