

# GLOBAL PUBLIC HEALTH (GPH-GU)

---

## **GPH-GU GU3185 Health Services and Policy Research (3 Credits)**

This course introduces key concepts and ideas in health services and policy research. Health services research is a multidisciplinary field of study that seeks to understand how economic, social, individual and structural factors are related to health care access, utilization, quality and costs. Insights from health services research are critical to inform health policy decisions across sectors and populations. Topics addressed in this course include health care quality, population health, health care costs, survey and administrative data sources used in health services and policy research, experimental and observational study designs, data management and comparative effectiveness research.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

## **GPH-GU 85 Ethics and Research (4 Credits)**

The course examines the scandals that launched the field of research ethics and consider the ethical principles that arose in reaction. A central issue concerns the nature and limits of informed consent. Topics include: what makes consent valid? What kind of understanding is required for consent to count as 'informed'? How should we distinguish research and clinical care? What clinical responsibilities to researchers have in designing and conducting studies? What does it take to justify research when consent is impossible, as in the case of children or incapacitated patients? When, if ever, is it acceptable to use deception in research? What else is required, beyond informed consent, to justify research? In particular, what sorts of social goals should research promote, and what social harms must it avoid. \*(restricted to juniors and seniors only)\*

**Grading:** Ugrd Global Publ Health Graded

**Repeatable for additional credit:** No

## **GPH-GU 95 The Ethics of Reproduction (4 Credits)**

This course surveys central issues in the ethics of human reproduction. Topics include the morality of abortion; whether we can harm people by bringing them into existence; moral issues raised by assisted reproduction; genetic selection and enhancement; the impact of our reproductive choices on future generations. The course will introduce students to philosophical conceptions of personal identity, fundamental moral notions (e.g., harm, interests, autonomy, respect), and the standards of bioethical debate.

**Grading:** Ugrd Global Publ Health Graded

**Repeatable for additional credit:** No

## **GPH-GU 1005 Advanced Introduction to Bioethics (3 Credits)**

*Typically offered Fall*

Advanced Introduction to Bioethics - Open only to Graduate Students in Bioethics or Philosophy or by Permission of Instructor. This seminar is intended to introduce students to the central methods and concerns of contemporary bioethics. We will consider topics including the grounds for respecting human (and other) life, the concepts of well-being and autonomy, decisions about future people, and justice in distribution of scarce medical resources. Students will develop familiarity with these concepts as well as the conventions and standards of bioethical debate.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

## **GPH-GU 1006 Advanced Introduction to Environmental Ethics (3 Credits)**

*Typically offered Spring*

Advanced Introduction to Environmental Ethics - This course situates theoretical developments in practical ethics broadly and in environmental ethics specifically. The course builds on the theoretical materials by examining a series of cases including ethics and agriculture, corporate responsibility and environmental injustice, and the environmental health consequences of war.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

## **GPH-GU 1165 Research Ethics (3 Credits)**

*Typically offered Summer term*

The course will examine the scandals that launched the field of research ethics and consider the ethical principles that arose in reaction. We will be especially concerned with the nature and limits of informed consent, as the central principle of research ethics. We will ask: what makes consent valid? What kind of understanding is required for consent to count as 'informed'? How should we distinguish research and clinical care; what clinical responsibilities to researchers have, in designing and conducting studies? What does it take to justify research when consent is impossible; as in the case of children or incapacitated patients? When, if ever, is it acceptable to use deception in research? What else is required, beyond informed consent, to justify research? In particular, what sorts of social goals should research promote, and what social harms must it avoid?

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

## **GPH-GU 1175 Life and Death (4 Credits)**

*Typically offered Spring term of odd numbered years*

Life and Death - In this seminar we will discuss a range of questions about the value of both human and non-human life, the morality of causing humans and non-humans to exist or not to exist, and what makes the lives of humans and non-humans better or worse. Specific topics include: respect for nature and human life; the harms and benefits of human and non-human existence, of family and single life; assisted reproductive technologies, contraception, abortion, and infanticide; the moral weight of environmental concerns in individual procreative decisions and state population policies.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

## **GPH-GU 1210 Justice in Health & Healthcare (3 Credits)**

This course surveys philosophical theories of justice, applying them to population bioethics with particular focus on environmental health justice. Case studies will include environmental racism and injustice in the United States as well as environmental and global justice dimensions of climate change, food systems, pollution, and infectious disease.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 1220 Controversies and Ethics (4 Credits)**

bioethicists are centrally concerned with matters of public controversy and political debate. What difficulties and responsibilities does this fact entail for the practice of bioethics? In this seminar we will examine several controversial bioethical issues. Our focus will not be on the arguments themselves, but on what we should make of the fact that they are controversial. Should bioethical inquiry take account of intractable moral disagreement? What are the distinctive roles of religious and secular perspectives in public debate? Can bioethicists legitimately claim authoritative expertise in a democracy? We will address the questions by reading work from philosophy and political theory, and also through case study of historical and contemporary issues including: the removal of homosexuality from the DSM, the 'Philosophers' Brief' on assisted suicide, and the regulation of new gene-editing technology.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 1225 Democracy and Scientific Expertise (3 Credits)**

In a democratic society, policy is set by the public and its representatives. But making good policy sometimes requires scientific expertise that the public lacks. Certain contentious topics, such as climate change and evolution are marked by a significant gap between scientific consensus and public attitudes, with many people unwilling to trust scientific findings. This course will begin with a brief exploration of core ideas from democratic theory, before focusing on tensions between the value of democracy and the value of scientifically-based policy. Drawing on examples from recent U.S. politics, we'll consider philosophical work on the possible sources of these tensions, individual responsibilities in light of them, and structural approaches to addressing them.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 1230 Advanced Introduction to Public Health Ethics (3 Credits)**

This course examines the ethical foundations of public health and ethical issues that arise in the context of public health work. Topics will include, for example, balancing individual autonomy and community health, rights to health and healthcare, culturally respectful global health interventions, and the risk of generating stigma through public health campaigns. We will also discuss the ethics of public health research, exploring topics such as privacy considerations in data gathering and informed consent in a community health context.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2020 Independent Capstone I (3 Credits)**

*Typically offered occasionally*

This course is offered in the Fall term for dual degree MD/MPH students who choose to do an independent Capstone in lieu of the regular Capstone requirement for students in Global Health Leadership.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2022 SAS for Beginners: Data Management and Exploration (1 Credit)**

This 5-session (2 hours per session), 1-credit course will introduce students to Statistical Analysis System (SAS®) software and provide an opportunity to gain basic knowledge of this commonly-used software by working with data from the real-world (e.g. data related to the COVID-19 outbreak). The course will cover data management, descriptive analysis, and data visualization. Students will complete problem sets after each class to reinforce skills introduced during that class, create a fact sheet as a culminating assignment that requires students to analyze the real-world public health data and present their findings. All the learning materials will be taught and performed using SAS standard version (version 9.4) and SAS OnDemand for Academics.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2025 Reproductive Ethics (4 Credits)**

This course surveys central issues in the ethics of human reproduction. Topics include whether (and when) procreation is permissible; the nature and extent of parental responsibility; the morality of abortion; the ethics of gamete donation; whether we can harm people by bringing them into existence; commercial surrogacy; genetic selection and disability; the impact of our reproductive choices on future generations; genetic engineering and enhancement. The course will introduce students to fundamental moral notions (e.g., harm, interests, rights, autonomy, respect), philosophical conceptions of personal identity, and the standards of bioethical debate.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2026 Neuroethics (4 Credits)**

*Typically offered occasionally*

Neuroethics has two branches: the neuroscience of ethics and the ethics of neuroscience. The former is concerned with how neuroscientific technologies might be able to shed light on how we make moral decisions, as well as on other philosophical issues. The latter is concerned with ethical issues raised by the development and use of neuroscientific technologies. Topics include whether neuroscience undermines deontological theories; whether our moral reasoning is inherently biased; whether there is a universal moral grammar; the extended mind hypothesis; the ethics of erasing memories; the ethics of mood and cognitive enhancements; "mind#reading" technologies; borderline consciousness; and free will and addiction.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2027 Moral Indeterminacy (4 Credits)**

It seems impermissible to kill one innocent person to save five other innocent people from being killed. At the same time, many people have the intuition that it may be permissible to kill one innocent person to save, e.g., one million people. Suppose that there is something to these intuitions. Is there a precise threshold when the act of killing an innocent person changes from impermissibility to permissibility, or is the boundary fuzzy? Is the source of this indeterminacy due to semantic vagueness in the term 'permissibility' or lack of adequate knowledge about what counts as permissible? Or does the indeterminacy stem from vagueness in the world? What is the difference between vagueness and indeterminacy? How should we go about deciding what to do when faced with a case of moral indeterminacy? In this seminar, we shall critically review some of the most popular philosophical approaches to vagueness including semantic, epistemological, and ontological approaches; consider whether the source of moral indeterminacy may be different from non-moral indeterminacy; and apply these insights to normative issues such as the defensibility of threshold deontology and the problem of incommensurability in population ethics.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2028 Nonconsequentialism (4 Credits)**

Nonconsequentialism is a type of normative theory according to which the rightness or wrongness of an act is not determined solely by consequences. In particular, it holds that even when the consequences of two acts are the same, one might be wrong and the other right. In this course, we shall examine factors (prerogatives) that permit an agent to act in ways that do not maximize the good, and factors (constraints) that limit what an agent may do in pursuit of the good. We shall discuss topics such as the moral difference between harming and not-aiding; intending and foreseeing harm, i.e., the Doctrine of Double Effect; whether constraints are absolute; and how nonconsequentialists should address issues such as aggregation and the so-called paradox of deontology. We shall also investigate how one might be able to provide a plausible, theoretical foundation for nonconsequentialism.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2029 Controversies & Politics (4 Credits)**

