

# PUH-Public Health

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## **PUH 101. Transitioning to College, Exploring Public Health. 3 Hours.**

This First Year Experience (FYE) course is for students majoring in or interested in Public Health. It is designed to introduce freshmen to the tools and techniques that will enhance their transition to college and improve their academic success. Goal setting, time management, faculty/peer interaction, and other relevant academic skills will be addressed. Students will also gain an understanding of the various educational opportunities and career options associated with Public Health. This course meets Blazer Core Local Beginnings with a flag in First Year Experience.

## **PUH 201. Introduction to Public Health. 3 Hours.**

Public health protects and promotes the health of people and communities. This course reviews the history and philosophy underlying public health, introduces core concepts and values in public health, and highlights the essential functions of public health in society. Offered each semester. This course meets Blazer Core Reasoning.

## **PUH 202. Introduction to Global Health. 3 Hours.**

This course introduces concepts and considerations relevant to public health in resource-constrained international settings while critically assessing historic, current, and projected efforts to improve population health globally. Topics include global burden of disease, measuring population health, global epidemiologic trends, health of vulnerable populations, comparative health systems, and governmental and non-governmental efforts to address health. This course meets Blazer Core Humans and their Societies with flags in Global Multicultural Perspectives and Collaborative Assignments. Offered each semester.

## **PUH 204. Social and Behavioral Determinants of Health. 3 Hours.**

This course examines the social and behavioral factors that impact human health at the individual, community, and population levels. The role of social and behavioral factors and the conceptual tools used by public health to understand their influence on health behaviors and resulting health disparities will be a central focus of the course. Offered each semester. This course meets Blazer Core Humans and their Societies with a flag in Wellness/Wellbeing.

## **PUH 205. Adolescent Health. 3 Hours.**

This undergraduate course will provide an overview of critical health issues in adolescence and review the potential of emerging perspectives to advance adolescent health and promote positive youth development. This course is designed to provide students with the most current knowledge of issues influencing the health and well-being of adolescents. Theoretical frameworks that draw on an ecological perspective will provide a better understanding of how families, peers, schools, neighborhoods, and the larger community influence risk and protective factors in youth. Adolescence is a time of growth and experimentation, a period marked by establishing autonomy and confronting new challenges. Emphasis will be placed on the promotion of positive youth development, and the relevance of adolescent health issues for the science of health behavior and the broader public health arena.

## **PUH 210. Agent, Host, Environment. 3 Hours.**

This course provides the scientific basis for the study of public health. It will examine how various agents (viruses, bacteria, toxins, carcinogens) affect the biology of human hosts. Particular emphasis will be placed on the role of environmental factors in shaping the interaction between agents and hosts, leading to human disease. Offered each semester.

**Prerequisites:** BY 115 [Min Grade: C] or (BY 101 [Min Grade: C] and BY 102 [Min Grade: C]) or BY 123 [Min Grade: C]

## **PUH 220. Environmental Factors in Public Health. 3 Hours.**

This course examines the sources, exposure routes, and health outcomes associated with biological, chemical, and physical agents in the environment (both naturally occurring and man-made). The course will focus on how these agents impact air, water, and food quality to cause disease, along with regulations and policies designed to protect the public's health from their harmful effects.

## **PUH 230. Public Health Data and Methods. 3 Hours.**

This course provides a hands-on introduction to the concepts and tools related to collecting and analyzing public health data. A substantial portion of the course will focus on communicating public health data to a variety of audiences to illustrate the critical role that evidence plays in public health research and practice. Offered each semester.

## **PUH 240. Profession of Public Health. 3 Hours.**

The purpose of this course is to assist students in planning and pursuit of their career goals. Students will interface with public health professionals to identify the skills needed for specific career paths and map out action items needed to gain those skills. The course will provide students the opportunity to gain tangible skills including, but not limited to: Ethics of Public Health, Oral and Written Communication, Personal Presentation Skills, Leadership Styles and Working in Teams and Project Management while addressing a current public health challenge.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

## **PUH 250. Biostatistics. 3 Hours.**

This course introduces the statistical approaches most commonly used in public health, medicine, and other health-related fields. The critical role of probability in inference and estimation will be examined, along with key univariate and bivariate statistics (e.g., t-tests, correlation, regression, etc.). This course meets Blazer Core Quantitative Literacy.

**Prerequisites:** MA 102 [Min Grade: C] or MA 105 [Min Grade: C] or MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 110 [Min Grade: C] or MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

## **PUH 251. Biostatistics Honors. 3 Hours.**

Students will gain a thorough understanding of basic analysis methods, elementary concepts, statistical models and applications of probability, commonly used sampling distributions, parametric one and two sample tests, confidence intervals, applications of analysis of two-way contingency table data, simple linear regression, and simple analysis of variance. Students will also gain experience reading scientific literature and interpreting results relevant to the statistical concepts covered.

