

# School of Public Health

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## Why Public Health?

Public health is the science of protecting and promoting the health and safety of communities through education, policy, and research. Coursework in public health gives students the skills to analyze and communicate critical public health information to diverse audiences. Whether it's warning about emerging epidemics, developing educational campaigns to help patients manage chronic conditions like diabetes or heart disease, or helping communities advocate for cleaner air and water, public health is a hands-on field that makes a difference. Students earning the Bachelor of Science in Public Health often continue their education pursuing a professional or graduate degree. Our graduates go on to work in:

- healthcare settings
- academic institutions
- for-profit corporations
- non-profit organizations
- governmental agencies like local health departments or the CDC

Our students provide value anywhere that broad knowledge of the biological, environmental, social, and behavioral influences on health is needed.

Founded in 1978, the UAB School of Public Health was established to improve the health and living conditions of the people of Birmingham; it is currently the only accredited School of Public Health in the state. For 40 years, the school has expanded to serve the state, the region, and the world. The Bachelor of Science in Public Health was established in 2013 to train students entering the public health workforce, which is currently experiencing a critical shortage of workers. After graduation, many students choose to pursue additional public health training at the graduate level or professional degrees in nursing, medicine, or other health professions.

The school also offers Accelerated Learning Opportunities (ALO) for motivated students wishing to complete both an undergraduate degree (in any field) and the Master of Public Health degree within 5 years. See the [SOPH Accelerated Learning Opportunities](#) website for more details.

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## Bachelor of Science in Public Health Degree Competencies

Upon completing the Bachelor of Science in Public Health degree, students will be able to:

- Communicate public health information in both oral and written forms and through a variety of media to diverse audiences.
- Locate, use, evaluate, and synthesize public health information.

Students will also be able to:

- Define the history and philosophy of public health as well as its core values, concepts, and functions across the globe and in society.
- Describe the basic concepts, methods, and tools of public health data collection, use, and analysis; and why evidence-based approaches are an essential part of public health practice.
- Recognize the concepts of population health, and the basic processes, approaches, and interventions that identify and address the major health-related needs and concerns of populations.
- Identify the underlying science of human health and disease including opportunities for promoting and protecting health across the life course.
- Address the socio-economic, behavioral, biological, environmental, and other factors that impact human health and contribute to health disparities.
- Apply the fundamental concepts and features of project implementation, including planning, assessment, and evaluation.
- Describe the fundamental characteristics and organizational structures of the U.S. health system as well as the differences in systems in other countries.
- Recognize the basic concepts of legal, ethical, economic, and regulatory dimensions of health care and public health policy, and the roles, influences, and responsibilities of the different agencies and branches of government.
- Implement the basic concepts of public health-specific communication, including technical and professional writing and the use of mass media and electronic technology.

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## Bachelor of Science in Public Health Degree Concentrations

The Bachelor's degree is designed to give students a foundational understanding of what public health is and what public health practitioners do. We offer concentrations in the following three areas:

- Environmental Health Sciences
- Global Health Studies
- Public Health

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## Bachelor of Science in Public Health

Online option available starting Fall 2023

The BS in public health offers a broad introduction to public health research and practice, drawing on the multiple disciplines within public health. Accredited by the Council on Education for Public Health, this degree prepares students to:

- Identify key health challenges facing a community, based on evaluation and synthesis of public health information
- Recognize the importance of evidence-based strategies to address public health challenges facing a community

- Advocate for improved health in the community, both orally and in writing, to diverse audiences

Students pursuing the BS in public health select a concentration in environmental health sciences, global health studies, or public health (a general concentration providing flexibility to pursue coursework in multiple areas of public health).

