

EXECUTIVE M.P.H.

[EMPH 528, Everyday Leadership]

Leadership encompasses a multi-dimensional set of skills that need to be leveraged based on situation and context. Understanding what leadership is and how to grow these skills requires the capacity to be a constant learner and adapt in the face of new situations and circumstances. This course develops a learner-leader framework for students to maximize their own leadership capacity through experiential learning and application of the course material. Throughout the course (an intensive provided in six half-day modules), students engage in various learning modalities, including pre-class assignments, lectures, small group discussions, and writing assignments. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors.

½ Course cr

[EMPH 529, Executive Communication Skills for Public Health and Healthcare]

This course strengthens a constellation of leadership communication competencies essential for work at the executive level in public health and healthcare contexts. We address strategies for articulating ideas to engage a spectrum of stakeholders and skills for advocating change. The course begins with a scientific examination of the markers of credibility in oral communication, followed by an exploration of the role of culture and diversity in framing suggestions to groups. We consider modes of persuasion as participants build facility in appealing to a variety of decision-making styles, while maintaining personal authenticity. We then examine modes of inquiry as well as team collaboration from strategic and linguistic viewpoints. The course concludes with participants completing a high-stakes presentation tailored for a policy group, a scientific panel, or venture capitalists. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors. ½ Course cr

EMPH 530a, Design Thinking in Public Health Systems Staff

Solution-focused problem-solving is an essential competency for public health professionals. This intensive introduces an iterative framework to innovatively solve complex challenges from the perspective of target user groups. Students address complex public health challenges utilizing a design-thinking framework. Students leave the intensive with a firm understanding of how to address complex public health challenges that account for their target user's desires/needs, what is financially viable and sustainable, and what is technically feasible. This is one in a three-part series of intensives for students enrolled in the Executive Online M.P.H. Program. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors.

½ Course cr

[EMPH 531, Strategic Management in Complex Systems]

Solving the world's most pressing public health challenges requires strategic management of resources in the context of complexity. This intensive uses case-based teaching and learning in small groups to prepare students to effectively manage human, financial, and political resources to improve implementation of public health programs and strategies. This is one in a three-part series of intensives for students enrolled in the Executive Online M.P.H. Program. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors. ½ Course cr

[EMPH 532, Leading Effective Teams]

Leadership is commonly described as the process of engaging others to set and achieve a common goal. This intensive prepares students to work in high-functioning interdisciplinary teams in public health, applying a relational approach to leadership. Students explore theories and practices of leadership and followership, working effectively across organizational boundaries and levels of hierarchy, and engaging with diverse organizations in cross-sectoral collaborations to promote public health. Students are exposed to evidence-based approaches to prospective organizational culture change to apply in their own organizations. Theories and principles are demonstrated through experiential learning activities and structured self-reflection. This is one in a three-part series of intensives for students enrolled in the Executive Online M.P.H. Program. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors. ½ Course cr

[EMPH 533, Foundations of Behavior Change]

This course provides an introduction to behavioral theory as it pertains to health and health care delivery. The focus is on the integration of social, psychological, and behavioral factors that must be considered in developing and implementing best clinical practice and public health initiatives. Students learn and practice the fundamentals of health behavior change (i.e., behavioral theory) via experiential exercises. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors. 1 Course cr

EMPH 534a, Principles of Epidemiology I Staff

This course introduces the fundamental principles of epidemiology, concepts, and methods of application in public health. Students gain an understanding of the role of epidemiology in investigations of diseases and health events in clinical and public health settings. Topics covered include the history of epidemiology, description of population patterns, study design, measurement of disease frequency, causal inference, measurement, sources of bias, confounding, and effect modification. Students critically evaluate and interpret epidemiologic findings from published literature. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors.

[EMPH 535, Biostatistics in Public Health]

This course provides an introduction to the use of statistics in medicine and public health. Topics include descriptive statistics, probability distributions, parameter estimation, hypothesis testing, analysis of contingency tables, analysis of variance, regression models, and sample size and power considerations. Students develop the skills necessary to perform, present, and interpret statistical analyses using R software. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors. 1 Course cr

[EMPH 536, Evidence-Based Decision-Making in Public Health]