**Prerequisites:** MA 102 [Min Grade: C] or MA 105 [Min Grade: C] or MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 110 [Min Grade: C] or MA 125 [Min Grade: C] or MA 225 [Min Grade: C]

## **PUH 270. Homelessness, Housing, and Health. 3 Hours.**

This service learning course will explore homelessness, housing, and health. The course will begin with a discussion of the concept of homelessness and housing instability and their impact on health. We will discuss how homelessness is defined and enumerated, pathways into homelessness, and multi-level interventions to prevent and end homelessness. We will also explore a series of special topics focusing on populations that may be particularly vulnerable to homelessness as well as the intersection between homelessness and experience of particular health conditions and outcomes. In addition to in-class course work, students are expected to complete 15 hours of community participation.

**PUH 275. Health Equity, Disparities, and Social Justice in Alabama. 3 Hours.**

In an atmosphere of discovery, we will learn about the public health needs of residents, who meets them, and how we can be a part of the solution. This course will cover the concept of health equity and a broad overview of health disparities in the Birmingham metro area and across the state of Alabama and then identify ways to work with community partners to address them. This course will examine relevant historical issues, theories, and empirical data emphasizing critical analysis and application of knowledge. Students will gain a better understanding of interventions to promote health equity through a combination of readings, lectures, reflection papers, in-class exercises, and proposing a Commitment to Action. Among outcomes, students will summarize the evidence regarding a specific health disparity (topic and population of their choice) and develop and propose an intervention to promote health equity. This course meets Blazer Core Curriculum City as a Classroom with flags in Civic Engagement and Service/Community-Based Learning.

**PUH 280. Introduction to Sustainability: Shaping Our Shared Future. 3 Hours.**

Starting from a foundation of social, economic, and environmental sustainability literacy, this course examines placed-based examples of successes and challenges in pursuing a more sustainable present and future. Through lectures, videos, team discussions, local field experiences, virtual engagement, and guest speakers, students will gain new perspectives on complex issues impacting sustainability. Particular areas of emphasis include the built environment, transportation, waste, food, economics, energy, natural systems, policy, and climate change from all perspectives: individual, municipal, corporate, national, and international. Students will be challenged to formulate a framework and set of core principles for applying sustainability within their own personal and professional lives. This course meets Blazer Core Curriculum City as a Classroom with flags in Sustainability and Civic Engagement.

**PUH 292. Seminars in Public Health. 1-3 Hour.**

Seminar will explore current public health issues and topics locally, regionally, nationally and globally; case studies in epidemiology, issues and causes of chronic and infectious diseases, how the environment interacts with health, and how social and behavioral factors affect personal health.

**PUH 299. Special Topics in Public Health. 1-6 Hour.**

This special topics course will be used in the undergraduate program to cover emerging issues or specialized content not represented in the main curriculum.

**PUH 302. Epidemiology. 3 Hours.**

This course introduces the central role of epidemiology in public health research and practice. Students will learn to use the basic tools of epidemiology (e.g., prevalence and incidence, measures of association) and epidemiologic study designs to understand how epidemiologists study patterns of disease in populations and identify outbreaks. Offered once a year.

**Prerequisites:** (MA 102 [Min Grade: C] or MA 105 [Min Grade: C] or MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 110 [Min Grade: C] or MA 125 [Min Grade: C] or MA 225 [Min Grade: C])

**PUH 305. Public Health Practice. 3 Hours.**

This course provides an overview of how public health practitioners work with communities to improve health outcomes. It will focus on the stages of public health project implementation, from planning to needs assessment and evaluation. Students will gain hands-on experience with public health advocacy, navigating community dynamics and cultural contexts, and professionalism/ethics. Offered fall and spring.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 307. Public Health Systems. 3 Hours.**

This course provides a comprehensive overview of the characteristics and structures of the US Health System, focusing on the legal, ethical, economic, and regulatory aspects of health care and public health policy. The course will also examine the contributions of federal agencies (Centers for Disease Control, Department of Health and Human Services), state/county health departments, and public and private health care providers (hospitals, long-term care facilities, physicians and nurses) to protecting and promoting health at the population level. Offered fall and spring.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 320. Global Health Service Learning. 3 Hours.**

This course provides students with an opportunity to apply principles of interprofessional collaboration, community partnerships, and global health in the development and implementation of a project to address a global health problem in collaboration with a community partner. The global health problem may be addressed in collaboration with a partner at a local site, at a site within the U.S., or at an international site. Students apply concepts and theories related to global health, interprofessional collaboration, team building, community partnerships, and the ecological framework developing and implementing a plan to address a specific global health problem with a community partner.