Program Completion Requirements

- Credit hours required in public health major: 27 hours
- Credit hours required in concentration: 21 hours (including at least one course designated as Experiential Learning)
- All PUH courses completed with a grade of C or higher
- Credit hours in institutional general education or core curriculum, including a First Year Experience course: 41 hours
- Credit hours in required or free electives: 31 hours
- Total credit hours required for completion: 120 hours

Requirements	Hours
Blazer Core Curriculum	41
General Electives	31
Public Health Core Courses	27
PUH 201 Introduction to Public Health	
PUH 202 Introduction to Global Health	
PUH 204 Social and Behavioral Determinants of Health	
PUH 210 Agent, Host, Environment	
PUH 230 Public Health Data and Methods	
PUH 302 Epidemiology	
PUH 305 Public Health Practice	
PUH 307 Public Health Systems	
PUH 495 Public Health Capstone Experience	
Concentration Credits	21
Total Hours	120

Environmental Health Sciences Concentration

A concentration in Environmental Health Sciences prepares students to protect workers, communities, and the environment. Common career paths include occupational health and safety, emergency preparedness response, environmental monitoring and assessment, and a wide range of positions with Health Departments or agencies focused on protecting the environment.

Requirements	Hours
PUH 220 Environmental Factors in Public Health	3
PUH 321 Workplace Environment	3
PUH 322 Environmental Justice and Ethics	3
PUH 333 Food, Water, and Air	3
PUH 422 Fundamentals of Toxicology	3

Concentration elective hours (select from any PUH or GHS course not already taken; 1 course may be from outside the School of Public Health with advisor permission). The concentration hours should include at least 6 hours from the 400-level in PUH or GHS and at least 1 course designated as Experiential Learning.

Total Hours	21
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Global Health Studies Concentration

A concentration in global health studies prepare students to advocate for the health and well-being of disadvantaged populations, both globally and here in our own community. Common career paths include work with non-governmental organizations (NGOs), ministries of health, or the WHO, focusing on issues like maternal and child health, infectious disease surveillance, disaster response, and humanitarian crises.

Requirements	Hours
PUH 333 Food, Water, and Air	3
PUH 403 Immigrant, Migrant, and Refugee Health	3
PUH 432 Global Health Cases	3
PUH 434 Global Communicable Disease Challenges	3

Concentration elective hours (select from any PUH or GHS course not already taken; 1 course may be from outside the School of Public Health with advisor permission). The concentration hours should include at least 6 hours from the 400-level in PUH or GHS and at least 1 course designated as Experiential Learning.

Total Hours	21
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Public Health Concentration (online option available)

Public health draws on a variety of disciplines (science, math, social/behavioral science, communications, economics, etc.) to investigate a broad range of health-related topics. The general concentration in public health allows students the flexibility to pursue their varied interests within this constantly evolving field. This concentration is ideal for students looking to be inspired to pursue a career where they can make a difference in their community.

Requirements	Hours
Concentration elective hours (select from any PUH or GHS course; 1 course may be from outside the School of Public Health with advisor permission). The concentration hours should include at least 6 hours from the 400-level in PUH or GHS and at least 1 course designated as Experiential Learning. <sup>1</sup>	21

Total Hours	21
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<sup>1</sup> Students may select one course from outside the School of Public Health from the list below (or another course approved by the advisor) to apply towards the public health concentration hours, if not already being used for the overall degree hours: ANTH 319, ANTH 330, ANTH 447, CHHS 141, CHHS 342, CHHS 402, CHHS 404, CHHS 408, CHHS 421, CHHS 491, DCS 101, EPR 414, GEO 491, HC 110, HC 112, HCM 305, HCM 318, HCM 402, HCM 415, HIM 415, MG 305, NTR 222, NTR 320, NUR 383, PHL 115, PHL 116, PHL 270, SOC 275, SOC 278, SOC 280, SOC 282, SOC 283, SOC 317, SOC 431, SPA 180, SW 208, SW 428

## Minor in Public Health

Public health offers a multidisciplinary perspective that complements all majors. Any student interested in health – whether from a clinical or community perspective – should consider a minor in public health. The minor is especially well-suited for students interested in applying to medical school, nursing programs, or any other clinical field. For students in STEM majors, the public health minor helps to illustrate how science can be used to protect and promote the health of populations. For students in the social and behavioral sciences, business, and education, the public health minor provides insight into how these disciplines can be used to promote the public's health.

