

Criterion V.C – Learning Objectives

For each program and area of specialization within each program identified in Criterion V.A, there shall be clear learning objectives.

Expected Documentation

1. Identification of a set of learning objectives for each program of study identified in the matrix for Criterion V.A. If individualized learning objectives are used, identification of a sample set that is typical of each program of study and which can be verified through on-site inspection.
2. A description of the manner in which learning objectives are developed, used and made available to students.
3. A description of the manner in which the school periodically assesses the changing needs of public health practice and uses this information to establish the learning objectives for its educational programs.
4. Assessment of the extent to which this criterion is met.

Criterion V.C – Learning Objectives

1. Learning Objectives

Learning Objectives for the MPH

During the academic years 2004/2005 and 2005/2006, the UIC SPH Committee on Educational Programs (CEP), a committee with representation from the faculty, student body and administration, began a critical review of the school's learning objectives for all degree programs. These objectives were derived primarily from the efforts of external sources, including the Institute of Medicine, the Association for Schools of Public Health, and the Council on Linkages Between Academia and Public Health Practice. Faculty input subsequent to the CEP report on these objectives resulted in some modifications in content and breadth of coverage.

Schoolwide Learning Objectives for the MPH (Master of Public Health Degree)

The MPH program is designed so that an MPH student will achieve the 47 learning objectives listed below by the time he or she graduates. These objectives cover 10 different domains: basic health science skills, analytic skills, cultural skills, information and technology, communication skills, policy development, leadership and systems thinking, financial planning and management, community dimensions of practice and ethics. These objectives are limited in their focus to learning what is expected to occur as a result of completing core courses, field and capstone experiences, and other activities that are required of all MPH students. Learning objectives for the MPH degree within each academic division provide further objectives appropriate to students in each division.

Basic Health Science Skills

- Define, assess and understand the health status of populations, determinants of health and illness, factors contributing to health promotion and disease prevention, and factors influencing the use of health services.
- Identify the research methods used in all basic public health sciences.
- Apply the basic public health sciences, including epidemiology, health and policy administration, behavioral and social sciences, biostatistics, and environmental and occupational public health, to the prevention of illness and injury.
- Describe the potential linkages and interactions among multiple determinants of health at intrapersonal, interpersonal, organizational, community and societal levels (i.e., ecological model).
- Communicate an understanding of theoretical explanations of racial and ethnic disparities in forces influencing health.
- Describe the role of molecular determinants in health and illness within an ecological model of public health.

Analytic Skills

- Define a problem in public health.
- Use appropriate data and statistical methods for problem identification and resolutions and for program planning, implementation and evaluation.
- Select and define variables relevant to defined public health problems.
- Use data to illuminate ethical, political, scientific, economic and overall public health issues.
- Synthesize core public health knowledge using analytic tools.
- Integrate theory into public health practice.
- Apply empirical knowledge to public health practice.
- Apply rigorous critical thinking to the analysis of public health problems.

Cultural Skills

- Demonstrate an in-depth understanding of the dynamic forces of cultural diversity and their implications for public health both within the United States and internationally.
- Interact sensitively, effectively and professionally with people from diverse ethnic, socioeconomic, educational and professional backgrounds, and with persons of all ages and lifestyle preferences.
- Identify the role of cultural factors in determining disease, disease prevention, health promoting behavior, and health care services organization and delivery.
- Develop and adapt approaches to public health that take into account cultural differences.

Information and Technology

- Define a public health problem for purposes of literature research process.
- Demonstrate library skills, including the ability to conduct computerized literature searches, for researching problems in public health.
- Use one of several statistical packages (e.g., EPI Info, SAS) to analyze data to address public health problems.
- Use basic data management software in public health.
- Use one of several graphics software packages (e.g., POWERPOINT) to develop presentations for public health problems.
- Describe the role of information systems in improving the effectiveness of public

health activities.

Communication Skills

- Communicate effectively both in writing and orally to diverse professional and lay audiences regarding public health issues.
- Present accurately and effectively demographic, statistical, programmatic and scientific public health information for professionals and lay audiences.
- Lead and participate in groups to address specific public health issues.
- Use the media to communicate important public health information.