**Prerequisites:** PUH 202 [Min Grade: C]

**PUH 321. Workplace Environment. 3 Hours.**

This course will explore known physical and chemical hazards found in the workplace. We will begin with the importance of key events and milestones in the history of worker safety and health and explore the ethical, legal, and social implications associated with the workplace environment. We will review the roles and responsibilities of government, non-government agencies, private organizations, businesses, and industry in worker safety and health. Offered once a year.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C] and PUH 220 [Min Grade: C]

**PUH 322. Environmental Justice and Ethics. 3 Hours.**

In this course, students will investigate the disproportionate burdens of environmental contamination and the resulting health disparities affecting communities of color across the U.S. and internationally. Using a broad range of examples we will look at the incidents that led to the emergence of environmental justice as a grass roots movement, much of which came from towns and peoples of the Deep South. Offered once a year.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C] and PUH 220 [Min Grade: C]

**PUH 331. The Rise of Noncommunicable Diseases Globally. 3 Hours.**

This course provides an introduction to selected key topics in chronic diseases burden endured globally. We will address the following questions: How is it that people in some countries live twice as long as in others? Why is there a rising epidemic of NCDs such as cancer, heart and lung disease, obesity, and diabetes spreading globally? What are the burdens posed by these diseases? What steps are being taken to control it? What key tools are at our disposal? Who are the global actors and stakeholders addressing this global health epidemic? What is the link between globalization and the rise of NCDs? Offered once a year.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 333. Food, Water, and Air. 3 Hours.**

The service learning course will examine food, water, air, with a focus on complex role they play in sustainable human development. While learning about food, water, and air in the classroom, students will gain further understanding of these topics by working with non-profit organizations in Birmingham that address food security, clean water, and clean air.

Topics include issues of availability, access, and use of food in the local, domestic and global context, as well as current responses and potential solutions; water resources and sustainability, as well as water use, pollution, and treatment, and; outdoor and indoor air quality issues. The course will also focus on helping students develop a skill set for global citizenship that includes opportunities for advocacy, leadership, and critical thinking. Offered once a year.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 335. Environmental Health and Local Communities. 3 Hours.**

This course will explore current environmental health issues and how they impact the health of residents in the community. Full of engaging student activities, the course will examine how chemical and physical agents in the environment can be harmful to the health of individuals in local communities. Some major historical events of pollution and environmental contamination in fenceline communities will also be discussed and compared with current local community occurrences and challenges. Students will also get the opportunity to know and work in collaboration with community partners to assess environmental data, infrastructure, and health outcomes in the Birmingham community. Moreover, local initiatives, efforts, and interventions to address toxic environmental exposures will be discussed.

**PUH 341. Public Health Preparedness and Emergency Management. 3 Hours.**

This course will provide participants with an understanding of Public Health Emergency Preparedness (PHEP), exercise development, and evaluation. During this course you will learn how to identify threats within your community, determine what capabilities are most needed to prepare for and meet these threats, and how to develop and evaluate exercises to test knowledge, skills and abilities.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 220 [Min Grade: C]

**PUH 342. Public Health Disasters. 3 Hours.**

This will be a hybrid of environmental disasters and history and consequences of world disasters.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 350. Intermediate Biostatistics. 3 Hours.**

This intermediate-level course will provide students with hands-on experience conducting analyses using statistical software. Selecting appropriate statistical tests and testing model assumptions will be a key focus, along with developing clear interpretations of results.

**Prerequisites:** (MA 102 [Min Grade: C] or MA 105 [Min Grade: C] or MA 106 [Min Grade: C] or MA 107 [Min Grade: C] or MA 110 [Min Grade: C] or MA 125 [Min Grade: C] or MA 225 [Min Grade: C]) and PUH 250 [Min Grade: B]

**PUH 354. Scratching the Itch: Introduction to Infection Control and Hospital Epidemiology. 3 Hours.**

This course is designed to focus specifically on concepts involved with performing epidemiological surveillance and research within a hospital setting. With the recent advent of policies set forth by the Affordable Care Act, emphasis has been placed on surveillance and prevention of nosocomial infections in hospitals throughout the country. The course will introduce students to the methodology of infection control in a hospital setting, including how patients are tested for infectious diseases, surveillance methodology, and how an outbreak investigation in a hospital is performed. The course will involve guest lecturers from different departments of the hospital, including but not limited to Infection Control, Patient Safety and Quality, Clinical Laboratory, and Environmental Control. Each week will cover a given topic (e.g., bloodstream and catheter-associated infections, multi-drug resistant pathogens, respiratory diseases). The students will be graded through the use of take-home assignments, a mid-term examination, two case studies, and a group project involving a nosocomial outbreak investigation of an infectious disease of the course master's choice.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 220 [Min Grade: C] and PUH 302 [Min Grade: C]