While medicine may aspire to objectivity, it remains a human practice that is often shaped by our personal values and political commitments. In this course, we will examine some of the ways in which medicine is 'value-laden', and in which our political commitments may inform our medical practices. We will ask questions like: how do we define health and disease? How do we draw the line between mental illness and mere mental difference? What role should a medical professional's personal values play in their practice? Should doctors have a right to refuse to perform medical procedures that violate their personal moral commitments? To what extent should medical systems accommodate patients' religious and cultural practices? We will address these questions, among others, by reading work from philosophy, political theory, and by examining case studies.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2032 End of Life (4 Credits)**

Central to philosophical discussions about the end of life is a well-known argument about the rationality of fearing death. That argument raises several puzzles about our asymmetrical attitudes concerning time, and about the badness of death. In addition to the value of death, this course will address related topics from among the following: definitions of death; personal identity; dementia and moral status; the meaning of life; the coherence and desirability of immortality; assisted death, advance directives, and end-of-life care; whether one can be harmed by being born. The general aim of the course is to strengthen your skills in analytical thinking and in substantive philosophical debate of these issues.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2085 Autonomy, Capacity, and Consent (3 Credits)**

This course investigates the nature of and relationship between autonomy, decision-making capacity, and informed consent. It divides into three parts. The first part asks: what is it to act autonomously and why is autonomy important? The second part asks: what is required to have decision-making capacity, understood as the ability of subjects to make their own medical and health-related decisions, and what is its relationship to autonomy? The third asks: what is consent, and why is it important? Although the focus of the course will be on general moral, metaphysical, and legal questions such as these, it will also consider a range of case studies arising in medical, research, and public health settings.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2100 Course Advisement (0 Credits)**

*Typically offered not typically offered*

This course will review the degree requirements for the Community & International Health, Global Health Leadership, and Public Health Nutrition concentrations. It will look at core course, concentration course, and elective requirements in addition to the culminating experiences. It will prepare students to understand the course registration process, when courses are typically offered and other information relevant to course enrollment. It will ensure that students understand their concentration's degree requirements, how to register on Albert, how to read the NYU MPH course schedule, become familiar with basic information about various courses, and become familiar with different tools to use when planning out courses.

**Grading:** School of Global Public Health Pass/Fail

**Repeatable for additional credit:** No

**GPH-GU 2105 Thinking Critically and Ethically in Public Health (1.5 Credits)**

This course is an introduction to critical thinking, ethics, and writing for public health professionals, who need to communicate public health content and identify communication strategies for different audiences. At the heart of such communications is persuasive writing. The first module introduces students to core reasoning skills such as what counts as a good reason for one's belief, what is an argument, the difference between a deductive argument and an inductive argument, and so on. Public health professionals are also often involved in devising policies that should be guided by sound ethical principles. The second module introduces students to key ethical theories and ethical issues that illustrate how the promotion of public health can conflict with autonomy, privacy, and social justice.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2106 Epidemiology (3 Credits)***Typically offered Fall*

Epidemiology is the study of the distribution and determinants of health and disease in different human populations and the application of methods to improve disease outcomes. As such, epidemiology is the basic science of public health. This course is designed to introduce students in all fields of public to the background, basic principles and methods of public health epidemiology. Topics covered include: measures of disease frequency; epidemiologic study designs, both experimental and non-experimental; understanding bias; and measures of effect and association. In addition, students will develop skills to read, interpret and evaluate health information from published epidemiological studies and mass media sources.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** Yes**GPH-GU 2110 Health Care Policy (1.5 Credits)***Typically offered Fall*

This course introduces students to key concepts, principles and practices in the field of health policy and management. The course will examine issues that concern quality, costs, access to healthcare and public health services for individuals and populations. The course emphasizes the need for leaders in today's world of public health to understand central issues in both policy and management and, importantly, how these interact. The overall goal of the course is to provide information for students to build an understanding of the fundamental ideas, issues, and problems currently debated in health policy and management and to provide a foundation for practice in a range of careers in public health and health care policy and management.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2112 Public Health Management and Leadership (1.5 Credits)***Typically offered occasionally*

The overall goal of the course is to provide information for students to build an understanding of the fundamental ideas, issues, and problems currently debated in public health management and to provide a foundation for practice in a range of careers in public health and management.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2115 Introduction to Principles of Nutrition in Public Health (3 Credits)***Typically offered Fall*

This course will cover the basic concepts of the science of nutrition detailing the nutrients, food sources, function and nutritional requirements. The course will integrate the nutritional needs of populations, both nationally and globally, with emphasis on undernutrition, over nutrition and the double burden of malnutrition. The principles of nutritional needs will be applied to promoting health in vulnerable populations.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2118 Food System Policies and Politics: Agriculture, Nutrition, Public Health (1 Credit)**

This course deals with the big-picture context of the most important global problems in public health nutrition: food insecurity, food overconsumption, and the environmental effects of agricultural production.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2120 Foundations of Global Health (3 Credits)***Typically offered Fall*

This course prepares students to critically examine public health issues from a global perspective. It will help you to understand how processes of socioeconomic development and globalization influence the health of populations throughout the world. This course prepares students to critically examine public health issues from a global perspective. It will present the state of the art in addressing global health problems, and introduce you to the primary actors involved in setting global health policies and in developing global health programs and services. The course will also touch upon the ethical dimensions of global public health, including conflicts between individuals, communities, and nations. The course is organized around four modules, three of which (Governance, Health Threats, & Opportunities), provide a critical lens for understanding global health today, and a fourth (Skills Building) that provides an introduction to the leadership skill sets required to address them. Pre-requisites: none

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2123 Integrative Seminar: Prac of Glob Pub Hlth I (1.5 Credits)***Typically offered not typically offered*

The Integrative Seminar is an inter-disciplinary series designed to compliment the core courses and concentrations with a discussion oriented seminar that will permit exposure to global health leaders and in-depth exploration of the paradigms, perspectives, and policy challenges that shape action in global public health. The course will also include special intensive modules to build skills students will need as individuals, as part of interdisciplinary teams, and as organizational leaders who translate knowledge into effective action to improve global health. The style of the course will be heavily oriented towards peer and experiential learning. It will assume active preparation and participation of all students to facilitate the lively discussion, debate and problem solving that are critical in an area of work that is relatively new and, therefore, contains ?contested knowledge?.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2124 Integrative Sem:The Prac of Global Pub Health II (1.5 Credits)***Typically offered not typically offered*

The Integrative Seminar is an inter-disciplinary series designed to compliment the core courses and concentrations with a discussion oriented seminar that will permit exposure to global health leaders and in-depth exploration of the paradigms, perspectives, and policy challenges that shape action in global public health. The Integrative Seminar is an inter-disciplinary series designed to compliment the core courses and concentrations with a discussion oriented seminar that will permit exposure to global health leaders and in-depth exploration of the paradigms, perspectives, and policy challenges that shape action in global public health. The course will also include special intensive modules to build skills students will need as individuals, as part of interdisciplinary teams, and as organizational leaders who translate knowledge into effective action to improve global health. The style of the course will be heavily oriented towards peer and experiential learning. It will assume active preparation and participation of all students to facilitate the lively discussion, debate and problem solving that are critical in an area of work that is relatively new and, therefore, contains ? contested knowledge?.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No

**GPH-GU 2125 Nutrition Education and Promotion Initiatives in Public Health (3 Credits)***Typically offered Spring*

This course will examine the role of nutrition education as a means of promoting, maintaining and improving the health and wellness of community populations. Using evidence based approach; the course will integrate skills obtained through practice and experience with external evidence from systematic research regarding nutrition education. Students will acquire the skills and knowledge to effectively identify, assess and adapt nutrition education materials and programs.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2126 Healthcare Claims Data Analysis (3 Credits)**

This course will introduce students to the richness, complexities, and limitations of healthcare claims data and how the data may be deployed to answer a variety of real-world population health questions. Topics covered in the course include an introduction to claims data and how it is used in population health analysis and quality of care measurement, data basics, claims coding, and how claims data is used in business, academic research, and to inform policy. Students will work hands-on with claims data to complete course assignments and a project.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2128 Writing and Communications for Public Health Policy and Management (3 Credits)**

Writing, presenting, and facilitating are core competencies in public health policy and management. Without the ability to produce clear, concise, and engaging writing you will have trouble convincing others of your point of view. Equally important are your facilitation and presentation skills. In this class we will develop the skills required to write compelling public health and policy documents. We will explore ways to present your material so your audience can grasp its importance. We will discuss tactics for facilitating discussions, practice the technique of active listening, and learn strategies for how to "read a room." This class will include brief lectures, discussion, role plays and student-centered learning.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2130 Global Health Diplomacy (3 Credits)***Typically offered occasionally*

Many of the geopolitical forces that shape global health (global disease burden and our collective response to it) lie outside of the health sphere. This course will explore the ways in which global health is influenced by, and can influence, other global forces including foreign policy, trade/economic policy, environmental policy, and security policy in a globalizing world. Effective responses to current and future global health challenges require that public health professionals (particularly those working in policy or at a policy-level) understand these dynamics and how best to leverage them in order to achieve better health outcomes globally.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2135 Dissemination and Implementation Science in Health Care and Public Health (3 Credits)**

Dissemination and implementation (D&I) science studies how evidence-based interventions in health care and public health can be spread and integrated into practice. This course introduces foundational elements of D&I science and teaches the essential skills required to apply D&I methods effectively to overcome barriers to dissemination, implementation, sustainability and spread of evidence-based health care and public health programs and policies. Students will learn how to develop and evaluate solutions to overcoming barriers to implementing evidence-based interventions. The course uses case studies to provide examples of ways in which these methods can be applied in real world settings.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2140 Global Issues in Social & Behavioral Health (3 Credits)***Typically offered Fall*