This online seminar for M.P.H. students focuses on interdisciplinary, student-driven learning and utilizes a mixture of teaching approaches including lecture, large- and small-group discussion, case studies, and practicum sessions. Students learn how to apply principles of complex systems theory to define evidence, explore different types of evidence and evidence-based decision-making frameworks, and apply their knowledge and public health training to real-world public health decision-making through case study analysis. Through their work in this course, students develop critical thinking

approaches to enable evaluation of both the quality and robustness of evidence, as well as potential gaps between theory and practice in evidence-based decision-making in public health. By studying the experience of others in the field of public health, students are able to apply “lessons learned” from past examples of public health decision-making to their own work and interest area(s). The final product for this course is a heavily documented, seven-page paper applying principles and practice of evidence-based decision-making to the student’s area of public health interest. Students develop their final paper throughout the term, receiving feedback from the instructor and their classmates. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors. 1 Course cr

EMPH 537a, Frontiers of Public Health Staff

This course is designed to expose students to the breadth of public health and is required of M.S. and Ph.D. students who do not have prior degrees in public health. It explores the major public health achievements in the last century in order to provide students with a conceptual interdisciplinary framework by which effective interventions are developed and implemented. Case studies and discussions examine the advances across public health disciplines including epidemiology and biostatistics, environmental and behavioral sciences, and health policy and management services that led to these major public health achievements. The course examines global and national trends in the burden of disease and underlying determinants of disease, which pose new challenges; and it covers new approaches that are on the forefront of addressing current and future public health needs. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors.

[EMPH 538, Health Policy and Health Care Systems]

This core course for the Executive M.P.H. program provides an introduction to the making, understanding, and consequences of health policy. The design and performance of the health care system are assessed, with particular attention to the complex and often contested manner in which health care is organized, financed, and delivered in the United States compared to other countries. Recorded lectures are made available to set the stage for each week’s topic(s), and we meet as a group to discuss the material and apply key concepts to the practice of health policy. The course examines the fundamental concerns—affordability, accessibility, and quality—that shape the development of health policy and health systems. Students are introduced to the key stakeholders, policy makers, institutions, and processes that influence the design and implementation of health policy and health care systems. Health issues are placed in the context of broader social goals and values, including equity; and critical trade-offs to be made while seeking such goals are discussed. To lend some coherence to our explorations, these general concerns are illustrated most consistently with health policies and programs from the United States. However, we draw from examples from other countries during several class sessions to convey how health policy and system issues play out in other nations. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors. 1 Course cr

EMPH 539a, Ethics in Public Health Staff

The purpose of this condensed course is to familiarize students in the online Executive M.P.H. with critical foundations of public health ethics and to foster sophisticated ethical reasoning so that students may carefully apply and negotiate different ethical principles in relation to current public health challenges. The course examines ethical

frameworks across cultures and considers sociohistorical context in relation to ethical constructs and applications. Attention is given to the interplay of race, gender, social inequalities, and marginalized populations when approaching matters of public health ethics. The first part of the course explores core principles of public health ethics; the second part of the course broadly applies these principles to some key areas of the field of public health practice in which ethics are particularly pertinent – infectious disease control, environmental health, social determinants of health, and policies of global health care access. Each session has readings and prerecorded material viewable online that should be completed before class. For each session, we meet for one hour of live discussion and interaction that synthesize and build on the readings and prerecorded material. Brief written reflections are incorporated into live interactions. A paper in which students evaluate ethical principles in relation to practical professional public health experience is developed and discussed incrementally. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors. ½ Course cr

EMPH 540a, Integrative Applied Practice Experience for Midcareer Professionals I
Staff

This two-semester sequence of four modules incorporates EMPH students' practicum experiences with the development of their cumulative learning experience deliverable. Alongside individualized coaching and peer support, this sequence applies frameworks introduced in students' first-year coursework to public health practice, integrating lessons from EMPH core coursework with students' work experience and expertise to support completion of practicum projects and prepare our mid-career students to apply these skills independently as they transition into leadership positions following graduation. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors.

[EMPH 541, Integrative Applied Practice Experience for Midcareer Professionals II]

This two-semester sequence of four modules incorporates EMPH students' practicum experiences with the development of their cumulative learning experience deliverable. Alongside individualized coaching and peer support, this sequence applies frameworks introduced in students' first-year coursework to public health practice, integrating lessons from EMPH core coursework with students' work experience and expertise to support completion of practicum projects and prepare our mid-career students to apply these skills independently as they transition into leadership positions following graduation. Open only to students enrolled in the Executive Online M.P.H. Program who have taken EMPH 540. Not open to auditors. 1 Course cr

[EMPH 542, Introduction to Clinical and Translational Informatics]

This course provides an overview of clinical and translational informatics fundamental to the practice of public health: the scientific collection and use of clinical and biomedical data. It focuses on providing an overview of informatics; key principles of the model formulation/systems science/study of effects of clinical information systems and their relation to clinical decision-making and clinical practice guidelines as well as clinical decision support; and translational/research informatics to confidentially obtain and standardize clinical and biomedical data. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors. 1 Course cr