Policy Development

- Understand the historical development and structure of state, local and federal public health-related agencies.
- Describe the U.S. institutions and processes of policy-making in public health and recognize that these differ in different societies.
- Communicate an understanding of the impact of public policies and policy-making on one's work in public health.
- Recognize relevant theories of social policy and how they explain policy-making in public health.
- Describe the use of evidence-based decision-making in policy-making in public health.
- Describe processes and strategies used to inform and influence policy-makers as they develop policies, laws, and regulations that impact the public's health.

Leadership and Systems Thinking

- Know what is required to assess a public health organization's structure and performance.
- Participate in and contribute to strategic planning in public health.
- Describe public health and health care delivery systems.
- Describe the elements of organizational leadership, including strategies for coordinating teams, managing conflicts, motivating staff and ensuring continuous quality improvement.

Financial Planning and Management

- Develop and justify a budget.

- Manage public health programs within budget constraints.
- Monitor performance of public health programs.
- Understand the role of cost-effectiveness, cost-benefit and cost utility analyses in the management of public health resources.

Community Dimensions of Practice

- Establish and maintain linkages with key stakeholders in community-based initiatives to address public health issues.
- Describe the process for developing, implementing and evaluating a community public health assessment.
- Describe the scientific, ethical and practice dimensions of community-based participatory research.

Ethics

- Use and apply ethical analysis to inform decision-making in public health.
- Apply ethical principles to the collection, maintenance, use and dissemination of data and information.

Additional MPH Learning Objectives

In addition to the schoolwide learning objectives, for students pursuing the **MPH degree in quantitative methods** through the biostatistics department, the following objectives apply:

- Be able to work with data files and statistical packages.
- Apply standard biostatistical methods to public health problems.
- Demonstrate the ability to recognize the appropriate research design for an analysis problem.

MPH students in community health sciences complete courses that provide public health practice skills along with specialized content in gerontology, health education and health promotion, and maternal and child health, or in an individualized content area track. The curriculum provides the follow competencies in addition to the schoolwide competencies. Upon completion of the MPH degree program in a specialized track, students will be able to:

Analytic Skills

- Identify components of good research design.
- Design a simple quantitative research study to include:
 - a. Develop hypotheses and frame research questions;

- b. Select a research question and focus;
- c. Defend research question's conceptualization;
- d. Place the question in the context of appropriate theoretical constructs; and
- e. Select methods of inquiry (type of quantitative or combination of methods; select or monitor selection of appropriate research tools).
- f. Select the qualitative research method appropriate for a particular public health research problem and explain how qualitative research would interact with public health data sets and their quantitative information sources in the field.

Cultural Skills

- Promote cultural competence within an organization.

Information and Technology

- Access and use national/state/local data sets with respect to:
 - a. Data management;
 - b. Statistical significance of data; and
 - c. Primary and secondary analysis of data.
- Monitor data gathering (review instruments, observation, interviews, etc.).
- Monitor and review data analysis.

Policy Development

- Analyze public policy regulation and/or legislation.
- Design a policy position and write a policy statement.
- Design and carry out advocacy plan promoting the policy.
- Prepare and deliver testimony to a governmental agency.
- Create, debate and defend a policy position in a controversial area.

Leadership and Systems Thinking

- Use analytical, synthesis and critical thinking skills to develop solutions to complex public health problems and situations demonstrating creative problem-solving.
- Access relevant resources for further professional development.

Community Dimensions of Practice

- Involve community in assessing need for health programs, selecting health program approach, and planning, implementing and evaluating health programs.

Health Education/Health Promotion

- Select and provide rationale for appropriate health education strategy for health needs.
- Design health education program for a specific audience, including program objectives, strategies and evaluation. Provide rationale for all decisions.
- Know when and how to use principles of mass media communication in selecting/designing a health education intervention.
- Monitor media for coverage of public health issues.
- Involve community in problem identification and choosing media outreach vehicle.
- Identify culture/values/behaviors/systems involved in outreach plan, carry out plans (brochure, oral presentation, mass media, etc.), monitor media coverage of a public health issue and analyze media coverage in influencing public opinion/behavior.
- Select appropriate plan for health promotion/disease prevention and defend/explain choice of approach based in theory and historical precedents.