### Program Completion Requirements

The minor includes four required core courses in public health (12 credit hours) and 6 elective hours selected by the student in consultation with their public health [academic advisor](#). #All public health courses must be completed with a grade of C or higher.

Requirements	Hours
<b>Required Public Health Courses</b>	
PUH 201 Introduction to Public Health	3
PUH 202 Introduction to Global Health	3
PUH 204 Social and Behavioral Determinants of Health	3
PUH 210 Agent, Host, Environment	3
<b>Elective Hours</b>	
6 additional hours of health-related coursework (1 course may be from outside the School of Public Health; advisor permission required). <sup>1</sup>	6
<b>Total Hours</b>	<b>18</b>

#### <sup>1</sup> Approved Electives:

ANTH 319, ANTH 330, ANTH 422, ANTH 447, ANTH 445, BY 426, CHHS 141, CHHS 342, CHHS 402, CHHS 408, CHHS 404, CHHS 408, CHHS 421, CHHS 432, CHHS 491, DCS 101, DCS 250, EC 306, EPR 414, GEO 109, GEO 415, GEO 491, HC 110, HCM 305, HCM 318, HCM 402, HCM 415, HIM 415, HY 483, MESC 209, MG 305, NTR 222, NTR 320, PHL 115, PHL 116, PHL 270, SPA 180, SOC 275, SOC 278, SOC 280, SOC 282, SOC 283, SOC 317, SOC 431, SOC 470, SOC 480, SW 208, SW 428, PUH 202, PUH 204, PUH 205, PUH 210, PUH 220, PUH 250, PUH 302, PUH 307, PUH 321, PUH 322, PUH 331, PUH 333, PUH 340, PUH 341, PUH 342, PUH 350, PUH 352, PUH 353, PUH 354, PUH 405, PUH 421, PUH 422, PUH 432, PUH 436, PUH 441, PUH 442, PUH 450

## Undergraduate Certificate in LGBTQ Health & Wellbeing

The 15-hour LGBTQ Health and Wellbeing Undergraduate Certificate Program will provide advanced education in LGBTQ health to undergraduate students at UAB seeking to enhance their skills regarding LGBTQ-related research and advocacy. It will prepare students and future professionals to have an immediate impact on LGBTQ inequities in the Deep South and throughout the nation. Undergraduate students may choose between courses in anthropology, psychology, English literature, public health, and women's studies. Students may choose from several online or classroom-based courses to meet the requirements for this program. All students will participate in a service-learning in-person course led by UAB faculty and staff from Birmingham AIDS Outreach.

Admissions requirements include:

- Enrolled as an undergraduate student at UAB
- 3.0 GPA
- Statement of Purpose

If you have questions about the program prior to enrolling, please reach out to Julie Brown at [jebrown@uab.edu](mailto:jebrown@uab.edu).

Requirements	Hours
PUH 404 LGBTQ Health and Wellbeing Service Learning	3
<b>Electives</b>	<b>12</b>
PUH 201 Introduction to Public Health	
PUH 404 LGBTQ Health and Wellbeing Service Learning	
ANTH 457 Anthropology of Gender	
ANTH 458 Human Sexuality	
CHHS 423 Human Sexuality	
EH 444 Women's Literature and Theory	
HC 218 Honor Seminar in Arts and Humanities	
HY 274 LGBT History	
PSC 364 Gender in World Politics	
PY 108 Human Sexuality	
PY 417 Psychology of Gender and Sexuality	
SOC 135 Introduction to Human Sexuality	
SOC 220 Gendered Lives: Sociology of Sex and Gender	
SOC 335 Sexuality in Social Context: Culture, Norms, and Identity	
WS 100 Introduction to Women's and Gender Studies	
<b>Total Hours</b>	<b>15</b>

The School of Public Health offers an Honors designation to those students who show exceptional commitment to serving the community through engagement in public health research or practice. Eligible students will be responsible for meeting the following criteria:

### Eligibility

- Institutional GPA 3.0
- Public Health Major GPA 3.5 – must have completed a minimum of 12 credit hours of public health coursework.