[EMPH 543, Topics in Biomedical Informatics and Data Science]

The course focuses on providing an introduction to common unifying themes that serve as the foundation for different areas of biomedical informatics, including clinical, neuro-, and genome informatics. The course is designed for students with significant computer experience and course work who plan to build databases and computational tools for use in biomedical research. Emphasis is on understanding basic principles underlying informatics approaches to interoperation among biomedical databases and software tools, standardized biomedical vocabularies and ontologies, biomedical natural language processing, modeling of biological systems, high-performance computation in biomedicine, and other related topics. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors. 1 Course cr

EMPH 544a, Computational Methods for Informatics Staff

This course introduces the key computational methods and concepts necessary for taking an informatics project from start to finish: using APIs to query online resources, reading and writing common biomedical data formats, choosing appropriate data structures for storing and manipulating data, implementing computationally efficient and parallelizable algorithms for analyzing data, and developing appropriate visualizations for communicating health information. The FAIR data-sharing guidelines are discussed. Current issues in big health data are discussed, including successful applications as well as privacy and bias concerns. This course has a significant programming component, and familiarity with programming is assumed. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors.

[EMPH 545, Principles of Epidemiology II]

This is an intermediate-level course on epidemiologic principles and methods. Students learn to (1) evaluate the scientific merit and feasibility of epidemiologic study designs, (2) review, critique, and evaluate epidemiologic reports and research articles, (3) perform epidemiologic calculations, and (4) draw appropriate inferences from epidemiologic data, all at the intermediate level. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors. 1 Course cr

[EMPH 546, Applied Analytic Methods in Epidemiology]

Students are given a comprehensive overview of data management and data analysis techniques. The SAS statistical software program is used. Students learn how to create and manipulate data sets and variables using SAS; identify appropriate statistical tests and modeling approaches to evaluate epidemiologic associations; and perform a broad array of univariate, bivariate, and multivariable analyses using SAS and interpret the results. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors. 1 Course cr

EMPH 547a, Systematic Reviews and Meta-analyses: Methodology of Synthesizing Evidence Staff

Evidence-based medicine and health care uses best current evidence in addressing clinical or public health questions. This course introduces principles of evidence-based practice in formulating clinical or public health questions, systematically searching for evidence, and applying it to the question. Types of questions considered include: examining the comparative effectiveness and safety of clinical and public health interventions, disease etiology (risk factor analysis), diagnostic testing, and prognosis.

Particular consideration is given to the methodology of synthesizing evidence in a systematic review. Also addressed is the role of evidence in informing economic analysis of health care programs, and clinical and public health practice guidelines. Using a problem-based approach, students contribute actively to the classes and small-group sessions. Students complete a systematic review in their own field of interest using Cochrane Collaboration methodology and software. Open only to students enrolled in the Executive Online M.P.H. Program. Prerequisites: EPH 534E (Foundations of Epidemiology and Public Health). Not open to auditors.

EMPH 548a, Environmental Exposure Assessment Staff

Individuals are exposed to a multitude of chemical and physical environmental agents as they move through various microenvironments carrying out their daily activities. Accurate environmental and occupational exposure data are critical for (1) tracking changes in exposures over time, (2) investigating links with adverse health outcomes in epidemiologic analyses, (3) conducting risk assessments, and (4) comparing against regulatory standards. However, quantitative exposure data are difficult to collect, and often surrogate measures are used. This course focuses on providing tools to evaluate air, water, and physical stressors encountered in the indoor, outdoor, and occupational environment. Indirect and direct methods of assessing exposures in environmental and occupational settings are reviewed. Criteria for evaluating the quality of an exposure assessment and exposure data are discussed. The course covers the design of exposure assessment strategies for research and public health practice, the techniques and methods for sampling and analysis, and the interpretation of data. In addition, it incorporates aspects of inequities in environmental exposures (environmental justice). The class consists of lectures, discussions of readings and exposure data, and hands-on exposure monitoring. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors.