In addition to the schoolwide learning objectives, for students pursuing the **MPH degree in environmental and occupational health sciences**, the following objectives apply:

- Demonstrate an understanding of the basic mechanisms by which environmental and occupational pollutants impact health (i.e., the linkage of pollutants' source, media, receptor and health effects) and the means to develop controls or interventions to protect humans and ecological systems.
- Express a working knowledge of the basic sciences deemed most relevant for the study of environmental and occupational health – toxicology, epidemiology and environmental chemistry.
- Be able to collect, analyze and interpret environmental and occupational data.
- Describe the structure of regulations and policies that govern the efforts to protect workplace and environmental health.
- Exhibit the ability to implement an occupational or environmental health investigation or project and clearly report the results.

In addition to the schoolwide learning objectives, for students pursuing the **MPH degree in epidemiology**, the following objectives apply:

- Appreciate the history and philosophy of epidemiology as a public health science.

- Understand the implications of epidemiology for other health specialists.
- Understand the fundamental measures and study designs used in epidemiology.
- Understand and be able to apply statistical methods commonly used in epidemiology.
- Have substantive knowledge of epidemiology.
- Have knowledge of protocol development, subject recruitment, data collection, quality control, reporting and presentation of findings.
- Demonstrate the ability to conduct data analyses and interpret results.
- Demonstrate the ability to manage and analyze data using statistical and epidemiological software packages.

In addition to the schoolwide learning objectives, students pursuing the **MPH degree in health policy and administration in the public health policy and administration** track must meet additional general objectives:

- Identify and define relevant terms, concepts and theories within the fields of law, health policy analysis, public policy development, public health ethics and public health advocacy.
- Identify and define management principles in analyzing, planning, controlling and leading public health agencies.
- Demonstrate an understanding of public policy processes and how they affect the public's health, the field of public health, and the management of public health agencies.
- Apply principles of management to the analysis of case studies in public health administration.
- Select and apply methods for analyzing a public health policy issue and discuss the pros and cons of the method selected.
- Develop and support opinions on public health policy and administration.

In addition to the schoolwide learning objectives, students pursuing the **MPH degree in health policy and administration in the public health policy and management** track, which focuses on public health law and policy, public health administration, and public health ethics must meet additional objectives:

- Communicate a basic understanding of American jurisprudence and its application to public health policies and programs.
- Describe the processes by which laws and regulations are made and the factors that influence those decisions, (b) analyze a particular state or federal policy making process to identify the determinants of its outcome and (c) demonstrate a theoretical understanding of the forces that have shaped and that continue to shape those processes.
- Describe basic principles of economics and demonstrate an ability to interpret studies (as opposed to being able to produce such studies), knowing the lexicon of the technologies of economic analysis, and their strengths and weaknesses.
- Illustrate different policy analytic and program evaluation techniques, again with an

emphasis on interpretation, not production.

- Demonstrate an understanding of the institutions of public health and of the health services system in the United States.
- Display strong written and oral communication skills, as well as skills in negotiating and in advocacy, an understanding of the importance of community support for public health programs, an ability to communicate effectively with the community, an understanding of the role of the media in public health policy-making, and an ability to communicate effectively with the media.
- Identify ethical principles that are involved in public health policy-making and programming.
- Identify skills necessary to administer public health programs, such as community assessment, strategic management, budgeting and organizational control, and leadership.
- Demonstrate the ability to evaluate a public policy problem and to communicate the results effectively in writing and orally.
- Put into practice the skills learned in previous course work by engaging in a field experience.

In addition to the schoolwide learning objectives, for students pursuing the **Professional Enhancement MPH in health policy and administration**, the following objectives apply:

- Demonstrate an understanding of the basic principles, practices and theories of public health.
- Demonstrate an understanding of selected problems in public health administration and public health policy.
- Apply selected tools to the solution of those problems.
- Communicate these abilities in writing and orally.

