PUBH • PUBLIC HEALTH

PUBH 280 · Environmental Health   **3 Credits**
Examination of the relationships between environmental factors and public health, focusing on how air, water, soil, and climate affect community well-being. Students explore key topics such as pollution, environmental toxins, climate change, and their implications for health disparities and vulnerable populations.

PUBH 300 · Public Health Essentials   **3 Credits**
Introduction to the field of public health. Students explore the core principles, concepts, and methodologies that define public health practice. The course covers the history and development of public health, the social determinants of health, epidemiology, biostatistics, health policy, environmental health, and global health issues.

PUBH 310 · Research Methods in Health Sciences & Public Health   **3 Credits**
Fundamental principles and practices of research in the health sciences. The course covers a wide range of topics including research design, data collection, data analysis, and the interpretation and dissemination of research findings. Emphasizing both quantitative and qualitative research methods, the course prepares students to conduct rigorous and ethical research to advance knowledge and improve health outcomes.
Prerequisites: PUBH 300, STAT 280.

PUBH 380 · Epidemiology   **3 Credits**
Principles and methods used in the study of health and disease in populations. Students apply epidemiological methods to public health practice and research, focusing on the identification of risk factors, prevention strategies, and the evaluation of public health interventions.
Prerequisites: PUBH 300, STAT 280.

PUBH 400 · Global Health   **3 Credits**
Exploration of the field of global health, examining the social, economic, and political determinants that influence health outcomes across diverse populations. Students engage with critical topics such as infectious diseases, non-communicable diseases, health systems strengthening, and the impact of climate change on global public health.
Prerequisite: PUBH 300.

PUBH 450 · AI in Healthcare and Public Health   **3 Credits**
Exploration of the role of artificial intelligence (AI) in improving health outcomes and advancing public health initiatives. The course covers fundamental concepts of AI, its applications in healthcare and public health, and the ethical, legal, and social implications of AI technologies. Students gain an understanding of how AI can be used for disease diagnosis, treatment, planning, health monitoring, and public health surveillance.
Prerequisite: PUBH 300.

PUBH 490 · Developing and Assessing Public Health Services   **3 Credits**
Knowledge and skills necessary to design, implement, and evaluate public health programs. Emphasizing a systematic approach, the course covers the entire program development cycle, including needs assessment, planning, implementation, and evaluation. Students apply evidence-based strategies to address public health issues and improve community health outcomes.
Prerequisite: PUBH 300.