

Graduate Public Health Courses

PBHL 5088. Integrative Learning Experience: Thesis. 1-6 Credit Hours (Lecture: 1-6 Hours, Lab: 0 Hours).

This culminating experience emphasizes the integration and application of core and concentration-specific public health competencies through the development of a scholarly thesis. It focuses on independent inquiry, critical analysis, and the application of appropriate research methodologies to examine a significant public health issue. Conducted under faculty supervision, the thesis may include collaboration with public health agencies, community partners, or practice-based settings. The final product reflects academic rigor, practical relevance, and a comprehensive understanding of public health principles, contributing to the evidence base that informs public health practice or policy. Prerequisite: A minimum of 30 credit hours of coursework completed or in progress.

PBHL 5311. Applied Epidemiology. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course provides an in-depth examination of epidemiological methods and their application to diverse populations, with a particular focus on rural settings. The distribution, determinants, and prevention of diseases are explored through the application of epidemiological tools to address real-world public health challenges. Emphasizing practical application, the course covers data-driven intervention design, outbreak investigation, and public health decision-making across various population settings. The unique health challenges affecting disease patterns and public health outcomes are analyzed, with attention to health variations and the social and structural determinants of health. Through these approaches, the course equips learners with the skills to design and implement effective epidemiological strategies tailored to the needs of diverse populations.

PBHL 5313. Applied Social and Behavioral Sciences in Public Health. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course explores the application of social and behavioral science theories, models, and methods to public health practice. It examines how social determinants, behavioral factors, and environmental influences shape health outcomes and disparities across diverse populations. The course critically evaluates interventions and policies aimed at addressing public health challenges at the individual, community, and systems levels. Key topics include health behavior theories, community engagement strategies, cultural influences on health, and cultural competency. Through these concepts, learners will develop strategies to design and implement effective public health interventions that promote behavior change and improve population health outcomes.

PBHL 5320. Foundation of Public Health Informatics. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course will cover foundational knowledge relevant to Public Health Informatics (PHI). The purpose of this course is to expose students to emerging research and application areas in the field of PHI. It will enhance abilities to know when and how to use theories, concepts, and tools of informatics applied to public health. The emphasis of the course is on the use of informatics tools and practices in public health and the existing and evolving relationship between clinical and public health systems. The focus is on PHI including topics such as data exchange and standards, interoperability, use of informatics tools, applying informatics to public health communication and dissemination, surveillance systems, public health policy and project management.

PBHL 5330. Health Database Management and Public Health Data Systems. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course will cover foundational knowledge relevant to database management and public health data systems for Public Health Informatics (PHI). The purpose of this course is to provide students with concepts relevant to the effective use of data, information, and knowledge tools to build, manage, merge, retrieve, and analyze public health data from appropriate health data systems. The emphasis of the course is to use, develop and adapt public health information systems as needed to support public health efforts through use of public health informatics tools and practices to support existing and evolving relationships between clinical and public health systems. The focus is to plan, develop, implement, manage and evaluate database management systems and health data systems that meet the needs of public health practice through PHI.

PBHL 5331. Health Promotion and Disease Prevention in Rural Settings. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course explores strategies for promoting health and preventing disease in rural communities, emphasizing the unique challenges such as limited healthcare access, low health literacy, and cultural barriers. Core principles of health promotion are addressed through the development and implementation of evidence-based interventions tailored to rural settings. Topics include community assessment, behavior change theories, and the role of community partnerships in advancing health outcomes. Case studies and applied exercises are used to support the design and evaluation of targeted health promotion campaigns aimed at reducing disparities and improving overall community well-being.

PBHL 5335. Fundamentals of Rural Public Health. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course offers an in-depth exploration of the critical public health challenges and opportunities in rural communities. A broad spectrum of issues, including socioeconomic factors, consumer and family health, environmental and occupational hazards, mental health and substance use, infectious and chronic disease prevention, and rural health care delivery systems will be examined. Special emphasis is placed on understanding and addressing health disparities that disproportionately affect rural populations. Students will develop the skills to assess rural health needs, evaluate interventions, and propose evidence-based solutions.