In addition to the schoolwide learning objectives, for students pursuing the **MPH degree in health policy and administration in the public health informatics track**, the following objectives apply:

- Employ the basic principles of public health sciences in public health practice.
- Analyze the role of public health information systems and informatics in public health decision-making.
- Specify the requirements for the development or adaptation of public health-related information systems.
- Plan, specify and manage the implementation of public health information systems projects.
- Discuss the security, privacy and confidentiality issues involved in utilizing health data and information systems.

- Describe the existence, structure and uses of public health and health care databases and networks.
- Evaluate the basic functions and operations of information technologies that have significant application in public health practice such as geographic information systems, web-based information dissemination and data mining.

Learning Objectives/Competency-based for the DrPH (Doctor of Public Health Degree)

The Doctor of Public Health curriculum is designed to prepare public health leaders by ensuring expertise in the conceptual foundations of public health, research methods, leadership and communication skills, and a substantive area of specialization. Students are eligible for conferral of the Doctor of Public Health degree upon demonstrating mastery of the DrPH competencies through a combination of course work, independent study, prior experience and completion of a thesis project.

After completing the DrPH program, the DrPH student will be able to:

Competency 1: Demonstrate in-depth understanding of the core areas of public health practice, research and theory.

- Analyze and critique public health as a system, including specific functions and roles of government and governmental public health agencies and other partners, assessing the system's ability to respond to public health problems and its limitations, and identifying ways to improve it.
- Integrate and apply multidisciplinary theories and research findings to solve a public health problem(s).
- Demonstrate an understanding of the ecological model and how it guides the assessment of, and solutions to, public health issues.

Competency 2: Analyze issues and problems in public health using critical evaluation, applied research methodology, and statistical methods.

- Obtain, interpret and apply appropriate quantitative, qualitative and economic measures to address public health problems.
- Demonstrate in-depth understanding through use of an applied research methodology of interest (quantitative, qualitative or economic research methods) of a public health problem or issue.

Competency 3: Access and synthesize information from a variety of sources to assess significance, identify relationships and develop strategies for addressing public health problems/issues in an area of interest or specialization in public health practice.

- Identify and apply foundation theories in an area of specialization to explain and predict public health problems and solutions.
- Apply measures of population health and illness, including risk factors, in the development

of community health improvement initiatives, taking into account appropriate cultural, social, behavioral and biological factors.

- Develop and apply a logic model, or other systems applications, demonstrating interrelationships among risk and protective factors, as well as between process and outcome objectives, and targets/standards for population health.
- Apply research, evaluation and strategic planning designs to address a public health issue in an area of specialization.

Competency 4: Demonstrate leadership in designing and implementing interventions aimed at a public health problem/issue.

- Demonstrate an ability to strategically plan, implement and evaluate agency or organization improvements.
- Exhibit an understanding of the political, cultural, social and economic factors influencing the development of, and changes in, public health programs, agencies or interventions as well as strategies to affect those factors positively.
- Apply principles and tools of financial resource management to public health programs.
- Apply principles and tools of human resource management to public health programs.
- Demonstrate an ability to lead and manage individuals or teams in the design, implementation and evaluation of public health programs.
- Access and synthesize information from a variety of sources to make evidenced-based program decisions.
- Apply negotiation, advocacy and other skills to public policy-making, demonstrating an understanding of how to influence the process.

Competency 5: Demonstrate the ability to communicate effectively orally and in writing.

- Demonstrate an understanding of the theoretical elements of effective oral and written communication.
- Organize and present qualitative, quantitative and economic data cogently and persuasively at scientific sessions and to lay audiences.
- Design oral and written communications for varied audiences (community and business leaders, the public, policy-makers, public health professionals, the media and other stakeholders).
- Demonstrate the ability to develop a social marketing plan for a new or existing intervention.

Competency 6: Demonstrate a vision and philosophy for professional leadership in public health.

- Demonstrate an understanding of the legal and ethical foundations of public health.
- Apply principles of effective leadership to create a shared vision within a public health organization and foster partnerships that maximize achievement of public health goals.

