

**Program Review and Assessment Report for Undergraduate Programs  
Department of Public Health  
Indiana University School of Medicine  
2010-2011 Academic Year**

## **INTRODUCTION**

The Department of Public Health has two undergraduate degree programs, two minors, and two certificates. These programs were transferred from the School of Public and Environmental Affairs to the School of Medicine in July 2010, and the 2010-2011 academic year marks the first academic year for these undergraduate programs in the School of Medicine. Overall, this first year has been a building year in which we established the undergraduate programs and academic policies and procedures in the School of Medicine.

## **OUTCOMES (What will students learn? How will we know it and measure it?)**

**General Outcomes:** Undergraduate students who earn one of our degrees will have the knowledge, skills and abilities:

- 1) needed to enter and advance in the professions relevant to their majors (measure by tracking student employment through recent graduate/alumni surveys)
- 2) embodied in the IUPUI Principles of Undergraduate Learning (PULs) (measure by faculty assessment of student mastery of the major emphasis PUL)
- 3) needed to enter advanced degree programs appropriate to their chosen fields of study (measure by tracking student entry into graduate programs)

**Degree-Specific Outcomes:** Degree-specific learning outcomes are provided in each degree program summary listed below. Students will demonstrate mastery of the competencies and learning outcomes defined for their major. Each degree program includes a capstone experience and an internship or experiential requirement.

## **ASSESSMENT OF LEARNING (How do we help students learn and measure their learning?)**

Each of our majors has degree-specific learning outcomes, and these are linked to the IUPUI PULs for the BSPH – Environmental Health Science major and the BS Health Services Management degree. The BSPH – Community Health is a new degree program and the PUL cross-walk will be provided in the next annual report. The BSPH – Environmental Health Science major is an accredited degree and the learning outcomes and competencies for this degree are also linked to those specified by the degree accrediting body.

Each course within a given degree program also has course-specific learning outcomes that are established by the faculty and approved by the undergraduate curriculum committee. The faculty also determines which PUL is the major emphasis PUL and how student mastery will be determined. Faculty members use a variety of approaches and tools to evaluate student learning within their courses; these include exams, case studies, papers, presentations, problem-solving, projects, etc.

We measure degree-specific outcomes primarily through performance in capstone courses in each degree program, faculty PUL ratings, supervisor evaluation of internship performance or other experiential, program reviews, and feedback from employers. We may also consider feedback from recent graduate/alumni surveys, retention and graduation rates, and DF rates as these data become available to us. Because of our recent move to the IU School of Medicine, some of these tools (for

example campus surveys of student and alumni satisfaction) are not immediately available to us, but they will be integrated into our reporting in future reports.

## **1. B.S. in Health Services Management (BSHSM)**

**Learning Outcomes:** A student who graduates with a major health services administration can: recognize, evaluate, and solve problems in health services organizations using knowledge, tools, and skills appropriate to entry- and mid-level health services management positions. At the completion of the degree program, a student will demonstrate the following learning outcomes:

- 1) Communicate effectively with diverse stakeholders, including public health and health care professionals, individually and in group settings using verbal, written, and electronic modes of communication. (Linked to PUL 1)
- 2) Use statistical and other quantitative analysis tools and techniques to understand issues and problems in health care organizations and systems. (Linked to PULs 1d, 2, 3, 4)
- 3) Use basic financial tools, principles and practices to review and analyze financial performance of organizations and implement controls as required. (Linked to PULs 1d, 2, 3,4)
- 4) Apply human resource best practices for management of human capital in an organization. (Linked to PULs 4, 5)
- 5) Use marketing concepts and skills to analyze markets, develop marketing plans, and measure the impact of marketing activities to raise awareness and increase growth of the organization's market share. (Linked to PULs 2, 3, 4)
- 6) Participate in developing and implementing plans and policies to improve the delivery of health services. (Linked to PULs 2, 3, 4, 5, 6)
- 7) Work individually and within a team-setting by applying organizational knowledge and leadership skills. (Linked PULs 1, 2, 3, 4, 5, 6)
- 8) Recognize and demonstrate sensitivity to diverse points of view. (Linked to PUL 5)
- 9) Seek principled solutions to health services delivery issues. (Linked to PUL 6)

**Assessment Results and Improvements:** Internship supervisors continue to have high satisfaction with student interns. In 2011, the internship evaluation form was revised to expand the number of performance indicators from 7 to 24. Because the evaluation form was changed in 2011 and the rating scale was changed, it is not possible to compare results between 2011 and prior years. However, we will be able to do this in future years.