PBHL 5337. Health Literacy and Communication. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course provides an in-depth exploration of health literacy and its essential role in promoting health and wellness across diverse populations and settings. It examines the multiple dimensions of health literacy, including the ability to access, understand, evaluate, and apply health information for informed personal and community health decision-making. Emphasis is placed on practical communication strategies for healthcare providers and public health professionals to clearly convey complex health concepts. The course also explores techniques such as the use of plain language, visual aids, and digital tools to enhance understanding. Topics include effective communication across varying cultural, educational, and geographic backgrounds, and approaches to overcoming barriers such as low literacy, limited health knowledge, and technology access. Additional focus is placed on designing user-friendly educational materials and developing outreach strategies that strengthen public comprehension and support health-related decision-making.

PBHL 5340. Methods in Public Health Informatics/Biostatistics. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course will cover foundational statistical knowledge and methods relevant to Public Health Informatics (PHI). The purpose of this course is to teach students to identify and perform appropriate statistical methods for the data analysis of data from many commonly used experimental designs in the field of PHI. The emphasis of the course is on the understanding of theoretical assumptions underlying these statistical methods. The focus of this course is to perform selected statistical analyses using SPSS and/or R and to interpret statistical results, in a manner relevant to public health informatics in the context of public health. This course builds upon previous knowledge of basic statistics, concepts, and tools by applying them specifically to the public health field.

PBHL 5341. Biostatistics for Public Health. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course provides a practical foundation in statistical methods essential for analyzing and interpreting health data in real-world public health settings. Emphasis is placed on the application of biostatistical techniques to support evidence-based decision-making and inform public health practice. Key topics include descriptive statistics, probability, hypothesis testing, confidence intervals, linear and logistic regression, and the use of statistical software for data management and analysis. Through hands-on exercises and case studies, the course develops the ability to apply statistical methods to public health research questions, critically assess data quality and findings, and clearly communicate results to diverse audiences. Ethical issues related to data collection, analysis, and reporting are integrated throughout, reinforcing the importance of integrity, transparency, and accountability in applied biostatistical work.

PBHL 5342. Telehealth and Health Information Technology in Rural Healthcare. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course examines the role of telehealth including telemedicine, mobile health applications, and remote patient monitoring in enhancing healthcare access and outcomes, particularly in rural settings. It addresses the distinct challenges faced by these communities, such as geographic isolation, healthcare workforce shortages, and limited access to specialized medical services. Emphasis is placed on the practical implementation of emerging health technologies, evaluating their potential to bridge care gaps and support patient-centered delivery models. The course also explores the policy, regulatory, and ethical considerations associated with digital health solutions, providing a framework for assessing their effectiveness, sustainability, and impact on healthcare delivery.

PBHL 5345. Applied Innovative Solutions in Public Health Practice. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course examines innovative interventions aimed at improving public health outcomes across a range of communities and contexts. Emphasis is placed on designing adaptable and effective strategies that respond to complex health needs while promoting sustainable, long-term impact. Content includes the application of technology, community engagement, and tailored programming to address health challenges in both local and global settings. Topics such as the integration of telehealth, mobile applications, wearable devices, and digital tools to enhance healthcare access and delivery will be examined. The course also explores the development of community-driven initiatives through workforce training, cross-sector partnerships, and approaches that address the broader social and structural factors influencing population health.

PBHL 5350. Public Health Project Management. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course is designed to provide an in-depth understanding of the fundamentals of project management and its application to the provision of health care. A problem-based approach is used to frame both the theoretical underpinnings of project management and hands-on practical application. Students will develop an understanding of the foundations of project management designed to enable them to successfully complete the certification exam to become a certified project manager. Course content includes project scope development, project work breakdown, financial control, and human resources management for projects. Prerequisite: PBHL 5320, PBHL 5330, PBHL 5340.