Learning Objectives for the MHA (Master's in Healthcare Administration)

Knowledge

Students will be able to demonstrate a professional manager's working knowledge of:

- Current health policy issues.
- Currently applicable law to their chosen area of health care delivery.
- Ethical guidelines of the American College of Health Care Executives, the American Hospital Association and the various professional societies representing leadership in clinical health care delivery.
- Structure and organization of American health care and the formal and informal forces that influence its actions.
- Functions of the component parts of the American health care system and how the economic and political forces at work between the various components affect the delivery of health care.
- Responsibilities of management and governing bodies, and the relationships between the two.
- Roles of executives as managers and leaders in the complex environment of health care delivery organizations.
- Health care financing, cost accounting methodologies, and reimbursement theory and practice.
- Financial reporting, operating budgets, capital budgets and treasury functions in health care delivery settings.
- Responsibilities of executives and, specifically, of finance officers to a board of directors, and to the various levels of government agencies.
- Manner in which the concepts and tools of statistics, epidemiology and marketing fit together to provide a basis for strategy development.
- Key roles of quality and effectiveness evaluation.

- Human resource theory and tools, and the importance of human resources in health care delivery.
- Role and significance of information systems in contemporary health care delivery.
- Synthesize and apply academic knowledge areas in the “real-life” setting of their program-long preceptorship, and in the development and presentation of their capstone project.

Skills

Students will be able to demonstrate their ability to:

- Apply analytical skills to manage programs and assess their effectiveness.
- Organize a planning process and develop effective comprehensive plans.
- Assess community health status and address program development and divestment needs in response to forecast demand. Program planning and program termination will be critical competencies.
- Develop a marketing analysis and strategy that incorporates demography, health status and competing service provision capabilities.
- Develop alternative strategies to effectively respond to changing incentives in order to meet organizational goals.
- Develop marketing and sales strategies to introduce programs.
- Assess and develop statistical profiles and complete a health program evaluation.
- Develop presentations, facilitate meetings and create reporting mechanisms to monitor adherence to established goals. The use of focus groups and development of listening skills will be key areas of focus.
- Develop a program budget, forecast budget projections, analyze income statements for budget variances and create strategies to address program deficits or surpluses.
- Assess financial options such as lease-buy financing strategies to support capital expansion and equipment needs.
- Analyze specific reimbursement approaches for organizational strengths and weaknesses.
- Determine the best strategies to optimize the effect of information systems (IS) on the operations of health care delivery organizations. The ability to interface with IS managers and use available systems and databases, as well as the Internet, to retrieve health information for planning purposes will be specific skills that the manager will apply in the work setting.
- Develop and conduct employee performance appraisals.

- Identify proper contract terms and negotiate agreements.
- Create and lead a self evaluation of management teams and the board of directors.
- Identify core ethical precepts of their organization and the conflicts that may arise in the performance of their job. Create a strategy for addressing those potential conflicts in an open, constructive and honest manner.

Learning Objectives for the MS (Master of Science Degree)

MS degree students are prepared for intermediate to senior research positions in local, state or federal agencies, in private or public health organizations, or in health research programs. MS degree students also are prepared for continuing studies through the PhD program.

In general, MS students will:

- Demonstrate knowledge and understanding of a well-defined public health discipline and its connection to, and impact on, public health.
- Express understanding of discipline-specific theoretical constructs, research design, research methodology and analytical strategies.
- Illustrate the ability to evaluate and interpret scientific literature.
- Participate in an original research project that makes a contribution to the body of knowledge of their discipline.
- Exhibit the ability to disseminate research findings to the scientific community and the general public.

Students pursuing the **MS degree in biostatistics** will develop an understanding of, and skills in, applying biostatistical methods for work in private sector (often in the pharmaceutical industries) or public sector (academic setting, nonprofit research groups and government) employment. The following learning objectives for the MS student in biostatistics apply:

- Apply methods and gain knowledge of the theoretical basis for these methods, including their underlying assumptions.
- Know how to work with data files and statistical packages.
- Understand standard diagnostic tools for statistical analysis.

For students pursuing the **MS degree in epidemiology**, in addition to the specific learning objectives for students pursuing an MPH in epidemiology, the following objectives apply:

- Exhibit the ability for problem conceptualization and study design.
- Demonstrate critical reading skills and the ability to synthesize epidemiological and related biological information.

- Illustrate the ability to write reports from studies that are suitable for publication in scientific journals.