This course begins by examining social, psychological, and cultural factors that have an impact on public health in community, national, and global contexts. These factors include population characteristics, individual beliefs and behaviors, and policies that affect public health problems and their solutions. The second half of the course introduces students to methods that public health professionals use to address the social and behavioral determinants of health. These methods include theories and perspectives drawn from the social/behavioral sciences, interventions and policies designed to alleviate health disparities, and methods to evaluate interventions and disseminate the results.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2145 Introduction to Public Health Systems: Management and Policy Issues (3 Credits)***Typically offered Fall*

This course introduces students to key issues, concepts and practices in the field of public health management and policy. We examine the organization, management and performance of public health departments and systems. The course emphasizes the need for leaders in today's world of public health to understand central issues in both public health policy and management and, importantly, how these interact. The overall goal of the course is to promote students' understanding of, and ability to analyze, fundamental issues and ideas that are central to public health systems and to develop students' skills for a range of careers in public health management and policy.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No

**GPH-GU 2150 Global Environmental Health I (1.5 Credits)***Typically offered not typically offered*

In this course we examine the determinants of health starting with the endogenous factors of age, genetics and gender. Following this we will explore how the substrates of air, water, and nutrition are critical to health and are potential conduits of contamination with harmful xenobiotics. The World Health Organization estimates that up to 25% of the global disease burden is due to environmental factors and even higher for children. We will examine the difference in disease burdens and disease patterns between developed and developing countries. Namely we will examine contemporary issues in food and water security, patterns of contamination, and the origins and effects of particulates and air pollutants on human health. This first part of global environmental health reviews the determinants of health as they relate to the critical substrates of nutrition, water, and air. Healthy populations have a sufficient, uncontaminated source of each of these substrates. We will examine contemporary health issues to reveal how deficiencies, excesses, or contamination of water, food, and air may result in disease. When feasible we will compare these to past and potentially, future global health consequences.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2151 Global Environmental Health II (1.5 Credits)***Typically offered not typically offered*

In this course we examine the determinants of health starting with the endogenous factors of age, genetics and gender. Following this we will explore how the substrates of air, water, and nutrition are critical to health and are potential conduits of contamination with harmful xenobiotics. The World Health Organization estimates that up to 25% of the global disease burden is due to environmental factors and even higher for children. We will examine the difference in disease burdens and disease patterns between developed and developing countries. Namely we will examine contemporary issues in food and water security, patterns of contamination. This half of Global Environmental Health will continue to examine the health consequences of the external natural and built environments in poorly developed, rapidly industrializing and developed worlds. This section will focus more on sustainable solutions to development and health.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2152 Introduction to Agent-Based Modeling (3 Credits)**

How do local (micro-scale) interactions between individuals generate global (macro-scale) societal patterns—of disease, of conflict, of inequality? Agent-based modeling (ABM) is a powerful new way to address such questions computationally. In ABMs, software individuals and the interactions between them are explicitly represented, and these local interactions generate the global patterns we wish to explain, and to alter through policy, epidemics being prime examples. This course introduces students to ABMs from epidemiology, public health, and social science. It teaches students to build, analyze, extend, test, and present simple models in NetLogo. No prior programming is required. Final projects will be tailored to students' interests and technical levels.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2153 Global Environmental Health (3 Credits)***Typically offered Fall and Spring*

Environmental health sciences represent the study of biological, physical, and chemical agents that affect the health of both communities and workers. This course provides students with an introduction to key areas of environmental health. Students gain an understanding of the interaction of individuals and communities with their environment, the impact of environmental agents on human health, and specific applications of concepts of environmental health including exposure assessment and engineering controls. The impact of global environmental issues on health equity will be considered, as well as scientific, political, legal, and economic perspectives on global environmental health. Emphasis is placed on issues in environmental health that transcend national boundaries.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2154 Adolescent Health and Development (3 Credits)**

This course will provide an overview of adolescent health and development. Drawing from a range of disciplines, students will critically examine the state of the evidence on adolescent health and learn about the main health issues and considerations to promote healthy development in this age group. Course topics include: healthy biological and psychological development; the social contexts of adolescent development, including race/ethnic identity development; nutrition, body image and weight stigma and discrimination; adolescent sexuality development; HIV and other sexually transmitted infections; mental health, tobacco and alcohol use; youth violence; and adolescent health in emergencies, such as COVID-19.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2155 Public Health Policy (3 Credits)***Typically offered Spring*

This course explores policy tools and regulatory mechanisms that can be used to improve the public's health. It examines issues related to evidence, stakeholders, and the processes involved in policymaking and implementation. Students will learn to evaluate government and other institutions' policies and formulate apt policy solutions to public health problems, such as those resulting from tobacco, alcohol, and food consumption. We will discuss the government's ability to shape health policy and limitations on the same in the context of firearms, injury prevention, and the labeling and marketing of products that cause harm. The course brings in current events so students gain a practical and current understanding of public health policy issues.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No

**GPH-GU 2160 Qualitative & Field Methods (3 Credits)***Typically offered Fall and Spring*

This course is devoted to flexible forms of inquiry suited to the local context of global public health research. Sometimes known as "action research", "rapid assessment", and "community-based participatory research" these approaches share a commitment to working closely with and in communities to identify health risks and effective interventions for ameliorating them. Although field research may include surveys and other forms of quantitative research, the emphasis in this class will be on qualitative methods with mixed method approaches included where appropriate. The focus will be on introducing the basic content/skills of on-the-ground field research under challenging conditions, i.e., shortages of time and resources as well as cultural/ linguistic differences. There are additional aspects to learning these methods (e.g., data analysis) that require much more time and skill development than is possible in this brief introductory course. Interested students are strongly advised to take additional coursework in qualitative methods.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2170 Social Marketing in Public Health (3 Credits)***Typically offered not typically offered*

Social marketing increasingly plays a key role in the promotion of public and environmental health initiatives and desired outcomes. This community-based learning course draws on the principles of social marketing to develop health promotion across media platforms. Student teams will design population-based promotional content for area public health and non-profit organizations. Students will develop critical skills for understanding the essential tools in public health promotion, through exposure to media literacy and representations found in public health media content presented in class

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2172 Global Health Informatics Workshop II (0 Credits)***Typically offered not typically offered*

Public Health Informatics is a new field that is concerned with the systematic application of information and computer sciences to practice, research and learning. This course is created to ensure that graduates of the program have (1) basic familiarity with the issues of technology in computers, communications and genomics in global health; (2)

**Grading:** School of Global Public Health Pass/Fail**Repeatable for additional credit:** No**GPH-GU 2183 Introduction to Statistical Programming in R (2 Credits)**

R is one of the most popular programming languages in statistics and data science. This course will introduce various R programming topics, including data visualization, exploration, and transformation, via illustrations with public health datasets. Students will learn how to program in R effectively and efficiently for data analysis with popular R packages including dplyr, tibble, readr, and ggplot2. By the end of the course, students will be able to write R codes from scratch for data visualization, exploratory analysis, transformation, and import & export. This course does not require prior experience in programming or statistics and serves as a foundation for other courses in biostatistics, epidemiology, and data science. Students are recommended to take the follow-up course: Intermediate Statistical Programming in R.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2184 Intermediate Statistical Programming in R (2 Credits)**

R is one of the most popular languages in statistics and data science. This course is the follow-up of GPH-GU 2183 Introduction to Statistical programming in R, and covers intermediate R programming topics that include organizing and modifying data, operating on various data object types, creating functions and iterations for statistical simulations, and writing high-quality reports with R Markdown. The course will focus on public health datasets as illustrations to best meet the practical needs of CGPH students but is also open to those of other backgrounds. By the end of the course, students will be able to comfortably program in R for effective data preprocessing, analysis and presentation. This course serves as a good preparation for courses in biostatistics, epidemiology, and data science.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2185 Readings in the History and Philosophy of Public Health III (0 Credits)***Typically offered not typically offered*

This non-credit bearing course will require students to read and discuss important global public health books exploring the evolution of the field of public health in global perspective from the 19th century to the present. All MPH students will be required to complete 3 of these non-credit bearing courses prior to graduation. For each of these course sessions, a book will be discussed in a public lecture by its author; students are expected to read the book in advance, responding with a "forum" posting on the "NYU Classes" website one week in advance of the lecture, including a question raised by the book about public health. Questions will be collected and forwarded to our author-speakers in advance of their public lectures. The lecture and Q&A will be chaired by a member of the GIPH faculty and will last for two hours. Students are expected to sign up for/ complete the reading and written response/ attend the lecture for at least three books in the history of global public health over the semesters in which they are earning their graduate degrees. The successful completion of three or more of these course sessions will lead towards the achieving this critical content as described by ASPPH for the 21st century MPH: "History and philosophy of public health as well as its core values, concepts, functions, and leadership roles.

