

Intentionality and Integration in Undergraduate Global Public Health Education

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Public health is capturing the energy and imagination of undergraduate students across the country, and University of Virginia (UVa) faculty, like many other faculties in both small colleges and large universities, are responding with innovative new courses and academic programs. As a relatively young academic field that dates back only to the early twentieth century in the United States, the study of public health illustrates the strengths and value of an undergraduate liberal education that features integrative learning, which draws on diverse academic perspectives from across the curriculum, and intentionality in learning, which embeds student-directed problem solving and experiential community fieldwork within academic programs.

The goal of the new initiatives in undergraduate public health education is not only to prepare future health professionals, but also and perhaps more importantly, to educate future citizens. *Who Will Keep the Public Healthy?*, a 2003 Institute of Medicine report, called for public health education for all undergraduate students and featured both themes, as did a 2006 Consensus Conference on Undergraduate Public Health Education, sponsored by the Council of Colleges of Arts and Sciences and national public health associations. Scholars recognize that public health requires a broad-based knowledge about human society and culture, as well as about the sciences and mathematics. And in addition, public health education has the potential to engage students—future health professionals and future citizens—on many levels, from reflection on enduring fundamental questions about civic responsibility and human rights to the use of intellectual and practical skills, such as critical and creative thinking, teamwork, and problem solving.

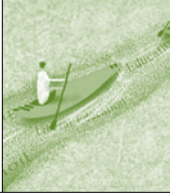
Students interested in pursuing an undergraduate public health education also demonstrate an increasingly global orientation. A recent editorial noted that a “feeling of enhanced connectedness on a

global scale—the sense of global community—is leading students ... in record numbers to seek educational experiences that enrich their understanding of other cultures ...” With increasing funding from government and foundation sources, media exposure, and inspiring leaders, global public health has emerged as a new field of great interest to students, albeit one without clearly defined educational goals and outcomes. While career paths are still being created, global public health issues do provide an ideal opportunity to engage students in real-world problems and motivate them to evaluate how or whether the solutions developed might actually work on the ground. This evaluation, at a distance or during an onsite experience, demands that students learn about and integrate the perspective of the community affected by the problem into their analysis. This analysis promotes an appreciation and respect for the historical, cultural, and political contexts that surround the issue.

THE GLOBAL PUBLIC HEALTH MINOR AT THE UNIVERSITY OF VIRGINIA

At the University of Virginia, faculty are responding to intense student interest in public health by creating a broad array of courses that explore human health through a variety of diverse environments and multidisciplinary methods and by developing a global public health minor that includes a capstone academic experience and community fieldwork. New courses range from literature and history courses about human response to disease to environmental and chemistry courses about food, nutrition, and obesity.

The need to develop a structure for global public health education at UVa has fostered the growth of a learning community made up of faculty from the schools of arts and sciences, medicine, engineering, nursing, architecture, and others. This community has worked together to provide a global focus for new courses,



many of which are team taught by faculty members from different departments and schools. With support from the Fogarty International Center's Framework Program in Global Health, faculty have created new courses such as Adaptive Urbanism: Water, Biodiversity, and the Health of Cities; Healthy Communities: Healthy Food Systems and Global-Local Connections; and Ethics and Human Rights in World Politics. Through the courses, students often develop research projects or ideas for summer field projects in international settings, ranging from building water treatment systems to providing culturally appropriate HIV education.

For students who want a more detailed introduction to global public health, the global public health minor is now available. To enter the new minor, an application is required, and faculty review the applicants based on personal statements and the ensemble of their academic and extracurricular performance. Completion of the minor requires six courses (eighteen credits). The course of study is developed in conjunction with the faculty adviser and should represent a coherent plan centered around a region, a global health issue, or another theme. The required courses include a course on health policy, an introductory global health course, and a capstone course with a major writing requirement. In addition, the students are expected to choose three electives. Many of the elective courses were developed with support from the Framework grant in disciplines ranging from architecture to chemistry to nursing. A language requirement, preferably one that fits with the coherent plan of study, is also a feature of this minor. Finally, a public health field placement, domestically or globally, is mandated. The student must complete 80-120 hours in the field. A journal is kept during the fieldwork and is reviewed with the faculty mentor upon its completion.