**PUH 360. Cuisine, Culture, and Public Health: A Tour Through The Food Industry. 3 Hours.**

"Tour the world" to explore the interactions between business, cultures, food traditions, and public health. The food service sector is a microcosm of how society works to sustain and enrich the human experience. From a business perspective, restaurants encompass every model from the international conglomerate to the small-scale entrepreneur. Moreover, restaurants and other food vendors by their very design reflect various cultures from around the world – sometimes accurately, sometimes not so much. Lastly, the way we treat food reflects our beliefs about how public health should practice in the community. The purpose of the course is to explore the various sub-sectors of the food service industry and reflect on their contributions to health and wellness, their sustainability, and how they have adapted to the changing societal norms after the 2020 covid-19 pandemic.

**PUH 361. A Survey of Public Health Topics in Film. 3 Hours.**

This course will combine feature films, television shows documentaries and other social media with discussions of relevant public health issues. Topics may include longevity, the U.S. health care system, Food and Drug Administration (FDA) regulations, poverty, environmental degradation, social injustices, occupational safety and health standards, labor rights, organ transplants, HIV issues, incarceration and the death penalty, religious influences on public health, reproductive rights, obesity, women's rights, the role of corporations, the opioids epidemic, world hunger, the tobacco and pharmaceutical industries, LGBTQ health issues, and gun violence – among others.

**PUH 391. Directed Study in Public Health. 1-6 Hour.**

This experiential learning opportunity is open to undergraduate students interested in conducting an in-depth exploration of an approved Public Health topic under the supervision of an SOPH faculty mentor. Students must complete the SOPH agreement form for independent academic work at least two weeks prior to the start of the designated semester. This form specifies the scope of work, regular assignments, and final product that must be completed to receive academic credit.

**PUH 392. Seminar in Public Health. 1-3 Hour.**

Seminar will explore current public health issues and topics locally, regionally, nationally and globally; case studies in epidemiology, issues and causes of chronic and infectious diseases, how the environment interacts with health, and how social and behavioral factors affect personal health.

**PUH 398. Undergraduate Research in Public Health. 1-6 Hour.**

This experiential learning opportunity involves participation in a research project under the supervision of an SOPH faculty mentor; this could involve a student-initiated project or collaboration on existing research. Students must complete the SOPH agreement form for independent academic work at least two weeks prior to the start of the designated semester. This form specifies the scope of work, regular assignments, and final product that must be completed to receive academic credit.

**PUH 399. Special Topics in Public Health. 1-6 Hour.**

This special topics course will be used in the undergraduate program to cover emerging issues or specialized content not represented in the main curriculum.

**PUH 403. Immigrant, Migrant, and Refugee Health. 3 Hours.**

This course will introduce students to the inter-relationships between migration and health, focusing on the myriad of health issues experienced by migrant populations. The course will focus on both communicable and non-communicable health issues among migrating populations. The course will examine health issues among all types of migrant populations with a particular focus on the categories of 'displaced peoples', and the resultant state and humanitarian responses surrounding health and social (public health) services. This course frames global health in broad terms to include the underlying social and economic conditions, including climate change, economic underdevelopment, and political instability, which displace people, or motivates them to migrate, and which present barriers to achieving health, mental health, and wellbeing in immigrant, migrant, and refugee communities. We explore how violence, social suffering, health, disease, and mental health are intertwined with displacement and migration.

**PUH 404. LGBTQ Health and Wellbeing Service Learning. 3 Hours.**

The service-learning course will examine LGBTQ health and wellbeing. Specifically, it will take the knowledge learned from courses associated with the LGBTQ health and wellbeing certificate program and enable the students the opportunities to put it into practice. Students will have a range of opportunities to explore what LGBTQ health and wellbeing looks like in practice. Topics include issues related to LGBTQ risk and resilience, policy and programmatic approaches to LGBTQ health and health and wellbeing, as well as the concrete advocacy and leadership skills needed to address the most pressing inequities faced by LGBTQ communities in Alabama and the Deep South. Service-learning is a high-impact practice that combines community service with structured academic learning, including preparation, and reflection.