**Grading:** School of Global Public Health Pass/Fail**Repeatable for additional credit:** No**GPH-GU 2190 Essentials of Public Health Biology (3 Credits)***Typically offered Fall*

This course introduces MPH students with minimal formal training in biology to the biological and molecular context of public health. The course provides an overview of: a) basic biological principles and mechanisms relevant to public health practice; and b) biomedical technology as applied in public health. The course covers basic principles of genetics, immunology, microbiology, and cell biology in the context of global public health. Areas covered include infectious diseases, genetic and chronic diseases, allostatic load, environmental factors affecting health, and prevention and treatment strategies.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No

**GPH-GU 2195 Nutrition and Metabolism (3 Credits)***Typically offered Spring*

This course examines the biological and physiological roles of macronutrients (carbohydrates, proteins, fats) and micronutrients (vitamins and minerals) in human health and disease. The associations between these nutrients and the development or prevention of adverse health outcomes relevant to public health, including obesity, diabetes, cardiovascular diseases, and cancer, will be addressed. Pre-requisite: GPH-GU 2115

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2205 Gun Violence in America: Public Health, Politics, and Pragmatism (3 Credits)**

More Americans have been killed with guns since 1968 than died in all the wars since the country's founding. Addressing this crisis means solving tenacious problems of both public health and politics. In this course we will examine the main causes of firearm injury, the political actors that have influenced America's public policy response, and the ways all of this connects to the underlying beliefs and behaviors that define American's relationship with guns.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2210 Migration & Health (3 Credits)***Typically offered Spring*

This course will provide an overview of key topics in public health for migratory persons: demographics; specific population groups and their circumstances and rights, including refugees, immigrants, asylees, and migrants; epidemiologic issues of displaced persons, including the shifting burden of disease, nutrition, environmental and occupational concerns; health and human rights; ethics; torture and other violence; PTSD, and other acute and chronic mental health concerns. Immigrant and Migratory Health will be approached from various perspectives, including historical, demographic, epidemiologic, access (economic, legal, linguistic, cultural, and institutional), life cycle, environment, including occupation and nutrition, and policy. The course will impart to students the skills necessary to develop an integrated approach to the care of immigrant and migratory populations.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2211 Environmental Injustice: From Local to Global (3 Credits)**

The United States Environmental Protection Agency (2007) defines environmental justice as the fair treatment and meaningful involvement of all people regardless of race, color, sex, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations, and policies. It is the right to a decent, safe quality of life in the environments where we live, work, play and learn. This required course will explore the links between environmental justice and civil rights and the political response to the movement both locally and globally through legislative and regulatory actions. The first half of this course will focus on the history of the environmental justice and cover seminal readings, regulations and laws. The second half will focus on local and global air, water, food and land based environmental exposures.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2212 Community Based Health Interventions (3 Credits)***Typically offered not typically offered*

This course engages students in assessing, describing, selecting and evaluating community based health interventions. It traces the origins of community based approaches to improving health, examines the evolution of such approaches, and introduces students to the health promotion theories that underlie some of the most well-known community based health interventions. It considers the elements of such interventions and examines the debate about their effectiveness. In the second half of the course, students examine a variety of public health interventions addressing current health topics in the US today, focusing on factors influencing the design of interventions, the choice of methods selected, methods for assessing the magnitude of change effected by the intervention, and ethical and political issues raised by the interventions.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2213 Public Health Nutrition (3 Credits)***Typically offered Fall*

Introduction to the concepts, principles, and scope of practice of public health nutrition. The course emphasizes the distinction between population-based and individual-based approaches to prevention and alleviation of diet-related conditions, and the societal, economic, environmental, and institutional barriers to improving the nutritional status and health of diverse population groups.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2214 International Health & Economic Development (3 Credits)***Typically offered not typically offered*

An introduction to the issues of health and health care on a global basis. The course focuses on the nature and scope of major worldwide health problems and the study of different national and international approaches to their solution.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2215 Food Policy (3 Credits)***Typically offered not typically offered*

Analysis of the economic and social causes and consequences of current trends in food production, marketing, and product development.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2217 Food Policy for Public Health (3 Credits)***Typically offered Fall*

Food and its many aspects has become a mainstay of public health policy, popular discourse, and national debate. This course examines current policy issues related to the modern food environment locally, nationally and internationally. The course provides background into how the U.S. government (federal, state, and local) can act in the area of food policy and it delves into topics related to nutritional guidelines, food programs, food safety, labeling, marketing, and pricing. We will additionally explore issues related to the food industry, the global nutrition transition, and agricultural and environmental food production concerns.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No



**GPH-GU 2218 Assessing Community Health Needs (3 Credits)***Typically offered Fall*

Community health assessments comprehensively identify the assets and needs of a defined group. When conducted in tandem with community members, community health assessments provide a window into how a community sees itself, the systems and patterns it functions by, and its assets and needs. Public health practitioners can use this information to work with a community to utilize its strengths to address mutually acknowledged needs. In this course, students will work in teams to conduct a community assessment of an assigned United Health Fund district within New York City. The focus of the course will be on introducing the basic content/skills of on-the-ground field research, collecting, analyzing, and summarizing data. Specifically, students will use primary data (surveys, in-depth interviews, observations) and secondary data (public data sets) collection along with systems thinking to describe and understand the health, demographics, and socio-economic profile of the community. Students will survey and/or interview community leaders, community based organization representatives, health practitioners, and/or community residents. Students will summarize the findings and offer recommendations in a final report and presentation.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2219 Application of Implementation Science Frameworks to Address Diseases in Global Populations (3 Credits)**

In order to improve health outcomes for diverse populations, evidence-based interventions (EBI) or evidence based practices (EBP) must be sustainable and incorporated into routine care in global settings. Students will explore several implementation science frameworks using examples from low and middle-income countries (LMICs). Then, through a guided series of critical thinking interactive workshops/activities apply the framework (e.g. RE-AIM, CFIR, EPIS...etc.) to address distinct diseases in global population(s), by selecting an EBI/EBP and explore its application to a global health challenge. At the end of the course, students will be able to critically evaluate and assess the utilized framework and articulate the strengths and deficiencies inherent within that framework to address the stated problem.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2220 Accelerating Progress Towards Health-Related SDGs (3 Credits)***Typically offered not typically offered*

This course provides an overview of the state-of-the-art concerning the Global Burden of Disease, the Disease Control Priorities, Universal Health Coverage and Health Systems Analyses. Students apply systems thinking and evaluation methods in designing policies to accelerate progress toward the health related Sustainable Development Goals (SDGs), by categorizing health related targets within the SDGs according to mortality, incidence/prevalence of disease, risk factors, cost effective interventions and health system platforms. For each of these dimensions, students analyze concepts, methods, information sources and existing data for countries with differing burdens of disease.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2222 Clinical Ethics (3 Credits)***Typically offered Spring*

Theoretical and practical medical ethics, combined with observation in a clinical setting.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2224 Introduction to Urban Health and Equity (3 Credits)**

This course will introduce students to urban health and its broad determinants. The course will combine readings, classroom lecture and discussion to provide an overview of urban health and health equity. As an emerging interdisciplinary area of research, practice and policy, we will draw on the work of experts and experience from all regions of the world and examine the challenges a focus on cities raises as a subnational focus when global health governance has historically worked with national governments. We will also look specifically at NYC as a global city that has been committed to advancing urban health and health equity through a health in all policies approach and alignment of its strategic plan OneNYC with the SDGs to examine its successes and challenges.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2225 Psychometric Measurement and Analysis in Public Health Research and Practice (3 Credits)***Typically offered Fall*

\*Students will examine the principles of measurement and testing as applied to public health research and practice, including the technical interpretation of test scores using the classical test model. Content of the course will consider individual measures of constructs and behaviors measured in public health research and practice. Students will examine and deconstruct principles and techniques used in psychometric studies to establish levels of reliability and validity and will utilize statistical software to conduct analyses. \*

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2227 Psychiatric Epidemiology (3 Credits)**

Psychiatric epidemiology is the study of the distribution and determinants of mental disorders at the population level. This course provides an overview of: (1) the history of this subfield of epidemiology; (2) approaches to classification of mental health conditions and (descriptive and analytic) study design and how they have evolved over time; (3) our current understanding of the burden and causes of mental disorders globally; (4) the important role of culture and context in the classification, prevalence, and correlates of mental health conditions; and (5) how epidemiologic findings have informed public health intervention. The course emphasizes critical evaluation of methodological approaches in psychiatric epidemiology, challenges and current debates, and future directions for this field of study.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2230 Global Non-Communicable Disease Prev & Control (3 Credits)***Typically offered Spring*

This course will focus on the considerable and increasing burden of disease due to chronic diseases, mental health, substance use (alcohol, tobacco, other drugs), risk factors (obesity, lack of physical activity), and injuries within the developing world. It will present methods for measuring the burden of non-communicable disease, review approaches to program and service development to modify risk factors, present lessons learned from successful developing country programs, and discuss implications for health services development and international development policies.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No

**GPH-GU 2232 Detection and Control of Waterborne Pathogens (3 Credits)**

Waterborne pathogens are the etiologies of a range of diseases – including gastroenteritis, poliomyelitis, hepatitis, Legionnaire's disease, and intestinal worm infections – and play an important role in the global burden of disease. This course will introduce students to fundamental principles of water-related infectious diseases, including the detection and enumeration of waterborne pathogens and indicator microorganisms; the burden of disease and mode of transmission of different classes of microorganisms; pathogenesis; and engineering controls to reduce transmission. The course will have a global perspective, and include water treatment options in low-resource settings.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2235 Biostatistical Consulting (3 Credits)**

This course will provide an introduction to biostatistical consultation. Students will learn about ethical principles, professional standards for communication and interaction, interpretation of a scientific or public health problem and its translation into a statistical framework, execution of the required tasks (e.g., design, analysis plan, data analysis, interpretation), and clear communication of the results. Students will participate in mentored group consultations with investigators from across NYU. Students will read and discuss literature on the art and science of biostatistical consulting. Students will write up summary reports for two projects and present one to the class. Some projects may turn into an applied practice experience or thesis. This PhD level course may be taken by MS/MPH students who have sufficient background.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2236 Criminalization and Public Health in the U.S. (3 Credits)**

This course offers a historical review and critical analysis of criminalization in the United States (US) from a public health perspective. Students will examine the development of US carceral structures, with an emphasis on those related to mental health and drug use, and how these structures impact individual, family, community, and population health. Critical race theory, criminology, social theory, and other theoretical frameworks will be used to investigate the policies, norms, and practices defining criminalization in the US today, and the social movements for change. [Trigger warning: Course readings include graphic depictions of violence.]