Students pursuing the **MS degree in environmental and occupational health sciences** are expected to show a dedication to advancement of the public health field, recognize public health ethics as providing for the greater good while preserving individual justice, serve as a resource to the community, protect the health of the public, engage in community participation and serve all populations equally.

Upon completing an MS degree in EOHS the student will be able to:

- Demonstrate knowledge of fundamental principles of calculus, chemistry, physiology, toxicology, environmental chemistry, epidemiology, biostatistics, and environmental and occupational policies and regulations, and exhibit in-depth knowledge in at least one area of environmental and occupational health sciences.
- Frame and conduct a workplace, community or environmental assessment; recognize, identify and assess exposures to environmental stressors, including proper operation of environmental instrumentation, when necessary; apply quantitative modeling techniques where appropriate; develop control strategies; and develop and evaluate training programs.
- Synthesize bodies of information; critically read and evaluate scientific papers; collect, analyze and report environmental and/or occupational health data; define, analyze and recommend interventions for environmental and occupational health problems based on sound technical and ethical considerations; and prioritize issues and interventions even with incomplete information.
- Apply the scientific method to a research project and demonstrate research skills and methods, including ethical conduct of research and policies and procedures related to human subject research.
- Illustrate effective communication through scientific writing and oral presentations to peers, scientific organizations and communities.
- Demonstrate an understanding of the benefits of multidisciplinary approaches to environmental and occupational health problems; describe how environmental health and safety fits into organizational structures; demonstrate effective teamwork; and exhibit integrity, courage and willingness to create change.

For students pursuing the **MS in health policy and administration**, there are no learning objectives beyond those for the School as a whole.

For students pursuing the new, Fall, 2006, **MS in Clinical Research within health policy and administration**:

This concentration is intended to train clinicians, primarily postdoctoral or post-residency fellows and junior faculty, to become leaders in clinical research. Upon completion of the program, graduates will be able to:

- Implement the basic analytical tools used by biostatisticians and epidemiologists.
- Demonstrate knowledge of the basic concepts and theories of social and behavioral sciences relevant to clinical research.
- Communicate their insights effectively.
- Write well-conceived and persuasive grant applications.
- Ensure the ethical treatment of their subjects.
- Participate in a broader multidisciplinary research community that includes basic and social scientists, as well as clinicians from other areas of clinical practice.

Learning Objectives for the PhD (Doctor of Philosophy degree)

PhD degree students are prepared to assume academic or research careers in a basic or applied science related to public health or careers in public health practice within both the public and private sectors.

In general, the PhD graduate will be able to:

- Demonstrate an in-depth knowledge and understanding of issues in his/her substantive interest area in the biological, physical or behavioral/social sciences related to public health.
- Display a high degree of mastery in appropriate theories, analytical skills, research design and methodology in the biological, physical or behavioral/social sciences related to public health.
- Identify knowledge gaps in the selected field, synthesize relevant information and formulate focused research questions to address these gaps.
- Design and conduct original research that contributes to knowledge in their selected field.
- Incorporate knowledge of cultural, social, behavioral and biological factors in formulating research questions, and design and implement research.
- Communicate effectively and clearly both orally and in writing, and present public health issues and research findings in his/her area of expertise to peers, students and the general public.
- Demonstrate teaching skills in working with students and other professionals in academic, research or practice settings.

Biostatistics Perspective

In addition to the schoolwide learning objectives for the PhD student and the learning objectives for MS students in biostatistics, the PhD student in biostatistics should be able to:

- Contribute to the development of the biostatistical discipline.

- Collaborate with other biostatisticians and participate in interdisciplinary research activities using biostatistics.
- Communicate biostatistical concepts to the nonstatistician.

Community Health Sciences Perspective

In order to develop a career in the multidisciplinary field of community health sciences, it is essential that the student develop mastery in both a major and collateral area along with the capacity to communicate and work with researchers and professionals in a wide variety of disciplines.