**Prerequisites:** PY 108 [Min Grade: C] and PUH 201 [Min Grade: C] and SOC 220 [Min Grade: C]

**PUH 405. Managing Public Health Programs. 3 Hours.**

This course is designed to prepare future managers and leaders in the public health arena. The course will provide students with knowledge relevant to managing public health organizations, non-profits, or NGOs, while identifying functions and concepts of management, leadership, and governance.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 421. Nature vs. Nurture: Genes, Environment and Health. 3 Hours.**

This didactic lecture course will examine how components of the world around us impact our lives and health. The classic battle of nature (genes) vs. nurture (environment) is being replaced with the understanding of how our exposure to our environment impacts gene expression, which can increase (or decrease) our own likelihood of disease. Using everyday, real-world examples we will study the environment-gene interaction and how this helps determine why some people are more disease prone than others. Each example will focus on the underlying science and the medical consequence of exposure, and will also examine exposure prevention strategies for individuals and practical legislation to reduce environmental contamination. Examples will vary from year to year, but damaging examples may include nanoparticles, smog, medical radiation, drugs and alcohol, pesticides, noise, indoor air pollution, toxic metals, plastics, food and water contamination, and sexually transmitted infections. We will also discuss how the environment can positively impact gene expression, and will include discussions of functional foods (i.e. nutraceuticals such as soy, green tea and garlic) and other alternative medicinal therapies. BY 116 or equivalent; completion of or registration in BY210 or BY330 is recommended.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 210 [Min Grade: C] and PUH 220 [Min Grade: C]

**PUH 422. Fundamentals of Toxicology. 3 Hours.**

Basic principles in toxicology will be covered including: dose-response relationships; absorption, distribution, storage, biotransformation and elimination of toxicants; target organ toxicity; mutagenesis and carcinogenesis; and an overview of fate and transport of contaminants in the environment. The course will focus on contaminants of environmental and public health interest and will include the fascinating roles toxins have played in human history.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 210 [Min Grade: C] and PUH 220 [Min Grade: C]

**PUH 424. Fundamentals of Industrial Hygiene. 3 Hours.**

The overall goal of this course is to provide you with an introduction to the field of industrial hygiene. The practice of industrial hygiene is both a science and an art devoted to the anticipation, recognition, evaluation, and control of factors in a workplace that may cause injury and/or illness to workers. This course also serves as a foundation for future course work in the field of occupational hygiene and environmental health. Students will be introduced to the fundamental aspects of the science and practice of industrial hygiene. Topics that will be covered in this course include, the historical basis of industrial hygiene, the development and applications of occupational health standards and guidelines, industrial toxicology, chemical hazards, physical hazards, ergonomic hazards, biological hazards, and ways to control hazards. Students will apply concepts learned to successfully complete the coursework and engage others in workplace safety and health.



**PUH 425. Fundamentals of Occupational Health and Safety. 3 Hours.**

This course will provide students with the basic knowledge in Occupational Health and Safety practice, as would be required of professionals seeking the ASP (Associate Safety Professional) certification in advance of the CSP (Certified Safety Professional). This course will provide an overview of common safety and health problems, programs, and requirements, including, but not limited to Safety Engineering, OHS Laws and regulations, accident/hazard controls, workers comp, slip/trip/fall, electrical safety, machine guarding, LOTO, Fire safety and cylinders, confined space, Hazardous Communication, JHA, ergonomics and Industrial Hygiene.

**PUH 426. Safety and Health Standards & Regulations. 3 Hours.**

Occupational health and safety standards are specific rules that establish methods and practices to protect employees from exposure to hazards, as well as potential injuries, illnesses, and death. The standards can be established by the government or various organizations. Occupational health and safety regulations are the required national/government rules established for employers to protect their employees from harm. In this course, students will be exposed to some common regulations and standard limits, administered by the US Occupational Safety & Health Administration, as well as relevant organization-based occupational standards. Upon completion of this course, students will be able to apply relevant regulations and standards to common workplace issues.

**PUH 427. Safety Program Management. 3 Hours.**

The goal of safety programs is to facilitate the evaluation of workplace practices, exposures to occupational hazards, injury/illness protection measures, incident/accident prevention, as well as ensure worker engagement, compliance and continuous improvement in practices and controls. This course therefore introduces students to current local and national safety programs, the roles of various participants in the safety programs, as well as the techniques employed in their management. Upon completion of this course, students will be well-equipped to describe the key elements of safety programs and appropriately explain multiple approaches in their management.

**PUH 432. Global Health Cases. 3 Hours.**

This course uses case studies to examine the impact of health conditions that transcend national borders. The focus will be on the political and economic impact of public health crises.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 434. Global Communicable Disease Challenges. 3 Hours.**

This course is designed to introduce students to the major infectious diseases of public health importance globally. Since we cannot cover all infections in depth in the time allowed, we will highlight major categories of infections as well as focus on a few major infections that together cause the greatest morbidity and mortality in children or adults worldwide. The purpose of this course is to equip participants with up-to-date knowledge of resources on major infections of global importance, and their prevention and control strategies.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 436. Maternal and Child Health in Africa and Asia. 3 Hours.**