[EMPH 549, Toxicity of Environmental Chemicals and Green Chemistry Solutions]

Students learn the foundation for understanding the role of toxicology in public health protection, with a focus on twenty-first-century techniques and challenges. Students are introduced to basic principles of toxicology (such as dose response, mechanisms of toxicity, and cellular defense) and then move on to advanced topics, such as early life vulnerability, low-level exposure to mixtures, systems biology approaches, green chemistry solutions, and the problems presented by chemicals that are common in consumer products and the built environment. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors. 1 Course cr

[EMPH 550, Risk Assessment and Policy]

This course introduces the methodology, interpretation, applications, and communication surrounding the use of risk assessment in public health. Students gain an understanding of how toxicology information on hazard and dose response is incorporated with exposure information to predict the health risk to a wide variety of populations. Students develop a risk assessment for a real-world exposure issue. Open only to students enrolled in the Executive Online M.P.H. Program. 1 Course cr

[EMPH 551, Introduction to Public Health Modeling]

Public health modeling is a powerful systems-based approach to understand and manage the complex forces that drive the health of populations. In this course students gain understanding of the main applications of different modeling approaches and the

types of scientific questions that can be answered using modeling methods; acquire knowledge of key modeling concepts and techniques necessary to understand and interpret scientific literature; and develop skills necessary to critically evaluate the role of assumptions and uncertainty in model validity. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors. 1 Course cr

EMPH 552a, Leading Healthcare Transformation Staff

Leading transformational change within institutions and organizations is one of the most challenging and critically important endeavors of our time. This course provides real-life examples, experience-based insights, and practical guidance on how to maneuver through the minefields and effect positive disruptive change within health care organizations. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors.

[EMPH 553, Monitoring and Evaluation in Public Health: Principles and Applications]

Lack of proper formative, process, and impact program monitoring and evaluation (M&E) is one of the biggest roadblocks to delivering cost-effective public health programs. This highly interactive course covers M&E principles, concepts, frameworks, and methods. Students apply real-world case studies to learn how M&E can be used in the design, implementation, and maintenance of high-quality and equitable public health programs on a large scale. Open only to students enrolled in the Executive Online M.P.H. Program. Not open to auditors. 1 Course cr

[EMPH 554, Microeconomic Frameworks for Health Policy]

This course introduces key conceptual frameworks from microeconomics with a focus on understanding what is needed for a market to “work” (i.e. allocate goods efficiently), common market failures and policy responses to address them, and how these tools can be used to address current challenges in public health and health care policy. Frameworks presented in this course can be used to think critically about questions like: (1) Why might segregationist policies from the 1920s impact educational and income disparities in 2020s? (2) In what situation is a tax more burdensome for producers than consumers, and vice versa? What does this mean about the welfare effects of different strategies regulating necessities versus luxuries? (3) Why would vaccination levels be inefficiently low even if no one believed vaccines caused autism? What type of interventions could help address this? (4) Why do governments (and not the private market) usually end up responsible for providing goods like clean water? (5) Why are insurance markets so volatile? How does an individual mandate help address this in the context of health insurance? and (6) How is physician behavior likely to differ under a “fee for service” versus capitation payment structure? What are the implications for costs? For patient care? 1 Course cr

EMPH 555a, Public Health Law Staff

This course surveys public health law in the United States and considers the role that law can and should play in preserving population health and promoting health equity. Students also consider the conflicts and problems that emerge when law is used for those endeavors, as well as the legal rights and principles that limit government’s public health powers. To understand the legal foundations of public health, students study the sources and nature of government power and its limitations. The class examines the U.S. Constitution, federal, state and local laws, and administrative law. Case studies

demonstrate the governmental tools that can shape and improve public health, as well as relevant challenges and legal obstacles. Prerequisite: core EMPH health policy course EMPH 538.

[EMPH 556, Leadership Challenges in Public Health]

This course immerses students in their final semester of the Executive M.P.H. program in real-world scenarios frequently encountered by state health officers and other public health leaders, emphasizing the critical thinking and decision-making skills needed to navigate complex public health challenges. To introduce key regulatory and structural frameworks at various levels of governmental, we begin with an overview of public health authorities across agencies, followed by a series of scenarios illustrating the multifaceted role of public health leaders. Each week focuses on a case study highlighting the interplay between federal, state, local, tribal, and territorial health authorities. Through lectures, readings, assignments, and discussions, students develop a comprehensive understanding of collaborative public health responses, equipping them to lead effectively in high-pressure situations. Prerequisite: EMPH 555.
1 Course cr

[EMPH 557, Organizational Behavior in Complex Care Systems]

Effective healthcare leadership requires more than strategy; it requires understanding the people, teams, and systems that drive organizational performance. While traditional organizational behavior has only briefly considered the role of culture and diversity, this course focuses on applying these best practices across cultures and organizational contexts. Students explore the behavioral dynamics that shape performance, culture, and change within healthcare organizations, including hospitals, public health agencies, global health NGOs, pharmaceutical companies, and consulting firms. The course examines organizational behavior at the organizational, team, and individual levels, helping students diagnose challenges, leverage strengths, and implement inclusive, culturally responsive strategies to influence outcomes. 1 Course cr

[EMPH 1999, Transfer Course]

Transfer Course 0 Course cr