The global public health minor has

accepted applications for the past three years. The students have clear and high expectations of what the minor will offer them, and they aspire to use the skills learned to make a difference. For example, one student noted in her application, "Through this program, I hope to learn more about the political, social, cultural, and economic relationships that appear to keep (health) disparities in place." Students admitted to the program often have extensive prior international experience and a variety of perspectives. Of the twenty-one students admitted to the minor in previous years, the majority (fifteen out of twenty-one) had prior international experience. More than half hailed from nonscience majors (thirteen out of twenty-one); some of the represented disciplines include anthropology, history, foreign affairs, and studies of women and gender. We have collected information on half of the students in the first graduating class. Two are pursuing masters of public health, two are pursuing medical degrees, one is in the Peace Corps, and one is working for a community service organization.

DEFINING GOALS AND OBJECTIVES

Despite burgeoning interest by high-quality students, we have decided not to expand the program until we have developed an evaluation plan and assessed program outcomes. Defining the goals and objectives of the global public health minor remains a fluid process, given the diversity of the students and the interdisciplinary curriculum. For example, what should be the expectation for the students in regard to developing an understanding of the fundamentals of epidemiology? In addition, how should the field placement sites (especially the international ones) be identified, evaluated, and compensated? How should the students' performance at field sites be evaluated? How should the success of our program be evaluated? Ongoing dialogue among schools

developing global public health programs is essential to developing pathways that prepare the future leaders in global health.

In concert with the development of globally focused courses and the global public health minor, UVa faculty also are developing new integrative approaches to particular public health courses. The Healthy Communities Seminar is an example of an integrative course that applies nontraditional learning strategies with an emphasis on community engagement. While a more traditional approach to undergraduate courses often follows a top-down, didactic method, with faculty presenting large amounts of content to their students, scholars studying learning strategies identify inefficiencies of this traditional learning style and offer alternatives that begin with a consideration of the context of the class and dominant issues in the field, followed by learning goals, active or experiential learning approaches to ensure students learning, and an assessment of these, and then course content. This approach is described by Fink as "teaching for significant learning."

As an illustration, the Healthy Communities Seminar, offered through the school of architecture, is designed according to three phases. In phase 1, the instructor evaluates the context of the course including the nature of the subject, student characteristics, teacher characteristics, and special pedagogical challenges. Students come from a variety of backgrounds, primarily planning and public health, and the instructor is trained as an urban and environmental planner. Also, the topic of healthy communities is rapidly evolving, requiring a great deal of flexibility in content and information sources. The learning goals, however, remain the same with focus in seven areas: foundational knowledge, application, integration, human dimension, caring, and learning how to learn. The learning goals provide the basis for assessing student learning, since all in- and out-of-



class assignments correlate to these goals. For example, the “learning how to learn” goal seeks to have students develop skills to identify relevant research studies and engage communities in the critique of the research methods and findings, and then apply the lessons from planning and public health research to the communities’ current and future problems.

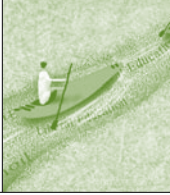
Phase 2 is when the major topics of the course are laid out, creating a thematic

structure for the course, with four to seven major ideas placed in an appropriate sequence and building on one another toward a culminating project (see table 1). These major ideas then follow an in- and out-of-class format that allows students to prepare at home, but engage in team-based learning activities during class time. Therefore, the policy memo or photovoice report assignments are modeled in class to better orient students to the expectations

and methods for completion and to offer learning activities that entail doing and observing experiences to activate learning and reflection opportunities. Photovoice, an approach developed by Caroline Wang (1994) to enable economically and politically disenfranchised populations to express themselves with greater voice, is a method where participants take pictures that address a particular topic and share them with others to develop recommendations