PBHL 5352. Leadership and Management in Public Health. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course emphasizes the essential skills and competencies required for effective leadership and management within health organizations. It examines the complex challenges healthcare leaders face, including constrained resources, geographic barriers, workforce shortages, and the growing demand for high-quality care. Through case studies and applied learning, the course explores how to develop strategic leadership approaches, manage multidisciplinary teams, and implement innovative solutions to improve health outcomes in diverse communities. Key topics include health policy, administration, strategic planning, financial and human resource management, community engagement, and the integration of technology in healthcare delivery. Special emphasis is placed on adaptive leadership, collaborative decision-making, and culturally responsive practices to address the evolving needs of populations across various settings.

PBHL 5354. Non-Medical Drivers of Health in Rural Populations. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course explores the unique factors influencing health outcomes in rural communities. The course examines the key drivers of health in rural areas, including access to healthcare, socio-economic challenges, policy issues, environmental factors, geographic isolation, healthcare workforce shortages, limited healthcare infrastructure, and cultural influences. Topics will cover the impact of limited healthcare infrastructure, the role of community and family structures in health, rural-urban health disparities, and the effects of agricultural practices, climate change, and transportation on rural health. The course will also address public health interventions and policies aimed at improving healthcare access and quality in rural settings.

PBHL 5365. Environmental and Occupational Health. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course introduces graduate students to the core principles of environmental and occupational health within the context of public health practice. It examines how environmental conditions and workplace exposures contribute to the development and distribution of disease, injury, and health disparities across populations. Key topics include air and water contamination, waste management, climate-related risks, toxic exposures, workplace injuries, ergonomic hazards, and chronic occupational diseases. Emphasis is placed on vulnerable populations and the intersection of environmental and occupational risks with broader social determinants of health. Students will gain foundational knowledge to analyze environmental and occupational health issues and explore evidence-based strategies for risk reduction, prevention, and health promotion in public health settings.

PBHL 5366. Public Health Surveillance and Disaster Preparedness: Strategies for Emergency Response. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course examines public health surveillance systems, emergency preparedness, and response strategies in the context of disasters and emerging health threats. Emphasis is placed on monitoring health trends, identifying disease outbreaks, and implementing timely response measures to protect population health during crises. Real-world case studies ranging from pandemics and natural disasters to bioterrorism events illustrate the practical application of surveillance and emergency response principles. The course also explores the role of surveillance in detecting, analyzing, and managing health risks, including infectious diseases and environmental hazards. Key components of disaster preparedness are addressed, such as risk assessment, resource allocation, and interagency coordination among public health organizations, government entities, and community partners. Additional focus is placed on data collection and analysis, the creation of disaster response plans, and methods for evaluating the effectiveness of public health interventions in emergency situations.

PBHL 5370. Comparative Healthcare Systems and Policy Analysis. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course provides an in-depth exploration of healthcare systems and policies in rural and urban settings across the United States and globally. The organization, financing, and delivery of healthcare are examined through a comparative analysis of various models, including single-payer, multi-payer, and mixed systems. The course emphasizes understanding how healthcare systems operate at local, state, federal, and international levels, and how these structures impact health access, quality, and outcomes. The course addresses the unique challenges faced by both rural and urban healthcare systems, including provider shortages, funding disparities, infrastructure limitations, population density, and service coordination. It also explores how public policies from national healthcare reform to local health ordinances shape healthcare delivery and access across different geographic and socioeconomic contexts. Key policy issues such as health insurance coverage, cost containment, healthcare workforce development, and the evolving role of government in public health are critically analyzed.