Environmental and Occupational Health Perspective

Upon completing a PhD degree in EOHS, the student will be able to:

- Demonstrate all skills and knowledge of MS degree.
- Begin to exhibit research independence through initiation, development and performance of research that leads to new contributions to science; compose scientific papers of publishable quality; and develop a research proposal that includes scientific rationale and methods, a research management plan and a budget for the research.
- Display attributes of leadership, partnership and team-building, skepticism, and engagement in the scientific community.
- Demonstrate thorough knowledge of research methods, including qualitative and quantitative methods, and specialized knowledge in an area of environmental and occupational health sciences.
- Discuss and describe how scientific research contributes to advancement of environmental and occupational health.
- Teach at the college or graduate level.

Epidemiology Perspective

In addition to the schoolwide learning objectives for the PhD student and the learning objectives for MS students in epidemiology, the PhD student in epidemiology should attain skills specifically for the practice of epidemiology in research, teaching and practical settings.

Health Policy and Administration Perspective

HPA does not have specific learning objectives for PhD candidates beyond those established schoolwide.

2. Development, Distribution and Use of Learning Objectives

As indicated in response to Criterion V.C.1, the MPH learning objectives originally were developed by the UIC SPH Committee on Educational Programs (CEP), a committee with

representation from the faculty, student body and administration. During the academic years 2004/2005 and 2005/2006, CEP began a critical review of the MPH learning objectives. External sources were consulted to assure the school's learning objectives reflect the most current thinking on public health education. Thirty-three of the school's original learning objectives were collapsed into 10 domains, reflecting a re-organization of the original objectives and the addition of 13 new ones. Revised objectives were scrutinized by faculty within divisional faculty meetings, by the SPH Executive Committee, and discussed at a SPH faculty meeting. The work of seminal documents, including Council on Linkages, "Core Competencies for Public Health Professionals" (2001); IOM Report, "Who Will Keep the Public Healthy?" (2002); and draft educational competencies of the Association of Schools of Public Health, now are reflected in our MPH learning objectives.

Simultaneous with this effort, CEP undertook a faculty educational campaign to assure that all course syllabi contained properly framed learning objectives. Division directors were held responsible for assuring that their faculty incorporated properly worded learning objectives into syllabi. This effort was reinforced by the CEP new course approval process.

To identify gaps in the curriculum, CEP "mapped" the learning objectives from the six core MPH courses to the revised MPH competencies (see Appendix V.C.2.1).

CEP developed a report of recommended course changes to address curriculum gaps. The report was shared with the Executive Committee, division directors and core course instructors. A faculty committee has been convened to address the two learning objectives (related to exposure to particular computer software and data manipulation) that were not fully addressed by the core MPH courses. A one-credit-hour "laboratory course" or the equivalent is under development for implementation in fall 2006. Information regarding this will be available in the resource file.

The development of the learning objectives for the DrPH degree was an integral part of an intensive effort to redesign the DrPH program, which began in academic years 2000-2001 and 2001-2002. During that period CEP examined the doctoral degree programs offered at UIC School of Public Health, using information provided from surveys of students and faculty, among other sources. CEP concluded that the DrPH program at UIC, similar to that at most schools of public health, was based largely on the traditional academic model for the PhD degree and that the similarities between the two programs were substantially greater than the differences.

In January 2003 the full faculty approved a major revision in the DrPH program better aligning the program with its aspirations of preparing doctoral-level public health professionals to assume leadership positions.

In 2004-2005 a DrPH Implementation Recommendation Committee with representation from faculty, doctoral students and administration finalized the DrPH competencies. The competencies were used to develop the DrPH program of study, including the development of two new leadership seminars and a final integrative seminar. The committee's report (in the Resource file), which proposed general principles, admissions policies, academic requirements, program administration procedures and transition policies, in addition to the DrPH competencies, was presented to CEP, the Executive Committee and the school faculty.

Students are eligible for conferral of the Doctor of Public Health degree upon demonstrating mastery of the DrPH competencies through a combination of course work, independent study, prior experience and completion of a thesis project.

The learning objectives for the new MHA degree were developed in AY 2004-2005 through a collaborative effort of SPH and College of Business Administration faculty, with guidance and consultation from the Commission on Accreditation of Health Management Education (CAHME). They were reviewed and approved by CEP, the Executive Committee and the full faculty.