TABLE 1. BUILT ENVIRONMENT AND PUBLIC HEALTH, A MODEL FIFTEEN-WEEK COURSE OUTLINE

Units	Learning Goals	Session Topics	Suggested Assignments
Unit 1: Planning and Public Health Foundations <i>(two weeks)</i>	Foundational Knowledge: Understand public health and planning history, evolution and significant movements to present, and historical and current theories on the relationship between the built environment and public health.	Planning History Public Health History Interdisciplinary Applications	(1) Local Neighborhood Case Study (2) Campus and Neighborhood Walkability
Unit 2: Natural and Built Environment <i>(six weeks)</i>	Application: Identify contemporary features of the built environment such as patterns of development, parks, public works projects, houses, and transportation systems, and use methods developed by sociologists, anthropologists, public health leaders, urban planners and architects to address chronic illnesses and impacts of the built environment.	Land Use and Transportation Planning Design Approaches Health Impact Assessments Environmental Impact Assessments Indoor and Outdoor Air Quality Water Quality Food Security	(1) Service Learning Group Project (2) Activity Diary (3) Transit Use
Unit 3: Vulnerable Populations and Health Disparities <i>(three weeks)</i>	Human Dimensions: Learn about oneself and the context in which others operate to better integrate that understanding when evaluating differing built-environments, socioeconomic positions, social and cultural backgrounds, and health status. Caring: Adopt new feelings, interests or values based on issues addressed throughout the semester.	Vulnerable Populations (the poor, children, women, elderly, disabled, and minorities) and Health Disparities Mental Health Social Capital Environmental Justice	(1) Newspaper Op-Ed or Radio Perspective (2) Debates
Unit 4: Health Policy and Global Impacts <i>(three weeks)</i>	Learning-How-to-Learn: Develop skills to identify studies and engage communities, critique methods and findings, and apply lessons from planning and public health research to current and future problems.	Health Policy Sustainable Planning and Global Warming Healthy Housing	(1) Policy Memos (2) Photovoice Report
Final <i>(one week)</i>	Integration: Integrate current evidence regarding the impacts of the built environment on health with information and perspectives from other courses and/or personal experiences.	Final Portfolio	Healthy Communities Portfolio



and implementation plans. It is an effective way to share knowledge, thoughts, and beliefs about a given topic. This approach helps communities identify important issues and develops recommendations on how to make changes.

During class students review health policies and critique them with a focus on a particular local community about which students have become familiar through other assignments earlier in the semester. Students build on this class exercise by reflecting on discussed policies as they relate to the particular community, and they read relevant newspaper articles. When they return to class, students then discuss their policy memos or participate in a full photovoice exercise and end the time by viewing a short video and outlining the required memo or report submission. Following this session, students complete readings, draft their memos or reports and submit questions for guests. In class, students learn about sustainable planning and global warming policies. Students reflect on this lecture by integrating information in their memos or reports and prepare for a field visit the next day to a healthy housing project that incorporates many green design, leadership in energy and environmental design (LEED) certified or low-impact development components. By focusing on a single house or development, this site visit helps students cement many of the ideas generated through the sustainable planning and global warming talk. Finally, students read a case study that emphasizes the ethical dimensions of public health within a clearly defined built environment framework. A possible phase 2 activity would call for students to simulate a planning commission that is considering a rezoning request from a bathhouse operator and is concerned about community comments as well as possible health impacts to the region. This class session allows students to decide the best decision for stakeholders to make by role-playing and

applying lessons they learned in preceding sessions and in preparation of their policy memo and photovoice report, which is due the following week.

In phase 3, the teacher and students address the details of the course and focus on grading and weighting of assignments and debugging the course through a full review of the schedule of activities and the drafting of a syllabus. This phase also incorporates integration of evaluations at the middle and the end of the term, as well as periodic feedback that better assesses how well the course is going so that faculty can adjust to student needs.

ASSURING CONDITIONS IN WHICH PEOPLE CAN BE HEALTHY

Overall, this integrative public health and planning course follows a nontraditional framework in its design as well as community emphasis. The course values a community-based approach to activities and assignments because it allows students to understand the people and place in which public health issues arise in order to better diagnose and/or respond to problems. Without this community approach, students might apply generic solutions to old and new public health concerns without understanding how to best engage a people and place in creating the customized solution that is required.

The Institute of Medicine's definition of public health describes why it is such a dynamic field for students who want to take on a complex topic, such as human health, as an integrating focus for their education: "Public health is what we, as a society, do collectively to assure the conditions in which people can be healthy." The words, "what we, as a society, do collectively" suggest the need for an enriched and integrated study of political philosophy, social psychology, and anthropology, for example, in order to understand how individuals and groups in society can take action together

to improve human health. The words, "assure the conditions in which people can be healthy," focus our attention on our biological, social, and environmental interdependence and the need for a broad knowledge of human cultures and the physical and natural world. UVa's new global public health minor, as well as our faculty's innovative approaches to course development provide examples of how academic centers can foster the development of the knowledge and skills essential for future public health leaders and informed, engaged citizens of the nation and the world. ■

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