Supervisors of BSHSM student interns strongly agreed or agreed that students demonstrated the indicators academic knowledge (100% of students); judgment, reliability and adaptability (75%); quality of work (75%); attitude (88%); human relations (100%); and attendance (50%). Although students are only required to complete 80 contact hours of internship experience, the results of the supervisor evaluations are of concern. A closer look at the data showed that areas of needed improvement included quality of written work, ability to think independently, ability to set priorities, and reporting to work regularly, following attendance policies, and arranging for time off in advance. The last three items, while not academic in a strict sense, are important for professional development, and faculty will consider ways to improve these rankings.

In the case study-based capstone for the BSHSM, students are evaluated on 10 key indicators using a 4 point mastery scale (does not meet expectations, needs some improvement, meets criterion at a basic level of competence; meets or exceeds criterion). To be successful in this course, students must demonstrate content knowledge in general management (organizing, controlling, planning and directing); roles and relationship of healthcare administrators, providers, and board members; strategic planning; leadership theories and styles; finance; and strategic thinking. Students are also expected to demonstrate the ability to write clearly in an organized, logical and professional manner that uses proper grammar and writing mechanics.

The instructor's evaluation of students identified the following concerns about mastery of expected knowledge, skills and abilities: students demonstrated a wide range of knowledge in relation to the

expected conceptual knowledge; student ability to apply concepts was not at the expected level; and writing skills for a subgroup need improvement. In response to these concerns, the faculty will review course sequencing for needed changes, assess the student knowledge base earlier in the semester, and reduce the number of cases to repeatedly focus on core concepts and reinforce learning.

The PUL ratings confirm previously identified weaknesses in quantitative skills (68% of students were ranked as not effective (32%) or somewhat effective (36%) in the basic finance course. The faculty has responded by developing a separate lower-level skills course that will be required for all students. This course will be offered during the coming year, and we hope to see improvements in the higher level course in the next several years.

An overall improvement to the program has been to raise the semester and cumulative GPAs (previously 2.0) and the GPA in the major (previously 2.3) to a required cumulative and semester GPA of 2.5, beginning with the Spring 2012 term.

## **2. B.S. in Public Health - Environmental Health Science major**

**Learning Outcomes:** A student who graduates from the Environmental Health Science major can: anticipate, recognize, evaluate, and solve problems in environmental science and health using knowledge, tools, and skills appropriate to entry-level environmental science and health positions. At the completion of the degree program, a student will demonstrate the following learning outcomes:

- 1) Communicate effectively with diverse stakeholders individually and in group settings using verbal, written, and electronic modes of communication. (Linked to PUL 1)
- 2) Use statistical and other quantitative analysis tools and techniques to understand issues and problems in environmental science and health. (Linked to PULs 1d, 2, 3, 4)
- 3) Anticipate, recognize, evaluate, and solve environmental science and health problems by applying scientific and technical knowledge and principles. (Linked to PULs 2, 3, 4)
- 4) Monitor a community's environmental health status using epidemiological tools, laboratory techniques, and field methods appropriate to individual issues. (Linked to PULs 1d, 2, 3, 4)
- 5) Participate in developing and implementing plans and policies to improve environmental health using scientific and technical knowledge. (Linked to PULs 2, 3, 4, 5 and 6)
- 6) Work individually and within a team-setting by applying organizational knowledge and leadership skills. (Linked to PULs 1, 2, 3, 4, 5, 6)
- 7) Recognize and demonstrate sensitivity to diverse points of view. (Linked to PUL 5)
- 8) Seek principled solutions to environmental problems. (Linked to PUL 6)

**Assessment Results and Improvements:** Internship supervisors continue to have high satisfaction with student interns. In 2011, the internship evaluation form was revised to expand the number of performance indicators from 7 to 24. Because the evaluation form was changed in 2011 and the rating scale was changed, it is not possible to compare results between 2011 and prior years. However, we will be able to do this in future years.