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2238 Machine Learning in Public Health (3 Credits)**

*Typically offered not typically offered*

This course provides students with a strong foundation in machine learning relevant to public health and biomedical applications. Topics include the data generating process, model selection and evaluation, generalized linear models, common supervised and unsupervised machine learning algorithms such as support vector machines, decision trees, random forests, neural networks, and k-means, and ethics and communication. Students will learn methods for optimal and proper implementation of machine learning, such as assessment of assumptions about the data generating process, feature generation, treatment of missing data, and reduction of bias. Students will gain familiarity with the potential power of machine learning in public health, as well as its particular challenges inherent to public health applications.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2241 Budgeting for Sustainable Health Returns on Investment (3 Credits)**

This course develops budget and resource management competencies and skills. Students will identify, apply and evaluate existing methods and tools that were developed and implemented by the World Bank, UNICEF, WHO and other agencies to support analysis of additional costs, returns on investment, budget requirements and fiscal sustainability. Case studies, readings and datasets are based on real life applications to equity focused approaches and health system strengthening for the Millennium Development Goals (MDGs). Students will synthesize additional costs, budgets, sustainability, and returns on investment, and propose priority analytic tools to be applied or further developed for budget and resource management for the health related targets of the Sustainable Development Goals (SDGs).

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2242 Crisis and Emergency Risk Communication (3 Credits)**

This course covers key concepts of crisis and risk communication theory and its practical application to emergent and catastrophic public health events. Crisis and emergency risk communication is among the central strategies by which government officials and community and organizational leaders promote critical protective actions to their constituents and stakeholders. This course will use a series of case studies to illustrate the principles, strategies, and tactics of effective risk communication. The course will also explore the shifting locus of authority as new media channels emerge and the information landscape continues to evolve, often moving away from centralized mass media brokers and towards more decentralized and informal models of information sharing and seeking.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2244 Health Care Management Science (3 Credits)**

This course is designed to equip students with a fundamental understanding of health system management and transformation including delivery models, value-based care, population health, policy, change management, and continuous quality improvement. It will introduce basic contextual knowledge about healthcare systems and quantitative models for improving healthcare system performance. Students will learn through the combination of interactive didactics, assigned reading, expert guest speakers, and completing a group capstone quality improvement project in a healthcare setting.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2245 Political Economy of HIV in South Africa (3 Credits)**

This course unpacks the political, economic, socio-cultural and epidemiologic nuances of the AIDS epidemic in sub-Saharan Africa. Global, national and community level perspectives on the epidemic and the political response are explored via social science literature and relevant media. The course covers HIV pathophysiology and epidemiology; the AIDS response across the region, with emphasis on South Africa; HIV prevention and treatment; AIDS costs and financing; cultural factors; and the relationship between AIDS, sex and poverty in perpetuating the epidemic. At the end of the course, students should be conversant in all major aspects of the AIDS epidemic and response in the region.\*

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2248 Teams and Strategy in Public Health Management (3 Credits)**

This course aims to equip learners with two interrelated domains that leaders and managers in public health organizations often have to focus on to improve organizational performance: teams and strategy. This course helps learners answer the question: "Why do some teams and organizations do better than others?" You will learn how to recognize suitable approaches to analyze team conditions and improve team performance, prioritize organizational activities and resources to create advantage or value for stakeholders, and communicate and implement strategic plans. Overall, this course will provide learners with useful theories, frameworks, and perspectives as well as improve their critical analytical skills around the effective use of teams and strategy to maximize organizational performance.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2250 Health and Human Rights (3 Credits)**

*Typically offered Fall*

This course approaches global health and justice from international human rights and humanitarian law. The course is designed to provide public policy and public health students with the basis for literacy about human rights and humanitarian law. Through lectures, case studies and practical training, students will be able to gain knowledge and skills to determine how rights violations impact health, and how to engage in using the human rights approach to improve health outcomes. Topics, including HIV/AIDS, sexual and reproductive rights, the right to health in war and disasters, access to medicines and the ethical obligations of public health professionals, will be used to illustrate practical applications of human rights to global health.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2255 Substance Use and Public Health (3 Credits)**

*Typically offered Summer term*

This course covers the broad group of drugs with psychoactive effects used world-wide, including: licit and illicit use of prescribed medications for Attention Deficit Hyperactivity Disorder and opioid based pain medications; alcohol; marijuana; tobacco; Ecstasy, Designer Drugs and methamphetamine; cocaine and crack; heroin and methadone; hallucinogens such as LSD and peyote; as well as others like energy drinks and steroids. The epidemiology and effects on biologic, psychological, social function and public health as well as history, trafficking, regulation, treatment and controversies are the focus. In addition, pharmacological properties and effects of drugs are reviewed and linked to health, economic, and societal problems. Best clinical practices in prevention and treatment and controversies over management of substance use disorders (SUDs) will be discussed, along with ethical issues of interest to health providers and public health practitioners.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2260 Disasters, Complex Systems, and the Social Ecology of Health (3 Credits)**

*Typically offered Spring term of odd numbered years*

Disasters, whether natural, technological, or man-made, often reveal the strength of our social fabric. They also reveal how much our health and well-being is dependent upon numerous complex systems in our lives. These systems can range from our internal cellular and micro-biological systems; through social and cultural systems; to public health and medical systems; to critical infrastructure and lifeline systems; to larger environmental and ecological systems, among others. This course will employ a number of disciplinary approaches to understanding risk, vulnerability, and resilience as we explore the theories, frameworks and methods for understanding disasters and their relationship to population health. It will be particularly valuable for students interested in public health research and practice.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2265 Climate Change and Global Public Health (3 Credits)**

*Typically offered Spring*

This course is about Climate Change i.e. Global Warming! Climate Change has been cited as the most significant public health challenge of the 21st century. We will intensively cover climate change science, public health response to disasters and altered distribution of diseases especially arthropod-borne, ecological consequences, fossil fuel air pollution, global food and health security, and government policy options. Examples of climate challenges will be covered including severe weather storms, flooding, drought, heat wave mortality and morbidity, ocean acidification, sea level rise, and loss of biodiversity. Renewables such as wind and solar energy will be assessed by States. Climate Denialism is covered with the text, "The Madhouse Effect." \*GPH-GU 2240\*\* Perspectives in Global Mental Health\* (3) Common mental disorders such as depressive, anxiety and substance use disorders are leading causes of disease burden globally and are associated with serious functional impairment, reduced quality of life, unemployment and homelessness and exacerbate risk for medical illness. Yet they tend to get lost on the global health agenda. Lack of familiarity with interventions, measurement challenges, and stigma are, in part, to blame. This course provides exposure to this increasingly relevant public health challenge from a global perspective, with a particular focus on the epidemiology, risk factors and consequences, individual- and population-level approaches to treatment and prevention, and delivery of care for mental health problems in different settings and cultural contexts worldwide. Pre-requisites: GPH-GU 2106 or 5106

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2270 Translating Research to Practice: Adapting and Implementing Evidence-Based Public (3 Credits)**

*Typically offered Spring*

Evidence-based public health is now recognized as the foundational gold standard for developing programs and interventions to improve population health. In practice, many challenges exist to identifying appropriate evidence-based interventions and adapting them to perform as intended in new settings. This course will examine approaches for selecting, adapting, and implementing evidence-based public health interventions. The framework presented in the course will help prepare students to adapt and implement programs that are theory-based, evidence-based, community-based, and reality-based.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2272 Value-Based Healthcare (3 Credits)**

Value-based healthcare is a healthcare delivery model in which providers, including hospitals, physicians, and other practitioners are paid based on patient health outcomes. Under value-based care agreements, providers are rewarded for helping patients improve their health, reduce the effects and incidence of chronic disease, and live healthier lives, in an evidence-based way. The class will explore how value-based care is being used in an attempt to attenuate wide disparities in health care outcomes, high costs, and increasing levels of provider burnout. There will be a focus on Medicaid, duals, and vulnerable populations, and the use of care management, integrated behavioral health and programs that address social service needs to provide better "value" for those populations.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2274 Outbreak Epidemiology: Re-emerging and Emerging Infectious Diseases (3 Credits)**

Over the last 20 years, we have witnessed a number of local as well as large-scale, multi-state and multi-country disease outbreaks and pandemics of re-emerging and emerging diseases – including measles, H1N1, Zika, Ebola, SARS, MERS, and currently SARS-CoV-2 (COVID-19). In light of the emergence and re-emergence of these infectious disease outbreaks, the overall objective of this course is to introduce students to the essential elements of outbreak investigations in both local, national and global settings. The course covers three broad content areas that include understanding and detecting infectious diseases, investigating outbreaks, and communication and prevention of future outbreaks.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2275 Nutrition Epidemiology for Public Health (3 Credits)**

*Typically offered Spring*

This course provides in-depth knowledge of the principles and challenges inherent to the discipline of nutritional epidemiology. In addition to covering fundamentals of nutritional epidemiology such as collection, analysis, and interpretation of data on dietary intake and nutritional status within diverse population groups, the course will place strong emphasis on methodological considerations in study design and pertinent statistical issues, including measurement error. The course emphasizes critical evaluation of dietary assessment methods and the results of research studies associating intake of foods, nutrients and dietary patterns with the risk of chronic diseases. Importantly, the course addresses the translation of scientific findings into nutritional recommendations and policies. Students in Public Health Nutrition should take GPH-GU 2115 prior to taking this course.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2276 Public Health Financial Management (3 Credits)**

This course introduces financial and accounting principles for public health and health care. Topics covered include accounting theory, budgeting, resource management, financial planning, and third party reimbursement. Students are presented with the basic foundations of financial management before progressing to demonstrate how health care managers can apply financial management theory and principles to help make better decisions that promote the financial well-being of public health and health care delivery organizations.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2278 Global Cancer Epidemiology (3 Credits)**

Cancer is a major public health concern globally, surpassing rates of cardiovascular disease in adults <75 years. It is a multifactorial disease with genetic, environmental and modifiable lifestyle risk factors. This course provides an overview of: a) the global and national burden of cancer; b) risk factors including genetic, early life risk factors and modifiable factors: tobacco, excess adiposity and diet (carbohydrates, processed foods, sugar-sweetened beverages, and alcohol); and c) cancer surveillance and policy as it relates to primary and secondary prevention of cancer. Students will discuss landmark studies in cancer epidemiology with an emphasis on population studies in the US and Europe. Students will also gain an understanding of cancer biology and important mechanisms that underlie carcinogenesis.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2280 Environmental Health Assessments and Interventions (3 Credits)**