### Requirements

- Application & Essay
- Service to the Community
- Professional Development
- Final Product & Presentation
- Faculty Mentor/Sponsor

Students interested in pursuing an Honors designation in Public Health should speak with their Academic Advisor soon after declaring the major.

## Sample Program of Study for a Major in Public Health

Courses are listed as placeholders to show a sample planner. **Students should work with their academic advisor to discuss academic goals and development of an individualized completion plan for graduation.** Some PUH courses are approved as Blazer Core options. General electives are used to reach the total degree hours needed for graduation and may be used towards a minor, pre-health requirements, or other academic interests.

<b>Freshman</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
Blazer Core Local Beginnings (ex: PUH 101)		3 PUH 201	3
Blazer Core		3 Blazer Core (Scientific Inquiry)	4
Blazer Core		3 Blazer Core	3
Blazer Core		3 Blazer Core	3
Blazer Core		3 General Elective	2
	<b>15</b>		<b>15</b>
<b>Sophomore</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
PUH 202		3 PUH 204	3
Blazer Core		3 PUH 210 <sup>BY 101/102, BY 115 or BY 123 is needed as a prerequisite for PUH 210</sup>	3
Blazer Core		3 Blazer Core	3
Blazer Core (Scientific Inquiry)		4 Blazer Core	3
General Elective		2 General Elective	3
	<b>15</b>		<b>15</b>
<b>Junior</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
PUH 230		3 PUH 305	3
PUH Concentration Course		3 PUH Concentration Course	3
PUH 302		3 PUH Concentration Course	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
	<b>15</b>		<b>15</b>
<b>Senior</b>			
<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
PUH 307		3 PUH 495	3
PUH Concentration Course (400-level)		3 PUH Concentration Course (400-level)	3
PUH Concentration Course		3 PUH Concentration Course	3
General Elective		3 General Elective	3
General Elective		3 General Elective	3
	<b>15</b>		<b>15</b>
<b>Total credit hours: 120</b>			

## EPI-Epidemiology Courses

### GHS-Global Health Studies Courses

#### GHS 420. Field Studies: Jamaica. 3 Hours.

This course is designed for students interested in global health, whether from public health, medicine, nursing, or other allied graduate programs. Key details about this course include: 1)It is focused on community-based approaches to public health, this course emphasizes the integration and application of classroom, laboratory and field experiences in order to foster problem-solving skills for infectious disease ecology, surveillance and control in resource-constrained settings. 2)Lectures will be given online prior to the beginning of the course and briefings will be held in UWI facilities while in Jamaica. 3)The three primary field projects will be mosquito surveillance, STD/HIV care and prevention, and water & sanitation. 4)In Jamaica, students will attend briefings, acquire laboratory identification skills and use field techniques to generate and analyze data.

#### GHS 429. Intensive Global Health Training - SIFAT. 3 Hours.

Become a better Global Citizen by learning critical issues on Household Energy use in the developing world that affect health, environmental sustainability, gender equity, economics, and the development of millions of families and communities globally. Eight days, twelve hours a day.

#### GHS 430. Global Health Training, SIFAT. 6 Hours.

This two week intensive field training course will take place at SIFAT's 176-acre international training campus in Lineville, AL. Students will attend didactic sessions and participate in hands-on activities and simulations. SIFAT trainers are experienced in international development and cross-cultural dynamics.

## PUH-Public Health Courses

#### 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 place-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.