



Program Assessment Report (PAR)

Public Health, BS (PUBH) Baccalaureate Degree

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ACADEMIC YEAR COVERED BY THIS REPORT: 2021-2022

I. PROGRAM LEARNING OUTCOMES

The objectives of the Public Health degree center around programmatic learning goals and core skills that not only provide an in-depth science education but aid students in developing skills necessary for future careers. These include

- Students will be able to differentiate and define of structures and objectives of public health, including the history and philosophy of public health, key achievements, and explain the organization of the U.S. public health system and across the globe.
- Students will demonstrate comprehension of a foundational science education including epidemiology, health and disease, social and behavioral sciences, biological and life sciences, anatomy and physiology, chemistry, statistics, and scientific writing.
- Students will demonstrate comprehension of community health, humanities, ethics, leadership, and effective health communication.
- Students will apply leadership, communication skills, and community and public health knowledge through experiential learning activities including internships, service-learning projects, capstone senior seminars, research papers, honors theses, or other scholarly, cumulative, and integrative applied experiences to support academic and career goals.
- Students will design an academic plan for graduation and identify, write, and describe a plan for professional success in their career path.
- Students will demonstrate effective oral and written communication skills and relate public health information to diverse audiences.
- Students will apply critical thinking through independent learning and collaborations with colleagues, peers, and community members and identify, evaluate, and synthesize public health information.

II. PROCEDURES USED FOR ASSESSMENT

A. Direct Assessment

To estimate the extent to which students met each of the eight Program Learning Outcomes (Table 1), the Biological Sciences Assessment Committee developed a survey of students' confidence in applying each of the competencies to their

working lives after graduation. These questions took a Likert scale: 0 = Not at all, 1 = Somewhat, and 2 = Very much. In order to better contextualize students' Likert responses, we also asked students open-ended questions about their perceived strengths and weaknesses of the Health Sciences Bachelorette program and courses they found most and least useful in their preparation. The survey was delivered online through Qualtrics. The link was provided to students by the students' advisors as well as via an e-mail message from the director of the Biological Sciences Assessment Committee. One graduate completed the survey.

B. Scoring of Student Work

Table 1. Summary of the seven Program Learning Outcomes desired for Health Sciences majors and survey questions to measure students' perceived mastery of each objective. Outcome/Survey Questions 1: Students will be able to differentiate and define of structures and objectives of public health, including the history and philosophy of public health, key achievements, and explain the organization of the U.S. public health system and across the globe. Not Assessed 2: Students will demonstrate comprehension of a foundational science education including epidemiology, health and disease, social and behavioral sciences, biological and life sciences, anatomy and physiology, chemistry, statistics, and scientific writing. 1. I feel like I have mastered the essential concepts of biology well enough to excel in the health sciences. 2. My knowledge of the physical sciences, including physics and chemistry, is outstanding 3: Students will demonstrate comprehension of community health, humanities, ethics, leadership, and effective health communication. I would succeed in a job that required me to understand the ethical implications of biological understanding and discoveries. 4: Students will apply leadership, communication skills, and community and public health knowledge through experiential learning activities including internships, service-learning projects, capstone senior seminars, research papers, honors theses, or other scholarly, cumulative, and integrative applied experiences to support academic and career goals. I would succeed at a health sciences job that required regular analysis and summarization of data. 5: Students will design an academic plan for graduation and identify, write, and describe a plan for professional success in their career path. I would succeed at a health sciences job that required me to trouble-shoot and solve problems on a daily basis. 6: Students will demonstrate effective oral and written communication skills and relate public health information to diverse audiences. I am capable of talking and writing about biology to academic audiences in the health sciences. 7: Students will apply critical thinking through independent learning and collaborations with colleagues, peers, and community members and identify, evaluate, and synthesize public health information. I would succeed at a job that required applying observational strategies, formulating testable hypotheses, and designing experiments with appropriate controls and variables

C. Indirect Assessment

Based on the single respondent, all measured objectives were rated at the highest level of mastery (“Very much”) with the exception of physical science knowledge (subset of Outcome 2) which was rated as “Somewhat”. This is reflective of other program assessments which demonstrate consistently that the physical sciences, and chemistry in particular, are challenging for students and seem to make the biological sciences seem less relevant and accessible to some students. This participant provided no responses to the open-ended questions and so there is no qualitative information to report.

III. ASSESSMENT RESULTS/INFORMATION:

Summary of the seven Program Learning Outcomes desired for Public Health majors.

Summary of the five Program Learning Outcomes desired for Public Health majors which are addressed in Biological Sciences coursework. Outcome Rating 1: Students will be able to differentiate and define of structures and objectives of public health, including the history and philosophy of public health, key achievements, and explain the organization of the U.S. public health system and across the globe. N/A 2: Students will demonstrate comprehension of a foundational science education including epidemiology, health and disease, social and behavioral sciences, biological and life sciences, anatomy and physiology, chemistry, statistics, and scientific writing. Very much, Somewhat 3: Students will demonstrate comprehension of community health, humanities, ethics, leadership, and effective health communication. Very much 4: Students will apply leadership, communication skills, and community and public health knowledge through experiential learning activities including internships, service-learning projects, capstone senior seminars, research papers, honors theses, or other scholarly, cumulative, and integrative applied experiences to support academic and career goals. Very much 5: Students will design an academic plan for graduation and identify, write, and describe a plan for professional success in their career path. Very much 6: Students will demonstrate effective oral and written communication skills and relate public health information to diverse audiences. Very much 7: Students will apply critical thinking through independent learning and collaborations with colleagues, peers, and community members and identify, evaluate, and synthesize public health information. Very much

[Analysis]

IV. ACTIONS TO IMPROVE STUDENT LEARNING

Program learning outcome data will be shared with program faculty and staff at the department meetings. It will be shared with other stakeholders including faculty and staff in other departments and department sponsors upon request by these parties. The data from this graduate indicate that chemistry and the

physical sciences is the area with the lowest level of confidence which triangulates the data from reports in other programs. It is encouraging that the highest level of mastery was indicated on the other objectives. Since Public Health is moving to Boonshoft School of Medicine (BSOM), this program will not be assessed in coming years in the Department of Biological Sciences. However, a takeaway from the current year is that, although the single student's responses are encouraging, attention to strategies for increasing students' response rates will be needed in order to generate more robust conclusions. It is difficult to justify strategic decisions based on a single student's response. This is the first year we have used a self-report survey for program evaluation and so there has been a learning curve. We would invite BSOM to utilize our current survey and data to inform the upcoming year's assessment plan if they would find it productive. V. SUPPORTING DOCUMENTS Please attach the following: A. Minutes of meetings (program faculty, stakeholders, etc.) where discussion of results and action planning occurred and any other relevant documents. B. If you administer a survey to graduating students, please attach a copy of the survey tool that you use. The university currently administers a university-wide survey at the point of application for graduation up to 6 months after graduation and would like to better understand what surveys graduating students may be receiving from their programs or colleges.

V. SUPPORTING DOCUMENTS

Additional documentation, when provided, is stored in the internal Academic Program Assessment of Student Learning SharePoint site.