This course will introduce students to the fundamentals of conducting an environmental health assessment of a contaminated site and propose interventions to reduce human exposure and disease. Students will learn and be able to apply the fundamentals of conducting environmental air, soil and water sampling for hazardous chemical, physical and biological agents. In addition, a variety of environmental remediation methods and public health interventions will be introduced. Special focus will be on environmental hazards in low and middle-income countries with numerous case studies presented and discussed.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2282 Health Economics (3 Credits)**

This course introduces microeconomics and economic evaluation concepts that are used to understand and analyze the organization, financing and delivery of public health and health care services. Topics covered include the demand for health and health care, cost of delivering services, market structure, economic evaluation, and cost-effectiveness analysis. The course also compares the structure and performance of public health and health care systems around the world in terms of equity and health outcomes.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2283 International Population & Family Health (3 Credits)**

*Typically offered occasionally*

A cross-cultural framework is used to compare the health status of populations and families and factors that affect their health in societal subgroups (for example, urban, rural, poor, women and children, and the elderly). The course emphasizes the effects of secular changes in women's roles and status and other societal, economic, and environmental trends on population and family health.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2285 Global Women's Health Programs - Analyzing/Evidence to Improve Women's Lives (3 Credits)***Typically offered Spring*

This course introduces the student to the major health issues facing women in low resource countries and how to analyze existing programs geared towards improving women's health. Students will learn how biological, environmental, and societal issues affect women's health, the outcomes of pregnancy, and child survival. Topics include reproductive and obstetric health, women's rights, gender-based violence, access to health education, family planning, female genital cutting, and the public health interventions proven to positively impact these issues. Students will intensively evaluate and analyze the interventions created to improve the lives of women and identify key elements that constitute an effective global women's health program. Students will learn the necessary skills to generate solutions to the complex circumstances affecting the health of women globally.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2286 Introduction to Data Management and Statistical Computing (3 Credits)***Typically offered Spring*

There is a gap between data collection and statistical analysis. Data management and manipulation is an essential component of public health practice necessary to fill this gap. The course will focus on command-based programming for modifying and managing data, and developing processes, procedures and documentation for reproducibility and efficiency. By the end of the course students will be able to comfortably create datasets, access existing datasets, create variables, clean data, merge data sets, create samples from larger data sets, label data and variables, create and debug code. Students will be exposed to the basics of several statistical packages (Stata, SAS, R, and Tableau). This course is intended for students who have no or minimal experience using statistical software.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2287 International Nutrition (3 Credits)***Typically offered occasionally*

Introduction to world food problems and their nutritional, economic, and social effects. Objectives: 1. Identify environmental, social, behavioral and economic factors that affect the dietary intake and nutritional status of people of various countries, and compare the ways these factors operate in countries of varying income levels. 2. Define the causes and consequence of the ?nutrition transition? that occurs when populations move from conditions of undernutrition to those of overnutrition. 3. Compare international and national food consumption, nutrient requirements, and dietary recommendations. 4. Analyze and evaluate Introduction to world food problems and their nutritional, economic, and social effects. Objectives: 1. Identify environmental, social, behavioral and economic factors that affect the dietary intake and nutritional status of people of various countries, and compare the ways these factors operate in countries of varying income levels. 2. Define the causes and consequence of the ?nutrition transition? that occurs when populations move from conditions of undernutrition to those of overnutrition. 3. Compare international and national food consumption, nutrient requirements, and dietary recommendations. 4. Analyze and evaluate food, nutrition, and other types of policy and program approaches to improve the food security and nutritional status of specific population groups. Examples: demographics, income and price, agricultural, fortification, health, educational, and marketing among others. 5. Identify, describe, and evaluate the work of governmental and non-governmental agencies and organizations concerned with international food and nutrition.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2290 Acute Public Health Emergencies (3 Credits)***Typically offered not typically offered*

This course discusses various acute public health emergencies due to manmade intentional and unintentional events, as well as to natural disasters; the distinction between the effects, preparedness and response to these events as they occur in developing versus modernized nations. The course will use case studies including specific events such as September 11, 2001 as well as the Indian Ocean Tsunami December 26, 2004. Students will understand the principles of preparedness, toxicology as it relates to terrorism, and humanitarian response. Table top exercises will be included.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2292 Public Health Law (3 Credits)***Typically offered Spring*

Many of public health's greatest successes have been based on the successful use of the law. Therefore, an understanding of the fundamentals of public health law and the legal foundations of public health is essential to appreciating the tools available to government to address public health threats. This class will examine the government's authorities and also the legal limitations on government enacting law to improve population health at the federal, state, and local levels and by the executive, legislative, and judicial branches. We will additionally analyze core public health issues in the context of this legal framework.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No

**GPH-GU 2294 Designing and Managing Organizations in Public Health (3 Credits)**

This course has two overall goals. The first is to increase your effectiveness in leading individuals and teams within and across organizations, sectors and agencies that seek to improve public health. The course's second goal is to prepare you to effectively design organizations and master organizational processes to impact population health. This course prepares to achieve your objectives by providing you with fundamental frameworks and tools developed from the behavioral and social sciences and tested by leaders in organizations across the public, non-profit, and for-profit sectors.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2295 Nutrition Epidemiology (3 Credits)**

Fundamentals of nutritional epidemiology focused on the collection analysis, and interpretation of data on dietary intake and nutritional status of diverse population groups. The course emphasizes critical evaluation of dietary assessment methods and the results of research studies associating intake of foods and nutrients or food consumption patterns with the risk of cancer, coronary heart disease, and other chronic diseases.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2296 Public Health Innovation and Entrepreneurship (3 Credits)**

This course helps current and future public health practitioners develop skills to create innovative, sustainable, and scalable solutions that address public health challenges. Student teams explore gaps in the availability, accessibility, acceptability, adequacy, and appropriateness of health-related goods and services in target communities and propose innovations that would narrow those gaps and improve health outcomes. Then, using a stepwise, structured approach, the teams develop and refine a business model for the innovation through stakeholder interviews designed to maximize product-market fit and minimize failure risk.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2301 Conflict Management & Negotiation (2 Credits)**

*Typically offered not typically offered*

Through readings, discussions, case studies, and role plays, students develop an understanding of the role of conflict and its dynamics; strategies for eliciting cooperation; the fundamentals of negotiation; the variety of conflict resolution approaches used to overcome the common barriers to negotiated resolution of conflict; communication skills; and strategies for dealing with public controversy. This course emphasizes both the theoretical and the practical. Students are encouraged to apply the principles and methods of effective conflict resolution to their own professional lives.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2305 Cross Cultural & International Negotiations (2 Credits)**

*Typically offered not typically offered*

Beyond the basics of negotiation lie areas of greater complexity.

One such area is the realm of culture, encompassing the cross-cultural (attempting from one cultural perspective to understand or describe another), the intercultural (the interplay of cultures) and the transcultural (aspects of negotiation that are common to all cultures or, in intercultural situations, transcend them). Culture can be thought of in terms of both the relatively simple, though not unimportant, aspect of etiquette and behavior, and the more complex and profound aspect of consciousness and worldview. In the fBeyond the basics of negotiation lie areas of greater complexity. One such area is the realm of culture, encompassing the cross-cultural (attempting from one cultural perspective to understand or describe another), the intercultural (the interplay of cultures) and the transcultural (aspects of negotiation that are common to all cultures or, in intercultural situations, transcend them). Culture can be thought of in terms of both the relatively simple, though not unimportant, aspect of etiquette and behavior, and the more complex and profound aspect of consciousness and worldview. In the first segment of the course, we will consider a framework of cultural variables that comprise or underlie negotiation styles; and then, by way of looking at one culture in particular in greater depth, contrast four efforts to understand Chinese negotiation practices; and, finally, look at implications for the practitioner.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2311 Policy Formation and Analysis (4 Credits)**

*Typically offered not typically offered*

This course addresses the dual issues of the nature of the policy-making process and the role of analytic activity in that process. It identifies hypotheses about the conditions under which analysis is most and least likely to have an impact on policy outcomes and the kinds of analysis that are most appropriately prepared for different types of political circumstances. Students use case studies of important federal, state, and local decisions to examine the validity of hypotheses presented by political scientists and to develop their own judgment about how to best apply analytic resources.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2312 Global Perspectives on Reproductive Health & Human Rights (3 Credits)**

This course examines reproductive health from a human rights perspective both nationally and internationally. After a review of the intersection of reproductive health and human rights, topics to be covered include: the demographic transition and declining birth rates; the rights of women with HIV infection and other vulnerable populations; men's influence on reproductive rights; viewing traditional practices through a human rights lens; and current reproductive rights in the USA.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2313 Public Health Through Film & Fiction (3 Credits)**

Examination of public health issues through the lens of film & fiction illustrating how narrative works provide dramatic insight into the multifaceted nature of public health problems, the complex circumstances giving rise to them, & the factors influencing responses. Discussion will include militarism, gender inequality, economic conditions, drug trafficking, occupation, pandemic disease, the interrelatedness of these problems & the diverse geographic regions affected by them.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2314 Global Health and Economic Development (4 Credits)**

*Typically offered not typically offered*

This course is required for all students in the international specialization in both the PNP and HPAM programs. The course provides an introduction to the current thinking and practice of public sector institutional reform with a particular focus on developing and in-transition countries. Part-time students should plan to take this course next year when it will be offered in both the fall and spring semesters; at least one of the two sections will be offered in an evening time slot. The bulk of the course is devoted to an examination of key institutional reforms that are intended to promote good governance as economies liberalize and societies democratize. Major topics include institutional restructuring, civil service reform, anti-corruption, fiscal framework reform, citizen engagement mechanisms, public-private partnerships, performance evaluation. This course is required for all students in the international specialization in both the PNP and HPAM programs. The course provides an introduction to the current thinking and practice of public sector institutional reform with a particular focus on developing and in-transition countries. Part-time students should plan to take this course next year when it will be offered in both the fall and spring semesters; at least one of the two sections will be offered in an evening time slot. The bulk of the course is devoted to an examination of key institutional reforms that are intended to promote good governance as economies liberalize and societies democratize. Major topics include institutional restructuring, civil service reform, anti-corruption, fiscal framework reform, citizen engagement mechanisms, public-private partnerships, performance evaluation and change management. In addition, the role of development aid and the institutions that provide it in supporting institutional reform are covered. The course concludes with a synthetic review of the topics covered and a case study exercise.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2315 Global Health and Economic Development (3 Credits)**

*Typically offered Fall of even numbered years*

This course engages students in assessing, describing, selecting and evaluating community-based health interventions to reduce health risks among individuals and communities, and to improve population health. It considers different definitions of community, a critical review of the evidence base, and identifies key elements and theories that underlie community-based public health interventions. Students examine a number of public health interventions addressing current health issues in the U.S. today, focusing on factors influencing the design of interventions, the choice of strategies selected, methods for assessing the magnitude of change effected by the intervention, and ethical and political issues raised by the interventions.