PBHL 5372. Applied Public Health Research Methods. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course offers an in-depth, hands-on exploration of public health research methods, emphasizing the design, implementation, and analysis of both quantitative and qualitative research studies. It covers the process of developing research questions, selecting appropriate study designs (such as cross-sectional, cohort, and case-control), and employing data collection methods, sampling techniques, and survey development to investigate health trends, evaluate interventions, and inform public health policy. Key topics include statistical analysis, navigating the Institutional Review Board (IRB) process, and addressing ethical considerations in public health research. The course also examines strategies for conducting research in diverse populations. Practical exercises provide opportunities to apply research concepts to real-world public health challenges, fostering the development of evidence-based solutions and effective research practices.

PBHL 5378. Public Health Communication: Messaging and Media Approaches. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course explores the principles and strategies of effective public health communication, emphasizing outreach to diverse communities across age groups, cultural backgrounds, geographic settings, and global contexts. Focus is placed on designing, implementing, and evaluating targeted communication campaigns that influence health behaviors, inform policy, and build public trust at local, national, and international levels. The course examines the use of traditional media (e.g., radio, television), digital platforms, and community-based communication channels to craft messages that resonate with specific populations. Key topics include risk communication, communication theory, social marketing, health literacy, cultural and linguistic adaptation, community engagement, crisis response, and the ethical considerations of public health messaging. Special attention is given to tailoring communication approaches for children, adolescents, adults, and older populations in both rural and urban settings. The course emphasizes the development of evidence-based strategies that foster understanding, encourage behavior change, and support improved public health outcomes across a broad spectrum of communities.

PBHL 5380. Public Health Program Planning and Evaluation. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course focuses on the knowledge and skills necessary to design, implement, and evaluate public health programs across diverse geographic, cultural, and socioeconomic settings. Emphasis is placed on applying evidence-based strategies to conduct needs assessments, engage stakeholders, allocate resources, and develop targeted interventions that address health disparities in rural, urban, and underserved communities. Real-world public health challenges are explored through the use of performance measurement frameworks to assess program effectiveness. The course also covers approaches to promote long-term program sustainability and adaptability in response to shifting community needs. Through applied learning and critical analysis, the course prepares learners to create data-informed, impactful public health programs that enhance population health and support community well-being.

PBHL 5382. Applying System Thinking for Public Health Solutions. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

This course introduces the principles of systems thinking and its application in public health as a critical approach to understanding and addressing complex health challenges. Emphasis is placed on examining how social, economic, environmental, and political factors interact within public health systems to shape health outcomes. By applying a systems lens, the course facilitates deeper insight into the root causes of public health issues and supports the design of holistic, sustainable interventions. Key concepts and tools such as feedback loops, leverage points, and system dynamics modeling are explored to assess and improve public health strategies. The course prepares learners to think critically about interdependencies within systems and to develop integrated solutions that target structural barriers and promote long-term improvements in population health.

PBHL 5391. Integrative Learning Experience: Capstone. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).

The Applied Public Health Capstone is a culminating, practice-based experience required for graduation that enables students to synthesize and apply the knowledge and skills acquired throughout their graduate public health training. Unlike the thesis, which focuses on original academic research, the Capstone emphasizes real-world application through the development and execution of a public health project. This course is designed to bridge academic learning with professional practice. Students work independently or in teams to conceptualize, plan, implement, and evaluate a project that addresses a significant public health issue. Capstone projects may include, but are not limited to: program evaluations, policy analyses, intervention development, health education campaigns, community needs assessments, or systems improvement initiatives. Projects are expected to incorporate evidence-based methods and engage relevant stakeholders, reflecting interdisciplinary collaboration and cultural responsiveness. Through the Capstone process, students demonstrate their ability to integrate public health competencies into a practical setting, using critical thinking, ethical reasoning, and professional communication. Each student will produce a final deliverable such as a comprehensive report, policy brief, program toolkit, or presentation showcasing their applied skills and readiness to enter the public health workforce. Completion of the Capstone project, including all deliverables and presentations, is required for graduation and serves as a reflection of each student's ability to contribute meaningfully to public health practice.