Supervisors of environmental health science student interns strongly agreed or agreed that all students demonstrated the indicators academic knowledge; judgment, reliability and adaptability; quality of work; attitude; human relations; and attendance. Supervisors did not identify areas of needed improvement. Students are required to complete 240 contact hours of internship, which provides sponsoring organizations with ample opportunity to observe student performance.

Faculty previously identified concerns about student abilities to critical thinking skills and intellectual depth in 400-level courses. The industrial hygiene course, which is offered only once every two years, was redesigned to provide students with additional opportunities to practice skills related to the content. A final culminating project, a walk-through simulation of hazards in a workplace, was supported by five smaller case study exercises. The final project, which was used in a previous offering of the course, provided a point of comparison. The final project required students to apply anticipate, recognize, evaluate and control a series of workplace hazards and to write a final report. The smaller case studies required the same type of analysis but to a single hazard that did not duplicate the content of the final simulation.

The learning outcomes for the culminating project are:

- Anticipate and recognize hazardous situations based on warning signs
- Communicate hazardous situations by including them on a facility block diagram
- Analyze potential health hazards using Material Safety Data Sheets
- Identify applicable regulatory requirements by interpreting regulations
- Evaluate the degree of hazard by interpreting technical, regulatory, and best practice information in the context of the case
- Make reasoned judgments to recommend appropriate administrative and engineering controls
- Communicate the results of an investigation by writing a quality technical report
- Recognize ethical issues during the inspection and handle these appropriately
- Reflect on your decision-making process after receiving feedback on your work

Analysis of the final simulation assignment showed a 17% improvement in overall scores, which was based on 7 key indicators of mastery. The D/F rate at the end of the semester (15% of the students had Ds, but there were no Fs) was lower than in previous semesters (25% to 40%). The improvements are attributed to the additional opportunities to practice essential skills. The next time the course is offered, the instructor will include a pre-test/post-test to supplement the simulation.

An overall improvement to the program has been to raise the semester and cumulative GPAs (previously 2.0) and the GPA in the major (previously 2.3) to a required cumulative and semester GPA of 2.5, beginning with the Spring 2012 term.

### **3. B.S. Public Health – Community Health**

**Learning Outcomes:** The Community Health major prepares students to provide health education, promote healthy lifestyles and healthy choices, prevent diseases, and enhance quality of life in communities. Students will obtain a foundation in understanding the social determinants of health, distribution of health and illness in diverse populations, and the disease risks among human populations. The focus of the major is on interdisciplinary efforts to address the physical, social, behavioral, mental, and environmental health concerns of communities and populations at risk for disease and injury. Graduates will plan and evaluate health services in communities. They will coordinate the community efforts of government agencies and private organizations.

The competencies for the BSPH in Community Health are

- 1) Assess individual and community health needs for health education.
- 2) Plan health education strategies, interventions, and programs.
- 3) Implement health education strategies, interventions, and programs.
- 4) Conduct evaluation and research related to health education.
- 5) Administer health education strategies, interventions, and programs.
- 6) Serve as a health education resource person.
- 7) Communicate and advocate for health and health education.

**Assessment Results and Improvements:** Community Health is a new major in the public health degree program, and there are no data at present.

### **4. Student Services**

The Department of Public Health provides students with a strong mentoring program through an academic advisor that is available to answer routine advising questions and a faculty mentor who is available to address academic and nonacademic issues.

**Assessment Results and Improvements:** In the Fall 2010, we conducted our first survey of active undergraduate students in the Department of Public Health. The results of the survey were mixed. A majority of students expressed being satisfied or very satisfied with the rigor of their courses (79%) and with the program (74%). Students gave lower marks to our student services (33% were satisfied or very

satisfied), academic advising and registration (45% were satisfied or very satisfied), scheduling and frequency of courses (12% were satisfied or very satisfied), and career placement and counseling (39% were satisfied or very satisfied). During the transition, there was confusion among students about the continuity of their academic programs, advising, and other issues.

Measures that we have taken to improve student academic advising and satisfaction include revisions to some course rotations, completed academic advisor training and established standard procedures for advising, provided students with an orientation to the department and the academic programs, developed forms and materials (admission, graduation, internship, degree program checklists and suggested four-year plans, student handbook, recruiting materials, etc.), provided students with an orientation to the department and the academic programs.

We have worked diligently to overcome these problems and feel confident that our next survey will result in significantly improved ratings from students.