**Grading:** Grad Steinhardt Graded

**Repeatable for additional credit:** No

**GPH-GU 2317 Social Epidemiology (3 Credits)**

*Typically offered Spring*

This course explores the subdivision of epidemiology that elucidates the ways in which social identities, processes, arrangements and structures shape the population distribution of health and disease, and produce social inequalities in health. This course rests on the premise that the study of the determinants of health at multiple levels, and their interrelationships, is essential in order to better explain, potentially predict, and hopefully improve the health of populations. This course is intended to provide an overview of the major areas of inquiry, key theories, seminal findings, methodological challenges/solutions and ongoing debates. By the end of the course students will understand the theoretical, substantive, and methodological parameters of social epidemiology, and be able to evaluate its strengths and limitations.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2319 Grant Writing to Fund Public Health Research (3 Credits)**

*Typically offered Spring*

A hands-on approach to grant writing including development of skills in locating potential funding sources and the use of appropriate grant-writing style & technique. Students are guided through the development of a grant proposal, from locating sources of funds; through development of program objectives, background, & methods; to the peer review process.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2320 Data Utilization in Public Health Practice (3 Credits)**

*Typically offered Fall and Summer terms*

Data Utilization in Public Health Practice (3 credits) Public health practice typically demands competencies in identifying, extracting, analyzing, interpreting and disseminating information from large surveys, administrative data sets, government reports, qualitative studies, and other data sources. This course will develop these competencies through rigorous evaluation of existing data resources (including their strengths and limitations for answering specific public health questions) and best practices in data utilization for situational assessment; monitoring; policy, program and strategy development; and surveillance of health outcomes through real-world case studies and assignments. The course will also provide students with basic skills in data analysis and visualization using Microsoft Excel and an interactive, online mapping software (Carto).

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2321 Cost Effectiveness Analysis for Public Health (1.5 Credits)**

*Typically offered not typically offered*

Policymakers, faced with competing health priorities and limited resources, routinely make difficult but necessary decisions. Cost-effectiveness analysis (CEA) is increasingly considered in public health decision making to set priorities among competing interventions, programs and policies and inform investment and disinvestment decisions in the health sector. Suited for MPH and PhD students, this 1.5-credit course provides an introduction to CEA—the most applied method in health economic evaluation—and covers its theoretical foundations, methodological principles and real-world applications over 7 weeks. Through lectures, discussions, and assignments, students will build their technical knowledge and skills to conduct and critique CEA studies and take part in discussions of planned cost-effectiveness research.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2322 History & Principles of Public Health (3 Credits)**

Examination of the mission of public health from a historical perspective. Past & current public health issues, policies & practices are critically analyzed.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2324 Infectious Disease Epidemiology (3 Credits)**

The course will provide an overview of the principles and methods of applied infectious disease epidemiology. Students enrolled in this course will learn the terminology associated with infectious disease epidemiology, factors that impact infectious disease transmission dynamics (i.e. vaccination and immunity), the methods used to conduct infectious disease surveillance, and control measures to reduce or eliminate the burden of certain infectious diseases in our population. In addition, the course will cover topics such as assessment of vaccine field effectiveness, molecular epidemiology and laboratory diagnosis of key infectious diseases. Finally, the course will cover the risk factors, transmission dynamics and control measures for key infectious diseases in global and domestic settings.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2325 Behavioral Communication Strategies for Global Epidemics (3 Credits)**

*Typically offered occasionally*

This course focuses on the integration of three public health disciplines for emergency action: epidemiology, behavioral health/ intervention research and public health communication to provide students with a knowledge base and foundation of skills to be able to design and implement strategies in disease prevention and response in outbreak situations, with a focus on the reemergence of Polio and Ebola.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2328 Politics of Int'L Development (4 Credits)**

*Typically offered not typically offered*

This course provides students with a rich sense of the institutional and political context within which policy is made and implemented. The course aims to give students exposure to importantThis course provides students with a rich sense of the institutional and political context within which policy is made and implemented. The course aims to give students exposure to important ongoing debates in international development and their historical context. The class will provide an overview of some of the major contemporary analytical and policy debates regarding the politics of development. Topics to be covered are: States, Regimes and Industrialization; Politics of Poverty, Growth and Policy Reform; Governance, Civil Society and Development; and The Politics of Development in the Age of Globalization.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2330 International Economic Development (4 Credits)**

*Typically offered not typically offered*

This course takes up issues of economic growth and social change in a comparative perspective. While some countries have achieved unprecedented rates of economic growth in the past half century, other countries have experienced setbacks. For those that have seen rapid growth, economic changes have not always translated in proportional social changes and sometimes rapid social changes have occurred in the absence of economic growth. The course begins by reviewing theories of economic growth and recent evidence. In that context, attention then turns to policy interventions to improve education, address market failures, confront rapid population growth, and strengthen safety nets.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2331 Prog Dev & Mgmt for International Organiz (4 Credits)**

*Typically offered not typically offered*

This course examines the inner workings of successful international public service projects and gives students the opportunity to design one or more themselves. Students will then study the characteristics of effective programs, which bring together a series of projects for mutually supportive and concerted action. Particular attention is paid to programs selected from the five areas where international public sector entities are most active: peace building, relief, development, advocacy and norm-setting. Case studies will be used in each of these areas to gain a deeper understanding of the relationship between policy and implementation.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2335 Developing Human Resources (4 Credits)**

*Typically offered not typically offered*

Designed for public and non-profit managers rather than human resource professionals, this course gives a broad overview of HR dynamics and responsibilities. It will cover basic HR functions such as recruitment, career development, performance appraisal and rewards, providing feedback and job design. It will also explore current issues within HR management, which could include diversity and identity at work, the role of unions, or other topics. The course will include practical application through case discussions and reflection on students work experiences. While it will focus on values-based organizations, it will compare HR practices in the public, non-profit and for-profit sectors.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2336 Critical Reading of the Biostatistical Literature (3 Credits)**

This 3 credit course will provide an introduction to critical reading and reviewing of the biostatistical literature. Each class meeting will focus on an article with substantial biostatistical content that will be selected by a student in the class, who will prepare questions that will be distributed prior to class for consideration by students, and will prepare slides that will clearly summarize the main points in the article and will help guide the discussion. The class instructor must approve of the selected article and will offer guidance in its selection. Students will read the article prior to class and prepare a written review that addresses the design, analysis, interpretation and conclusions of the article, and that responds to the guiding questions sent by the leader. Class participation is expected and is essential.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No



**GPH-GU 2338 Machine Learning in Public Health (3 Credits)**

This course provides students with a strong foundation in machine learning relevant to public health and biomedical applications. Topics include the data generating process, model selection and evaluation, generalized linear models, common supervised and unsupervised machine learning algorithms such as support vector machines, decision trees, random forests, neural networks, and k-means, and ethics and communication. Students will learn methods for optimal and proper implementation of machine learning, such as assessment of assumptions about the data generating process, feature generation, treatment of missing data, and reduction of bias. Students will gain familiarity with the potential power of machine learning in public health, as well as its particular challenges inherent to public health applications.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2340 Advocating for Community Health (3 Credits)**

*Typically offered Fall of odd numbered years*

Examines models and principles of community development, social planning, social action, and public advocacy for health, and concepts and theories related to planned change.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2342 Global Issues in Public Health Nutrition (3 Credits)**

*Typically offered Spring*

This course addresses major global nutrition issues that we face today. Food insecurity, and all forms of malnutrition, underweight, obesity and micronutrient deficiencies are leading risk factors of mortality and comorbidity worldwide. The course is developed in the context of the United Nations System, through the lens of the Sustainable Development Goals (SDGs) and the 2030 Agenda. We will discuss climate change, conflict, and economic downturn as determinants of food insecurity that are worsening non-communicable disease prevalence. Next, we understand malnutrition, its major determinants and its interconnections with the food systems. Students will design a solution for these issues, using the systems approach and principles from social entrepreneurship in the the global landscape.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2343 HIV/AIDS Public Health Promotion (3 Credits)**