Despite significant advances in global health over the last fifty years, the burden of disease among the maternal and child health (MCH) population in certain areas of the world remains alarmingly high. While child mortality has declined over the last fifty years, maternal and neonatal mortality has seen relatively little improvement, especially in Sub Saharan Africa and South Asia, which bears a disproportionate share of the global burden of maternal and child health disease. Maternal health is especially critical due to the far ranging impact of a maternal death on the family, community, and society. Fortunately, high impact, cost-effective solutions exist to address these highly preventable maternal and child deaths. In this course we will discuss those successful MCH interventions and policies in addition to identifying different barriers and challenges to the implementation and scale up of MCH services in Africa and Asia.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 441. Public Health Law and Policy. 3 Hours.**

PUH 441 will be an introductory course in public health law and policy designed for undergraduate students in public health. There are no prerequisites for this course. The purpose of the course is to introduce non-lawyers to the United States legal system and to the basic principles of law relevant to public health practitioners. It is intended to provide students with basic legal knowledge to assist them in communicating with attorneys about potential legal issues that may arise in formulating policy and exercising leadership in health care organizations. An overarching theme of the course is the tension between community interests and individual rights.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 220 [Min Grade: C]

**PUH 442. Children and Families: Issues in Health, Poverty, and Policies. 3 Hours.**

This interdisciplinary course will provide students with basic knowledge about current issues in health and society, both globally and domestically that impact the Maternal and Child Health (MCH) population, which broadly includes women of reproductive age, infants, children, and families. The course will include a specific focus on the role of poverty in the health issues of this population.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C]

**PUH 450. Statistical Programming and Database Analysis. 3 Hours.**

This class provides an introduction into the commonly used statistical programs and teaches the fundamentals of database design. By the end of the class, students will be able to design and build research databases. Students will also be taught how to conduct statistical analyses using EXCEL and SAS.

**Prerequisites:** PUH 250 [Min Grade: C]

**PUH 491. Directed Study in Public Health. 1-6 Hour.**

This experiential learning opportunity is open to junior and senior level undergraduate students interested in conducting an in-depth exploration of an approved Public Health topic under the supervision of an SOPH faculty mentor. Students must complete the SOPH agreement form for independent academic work at least two weeks prior to the start of the designated semester. This form specifies the scope of work, regular assignments, and final product that must be completed to receive academic credit.

**PUH 492. Seminar in Public Health. 1-6 Hour.**

Seminar will explore current public health issues and topics locally, regionally, nationally and globally; case studies in epidemiology, issues and causes of chronic and infectious diseases, how the environment interacts with health, and how social and behavioral factors affect personal health.

**PUH 494. Internship/Fieldwork in Public Health. 3 Hours.**

Students who meet eligibility requirements may take three hours of academic credit per semester for participating in an advisor approved internship experience.

**PUH 495. Public Health Capstone Experience. 3 Hours.**

Through completion of an individually-designed service learning project, this course provides students with the opportunity to apply public health competencies through engagement, study, and reflection. Students will apply their public health knowledge and skills to assist a community partner and present a final report on their experience. This course should be taken within the last two semesters of graduation; students must have completed at least 27 hours of PUH coursework prior to enrolling.

**Prerequisites:** PUH 201 [Min Grade: C] and PUH 202 [Min Grade: C] and PUH 204 [Min Grade: C] and PUH 210 [Min Grade: C] and PUH 230 [Min Grade: C] and PUH 305 [Min Grade: C] and PUH 307 [Min Grade: C]

**PUH 496. Exploring Population Health. 6 Hours.**

Public health is what we do together as a society to ensure the conditions in which everyone can be healthy. This course will provide students an opportunity to learn about both historical and contemporary public health issues, their effects on population health, and how public health systems are working to solve the health issues affecting our communities today. This course will focus on the Southeast United States. Students will tour historically significant sites, visit communities and community-based organizations, attend featured presentations around both contemporary and historical public health issues, as well as visit local, state, tribal and federal public health agencies to learn about their structure, programs, service delivery models, and approaches to addressing issues of public health. The sum of this experience will illustrate the interdisciplinary nature of public health practice and the need to add attention to the social determinants of health – the conditions in the social, physical, and economic environment in which people are born, live, work and age – in order to achieve health equity. Travel is required for this course. Undergraduate students must have completed their sophomore year before registering for PUH 496.

**PUH 498. Undergraduate Research in Public Health. 1-6 Hour.**

This experiential learning opportunity involves participation in a research project under the supervision of an SOPH faculty mentor; this could involve a student-initiated project or collaboration on existing research. Students must complete the SOPH agreement form for independent academic work at least two weeks prior to the start of the designated semester. This form specifies the scope of work, regular assignments, and final product that must be completed to receive academic credit.

**PUH 499. Special Topics in Public Health. 1-6 Hour.**

This special topics course will be used in the undergraduate program to cover emerging issues or specialized content not represented in the main curriculum.