Learning objectives for the MS and PhD degrees were developed separately by division through a process that involves curriculum committees of each division as well as the full faculty of each division. In some cases, external reviewers were brought in to evaluate curriculum and learning objectives.

Learning objectives for the MS, MHA and PhD degrees were reviewed and re-endorsed by CEP in AY 2005-2006.

Learning objectives and/or competencies for all degree programs are distributed to the School community via the SPH Student Handbook and are published on our Web site at www.uic.edu/sph.

3. Assessment of Changing Needs of PHP

CHS faculty work closely with both academic and professional practice organizations on issues related to practice competencies. Examples include the Council on Linkages Between Academia and Public Health Practice, Association of Teachers of Maternal and Child Health, Society for Public Health Education, Gerontological Society of America, as well as public health practice competency development processes of CDC, HRSA and ASPH. In addition, CHS faculty works directly with state and local public agencies in Illinois on training and broader public health work force development activities. These interactions inform CHS faculty in the development and review of competency expectations.

EOHS incorporates advisory comments from formal advisory boards associated with extramurally funded training programs, including the NIOSH-funded Educational Research Center (advisory board meetings held quarterly, minutes appended), the CDC-funded Illinois Public Health Research Fellowship Leadership Advisory Group (meeting quarterly, including public health leaders from IDPH, CDPH and Cook County Dept. of Public Health, as well as the dean and the EOHS division director), and the EOHS-supported Environmental Justice Advisory Board, chaired by the director of Environmental Health, CDPH. In addition, the Great Lakes Centers for Environmental and Occupational Health, a series of research and service centers, whose director is an EOHS professor, provide formal and informal clinical practice opportunities and provide funded research and service through Health Hazard Evaluations, consultations through the Occupational Health Service Institute, and an advisory board for the Center for Excellence in Environmental Health.

Separate professional accreditation is obtained for both the Industrial Hygiene training program (fully ABET accredited) and for Occupational and Environmental Medical Residency training (ACGME accredited) the latter includes an outside Residency Advisory

Committee.

In addition, full-time faculty members are active in professional organizations and in consulting, and have experience providing service to the regional EPA through IPA arrangements. This expertise is augmented by a rich cohort of adjunct faculty, who are engaged in teaching, mentorship, preceptorships and collaborative research projects with students and trainees. They hail from a variety of governmental, labor, nongovernmental and private organizations and reflect the array of disciplines within the division.

Epi-Bio faculty are involved actively in numerous professional organizations such as the Society for Epidemiologic Research, the American College of Epidemiology and the American Statistical Association. These organizations periodically have discussions on curriculum in which our faculty have been involved. The division routinely solicits informal information from alumni, community partners and internship preceptors on the changing needs of epidemiologic and biostatistics practice. We are working on tracking our alumni more effectively and plan to survey them formally in the future regarding how well our program has prepared them for their professional careers. In addition, the division director meets with both PhD and master's students once per semester to gauge their progress, assess their needs and identify gaps in the current academic programs. For example, students repeatedly have expressed an interest in more course work and opportunities to conduct research on genetic epidemiology. We have responded by creating two courses in genetic epidemiology, hiring Dr. Xiping Xu, who is building a Center for Population Genomics, and conducting a search for a cancer genetic epidemiologist.

HPA routinely solicits informal information from alumni, community partners and internship preceptors on the changing needs of public health practice. We also study research and publications in the field (e.g., recent IOM reports). In addition, the division director meets with students once per semester. Since the majority of our students are midcareer, many are qualified to assist us in keeping the curriculum focused on the current needs of public health practitioners.

We have hired a new academic professional to act as our coordinator of recruitment, career services and alumni affairs. Part of her job description is to establish and maintain relationships with HPA alumni. The purpose of this program is threefold: (1) to provide alumni help on career services; (2) to work with alumni to develop internship opportunities; (3) to provide systematic input into curriculum issues, such as the relevance of course work to public health practice.

For our MHA and our proposed MPH in public health policy and management, we have established two advisory committees to provide input into curriculum.

4. Assessment

The faculty, through their respective divisions and through the Committee on Educational Programs, has developed clearly stated learning objectives. There are overall degree-specific objectives as well as discipline-specific objectives. This criterion is met.