**PUH 600. Overview of Public Health. 0-3 Hours.**

The Overview of Public Health (OPH) course is intended to provide professional degree students in the School of Public Health (SOPH) a broad overview of the core areas of public health. This course was designed to address the foundational public health learning objectives. This course will introduce students to and facilitate their understanding of how public health relates to their discipline. As well as, how all disciplines relate to achieve the goals of public health.

**PUH 601. This is Public Health. 1 Hour.**

Understand the history, philosophy, and values of public health, including the structure and functions of organizing governmental public health.

**PUH 602. Community Assessment. 3 Hours.**

Becoming aware of current conditions through a community assessment is the first step to evidence-based public health. This course will introduce students to the various community assessments methods used to identify and prioritize community needs, concerns, and preferences, as well as to identify community assets, and inform the development of public health interventions. Students will be able to utilize a breadth of data sources commonly used to assess population health needs, assets and capacities that affect community health. Topics to be covered include the introduction to planning models, stakeholder identification, coalition building, quantitative data sources, quantitative and qualitative data collection methods, analysis of qualitative data, interpreting data, and framing community issues.

**Prerequisites:** PUH 601 [Min Grade: C](Can be taken Concurrently)

**PUH 603. Quantitative Methods in Public Health. 3 Hours.**

To appropriately address the needs of communities, we must be able to prioritize their leading health concerns. Quantitative methods allow us to examine the associations between various social, ecological, biological, and environmental factors and health outcomes, to identify populations at elevated risk for poor health outcomes, and to assess the effect of programs or policies implanted to improve health outcomes. This course introduces students to the broad range of epidemiologic and biostatistical methods used in public health, with particular attention to how quantitative results can be communicated clearly to scientific and non-scientific audiences.

**Prerequisites:** PUH 601 [Min Grade: C](Can be taken Concurrently)

**PUH 604. Programs and Policies. 3 Hours.**

This course covers how to collect and apply evidence of community needs in order to identify and prioritize programs and policies for implementation. Public health programs and policies should improve the quality of life of persons and communities through the reduction or elimination in the incidence, prevalence, and rates of disease and disability as well as the promotion of human flourishing via the preservation and improvement of community health. In doing so, programs and policies should strive to improve conditions and access to resources for healthy living for all persons. Given the breadth and complexity of factors that influence health, public health has developed a rich toolkit to guide our efforts to improve community health. This course reviews key elements of that toolkit, including (1) methods and theoretical tools used to collaboratively and inclusively determine community priorities for promoting health; (2) planning models and theories used to guide the development of public health programs and influence health policy; and (3) strategies to frame public health issues with the ultimate goal of informing and successfully advocating for public health policies. From prioritizing goals and objectives to planning for successful implementation, this course explores the multiple dimensions of the successful adoption of public health policies and programs.

**Prerequisites:** PUH 601 [Min Grade: C] and PUH 602 [Min Grade: C] and PUH 603 [Min Grade: C]

**PUH 605. Public Health Management and Evaluation. 3 Hours.**

Applying effective management methods and principles and evaluating the impact of programs and policies to determine community cost and impact are essential components of evidence-based public health. This course includes an exploration of key management, governance, and leadership principles necessary for the successful implementation and evaluation of public health programs and policies. Managers and organizations often operate with limited resources, thus learning how to be good stewards of financial and human resources is essential. This requires the ability to develop budgets and evaluation plans, operate within and foster interprofessional collaboration, manage conflict, and ethical decision-making. A cornerstone of good management is the continuous and rigorous determination of the consequences of one's choices and actions; did the program or policy have the desired effect? Did it have unintended consequences? This course introduces students to methods of process, formative, summative, and outcome evaluation, including experimental designs and participatory models of evaluation.

**Prerequisites:** PUH 601 [Min Grade: C] and PUH 602 [Min Grade: C] and PUH 603 [Min Grade: C]

**PUH 606. Leadership for Evidence-Based Public Health. 1 Hour.**

Developing competencies to provide effective leadership for evidence-based public health. Effective leadership for evidence-based public health requires competencies in advocacy, negotiation, communication, and collaboration, all within a "systems thinking" framework. This course includes an exploration of theoretical constructs and concepts in leadership, balanced with a series of case studies, presentations, and interviews with leaders that provide examples of the application of these leadership competencies in public health practice. Students will learn to advocate for programs and policies, apply negotiation skills, communicate using appropriate strategies for specific audiences, collaborate through interprofessional learning experiences, and apply systems thinking to a public health issue. Students will be assessed through papers, group projects, and participation.

**Prerequisites:** PUH 601 [Min Grade: C] and PUH 602 [Min Grade: C] and PUH 603 [Min Grade: C] and PUH 604 [Min Grade: C](Can be taken Concurrently) and PUH 605 [Min Grade: C](Can be taken Concurrently)

**PUH 610. Population Health. 3 Hours.**

This course introduces you to the field of population health. It is intended for students and those receiving training or already working in different aspects of health and social care who wish to improve their understanding of this interdisciplinary field. Population health is a relatively new term with many meanings, but at its core, it has three central concerns. These include assessing the range of health outcomes of population groups; understanding the multiple determinants of the levels and distributions of health within and across populations; and addressing those factors through policies and practices to improve health and ameliorate health disparities.

**PUH 615. Public Health in Context and History. 1 Hour.**

This course explores the historical foundations and critical (yet sometimes overlooked) connections between public health and fields such as social work, business, pharmacy, and allied health professions. Students will learn about the influence of public health across sectors and the development of collaborative health strategies to tackle complex health issues-- pandemics, disparities, climate change, and disease control and prevention.

**PUH 627. Writing & Reviewing Research for MPH Candidates. 3 Hours.**

PUH 627 is a course that meets for ten three-hour sessions over the course of 10 weeks. Class time will be filled with discussion, group activities, tasks, writing, peer review, and presentations. By the end of this 10-week course, PUH 627 student writers will demonstrate a working grasp of academic research writing best practices, including ethics for authors, and gain knowledge and confidence as writers after completing weekly non-graded reading/writing activities, 3 rigorous graded writing assignments, and a final (a research proposal presentation) as measured by: 1) an average of grades on writing rubrics and 2) instructor evaluation.

**PUH 685. Training in Public Health Teaching. 3 Hours.**

Acquire skills for teaching in higher education, including syllabus design, communication skills for the classroom and office hours, creating assignments and rubrics, preparing and giving lectures, preparing nondidactic content, and effective grading. **Prerequisites:** Must have completed the course that you will be the TA, or similar course, in a prior semester with a grade of B or higher. Have an overall GPA of 3.0 or higher (be a student in good standing with the UAB Graduate School). Receive an invitation from the applicable faculty member to register for this course.

**PUH 688. Public Health Internship. 3 Hours.**

All students in the MPH degree program are required to complete the three (3) credit hour public health internship (PUH 688) as a part of their curriculum. The internship provides an opportunity for each student to work in a public health setting with responsibilities similar to those in an entry-level MPH position. The internship cumulates with the submission of at least two work products developed by the student that benefit the agency/organization and allows the student to successfully demonstrate competency attainment in five (5) of the Foundational MPH competencies. Students should have completed the core classes before registering for an internship.

**Prerequisites:** PUH 601 [Min Grade: C] and PUH 602 [Min Grade: C] and PUH 603 [Min Grade: C] and PUH 604 [Min Grade: C] and PUH 605 [Min Grade: C] and PUH 606 [Min Grade: C]

**PUH 690. Special Topics in Public Health. 1-6 Hour.**

This is a general course that may be used for special topic lectures or directed readings.

**PUH 696. Exploring Population Health. 6 Hours.**

Public health is what we do together as a society to ensure the conditions in which everyone can be healthy. This course will provide students an opportunity to learn about both historical and contemporary public health issues, their effects on population health, and how public health systems are working to solve the health issues affecting our communities today. This course will focus on the Southeast United States. Students will tour historically significant sites, visit communities and community-based organizations, attend featured presentations around both contemporary and historical public health issues, as well as visit local, state, tribal and federal public health agencies to learn about their structure, programs, service delivery models, and approaches to addressing issues of public health. The sum of this experience will illustrate the interdisciplinary nature of public health practice and the need to add attention to the social determinants of health – the conditions in the social, physical, and economic environment in which people are born, live, work and age – in order to achieve health equity. Travel is required for this course.

**PUH 703. Public Health Grant Writing. 3 Hours.**

This course will explore approaches to writing research grants including the preparation of grant proposals and the peer review process for research grants. We will address the development of testable research hypotheses, preparing an aims page, drafting the significance, innovation and approach sections of a grant, and preparing an NIH-formatted biosketch. Additionally, we will discuss assembling a team for conducting the work proposed in a grant, statistical power and sample size considerations and the peer-review process for research grants. The majority of class sessions will be led by guest lecturers who have substantial experience writing grants. Prerequisites: Students must have completed the first year of their doctoral program and obtain permission from their academic advisor.

**PUH 704. Grant Writing Workshop. 1 Hour.**

PUH 703 is a prerequisite to this course. This course is designed to help students further develop the proposal that was drafted in PUH 703. Students will further develop critical thinking and writing skills relevant to the preparation and submission of a National Institute of Health (NIH) Fellowship Award and an American Heart Association (AHA) Predoctoral Fellowship Award. The course is most appropriate for doctoral students who are working on their dissertation and plan to submit their fellowship award in the summer or fall.

**Prerequisites:** PUH 703 [Min Grade: B]