Students will examine the evolution of the HIV epidemic in the United Kingdom (U.K.) and the United States (U.S.) throughout the last four decades using a public health lens with an emphasis on population-based health promotion strategies and responses of the respective health system within each country. Students will learn about the history of the disease in the U.K., U.S and within a global context, the biomedical aspects of the disease including HIV testing, and treatment, the epidemiology of the disease, the socio-bio-behavioral drivers of the disease, and HIV/AIDS public health policies and calls to action both within the U.K. and the U.S. Students will examine, analyze, apply, and evaluate theoretical paradigms and research, drawn from public health and interrelated disciplines with regard to HIV prevention, treatment, and care as it is manifested in the across all segments of the population. The course utilizes a biopsychosocial framework for understanding illness and health promotion and emphasizes theory-based HIV prevention and care. The course uses an experiential learning approach; students engage with local AIDS service organizations, health care facilities, and thought leaders, all with an eye to bring an end to the AIDS epidemic.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2344 Maternal and Child Nutrition in Public Health (3 Credits)**

*Typically offered Fall*

This course is concerned with the study of nutritionally-related determinants of health and disease in maternal, infant, and child populations. Biological, physiological, and psychological aspects of reproduction (maternal) and growth and development (infants and children) will be discussed, with particular focus on how they are influenced by nutrition. Methodological issues encountered in research (e.g. data collection and analysis) will also be incorporated into lectures and discussions. After completion of this course, students should understand the important immediate and long-term roles that nutrition plays in reproductive and pediatric health.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2347 Tackling Global Health Disparities through Implementation Science Research (3 Credits)**

Students will examine and review the epidemiology and drivers of the global burden of non-communicable diseases as well as two 'chronic' infectious diseases (tuberculosis and HIV). Students will explore solutions through an implementation science research framework. 'Real life' case studies will be used to allow students to fully grasp how to design, implement and evaluate effective interventions in low resource settings and among vulnerable populations. The course will focus on the use of alternative research study designs as well as the potential for mobile health interventions to improve disparities in access to care through task-shifting and task-sharing among front-line health providers to reduce health disparities.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2349 Program Planning and Evaluation (3 Credits)**

*Typically offered Fall*

This course will introduce the major principles, concepts and methods used to plan, monitor and evaluate public health interventions and programs. Emphasis is placed on helping students develop the essential skills required in developing program plans, monitoring program implementation, and conducting evaluations for public health practice.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2352 Comparative Health Systems (4 Credits)***Typically offered not typically offered*

We tend to be ethnocentric in our views of health care organization and policy. A look abroad, however, can provide insights about problems at home. In spite of differences in the organization and financing of their health care systems, most countries share a number of common problems with the United States. First, is the question of deciding - or not explicitly deciding - what proportion of GNP should be devoted to health and welfare. Second, is the problem of agreeing on appropriate criteria to allocate health and social service expenditures. Third, is the problem of how to implement established policies: through regulation, promotion of competition, budgeting, or reimbursement incentives directed at health care providers. In this class, students will be asked to become "experts" about a health system of their choice outside the United States but in a nation belonging to the Organization of Economic Co-operation and Development (OECD). Students with a special interest in developing nations and the transitional economies of Central and Eastern Europe may choose to become an expert in a second health system, as well, but all students must choose one relatively wealthy nation that they can compare to the United States. We will examine a range of health systems with respect to their own published data, as well as data collected and analyses conducted by international organizations, e.g. the World Health Organization (WHO), OECD, the World Bank, and UNICEF. The readings, lectures and class discussions will focus on the common problems and themes noted above as they affect the organization and financing of health systems in wealthy OECD nations. We begin with a discussion of the impact of globalization on health system development and an overview of health system models around the world. Second, we examine conceptual frameworks and methods for health systems analysis, and a range of myths about health systems with universal coverage. Third, and this is the heart of the class, we apply these approaches to the empirical analysis of health systems in selected nations and examine the extent to which the available evidence supports or refutes these myths. Throughout the class, we will also consider issues of medicine, culture and public health infrastructure.

We tend to be ethnocentric in our views of health care organization and policy. A look abroad, however, can provide insights about problems at home. In spite of differences in the organization and financing of their health care systems, most countries share a number of common problems with the United States. First, is the question of deciding - or not explicitly deciding - what proportion of GNP should be devoted to health and welfare. Second, is the problem of agreeing on appropriate criteria to allocate health and social service expenditures. Third, is the problem of how to implement established policies: through regulation, promotion of competition, budgeting, or reimbursement incentives directed at health care providers. In this class, students will be asked to become "experts" about a health system of their choice outside the United States but in a nation belonging to the Organization of Economic Co-operation and Development (OECD). Students with a special interest in developing nations and the transitional economies of Central and Eastern Europe may choose to become an expert in a second health system, as well, but all students must choose one relatively wealthy nation that they can compare to the United States. We will examine a range of health systems with respect to their own published data, as well as data collected and analyses conducted by international organizations, e.g. the World Health Organization (WHO), OECD, the World Bank, and UNICEF. The readings, lectures and class discussions will focus on the common problems and themes noted above as they affect the organization and financing of health systems in wealthy OECD nations. We begin with a discussion of the impact of

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2353 Regression I: Linear Regression and Modeling (3). (3 Credits)***Typically offered occasionally*

Regression models are one of the most important statistical techniques used in public health. This course focuses on data analysis that use linear regression models for continuous outcomes. The first part of this course introduces simple and multiple linear regressions, principles of ordinary least square regression models, model assumptions, and inferences about model parameters. The second part of the course focus on important practical matters, such as prediction, variable selection, moderated effects, and mediation. These two parts together provide the foundations for more advanced statistics modeling. Examples are drawn from broad areas of public health research. All the analyses will be taught and performed using Stata and/or R statistical software.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2354 Regression II: Categorical Data Analysis (3 Credits)***Typically offered Fall*

Regression models are one of the most important statistical techniques used in public health. This course focuses on data analysis that use linear regression models for continuous outcomes. The first part of this course introduces simple and multiple linear regressions, principles of ordinary least square regression models, model assumptions, and inferences about model parameters. The second part of the course focus on important practical matters, such as prediction, variable selection, moderated effects, and mediation. These two parts together provide the foundations for more advanced statistics modeling. Examples are drawn from broad areas of public health research. All the analyses will be taught and performed using Stata statistical software.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2355 Analysis of Epidemiologic Data Using SAS (3 Credits)**

Public health research and practice often require the use of statistical software to analyze data. This course is designed to give students practical and direct experience with using Statistical Analysis System (SAS®) software to analyze public health-related data. Throughout the course, students will work with a data set and learn how to generate descriptive, bivariable, and multivariable statistics. They will also gain additional skills in organizing statistical findings in tables and figures and instruction in writing Methods and Results sections, similar in style to those presented in peer-reviewed journal articles. These skills will prepare students for future analytic projects by strengthening their analytic capacity and building expertise in a well-known, versatile statistical program used both in all areas of public health practice. Pre-requisites: GPH-GU 2106 OR GPH-GU 5106 and GPH-GU 2920

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2357 LGBTQ Health Disparities (3 Credits)***Typically offered Spring*

This course examines the core interdisciplinary theories, knowledge, research, and methods evidenced in understanding LGBTQ health and disparities evidences in the LGBTQ population. The course introduces students to the main conceptual frameworks for the study of LGBTQ individuals, communities, and populations across the lifespan and overviews existing knowledge about LGBTQ health in the United States and globally. The course highlights research design, measurement, ethics, and analysis issues in population research in LGBTQ health.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No

**GPH-GU 2359 Applied Practice Experience Seminar (2 Credits)**

*Typically offered Fall and Spring*

This course complements the internship applied practice experience by providing a structured and supportive environment to reinforce the internship goals of developing public health competencies, gaining valuable work experience, and cultivating professionalism. Students complete the internship in the summer or fall of their final year in the program, and enroll in the course in the fall. The internship and course fulfill the Applied Practice Experience requirement for the following MPH concentrations: Community Health Science & Practice, Environmental Health Sciences, Global Health, Public Health Policy & Management, and Public Health Nutrition.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2360 Integrative Learning Experience Seminar (2 Credits)**

*Typically offered Fall and Spring*

A key goal of the MPH program is to enable students to synthesize principles, concepts, and competencies learned through coursework and the Applied Practice Experience. This course provides a structured and supportive environment to help students achieve this goal and to develop professionalism. Students prepare a professional report, poster, and critical reflection paper, comprising the MPH Integrative Learning Experience. Students enroll in the course in their final spring semester. The course fulfills the Integrative Learning Experience requirement for the following MPH concentrations: Community Health Science & Practice, Environmental Health Sciences, Global Health, Public Health Policy & Management, and Public Health Nutrition.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2361 Research Methods in Public Health (3 Credits)**

*Typically offered Spring*

This course is a review of research and original writings related to public health. Students will learn to apply research methodology to problems in public health. This course provides an introduction to the fundamentals of research study design and methods. It serves as an introduction to quantitative and qualitative approaches to research, as well as ethical issues in conducting research. Through the mix of texts, articles from the public health literature and course work, students will build skills for conducting research and critically evaluating research designs and research findings.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2362 Professional Writing in Public Health (3 Credits)**

Develops writing to audiences, including the general public, legislators, government officials, academics and healthcare providers. Students will explore a variety of writing forms commonly used in the practice of public health. They will develop and enhance their writing skills in order to communicate written public health messages effectively with a given audience.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2363 Causal Inference: Design and Analysis (3 Credits)**

Causal inference seeks to study the causal effect of certain treatment/exposure/intervention on some outcome of interest. It has been widely used in public health, biomedical research, social sciences, educational research, economics, etc. The course will introduce some fundamental and advanced causal inference methods and will emphasize their applications in public health, biomedical research, and social sciences. Topics include the potential outcomes framework, treatment effect models, design and analysis of randomized experiments, methods for adjusting for overt bias in observational studies, sensitivity analysis for hidden bias in observational studies, detection of hidden bias, and methods for controlling for hidden bias. Each topic will be illustrated with extensive real-data public health examples.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2365 Decentralized Dev Plan & Policy Reform (4 Credits)**

*Typically offered not typically offered*

This class presents an overview of the theory and practice of planning in developing countries. A central theme is that the structure of a planning system and its success in producing good results depends heavily on the economic, political, institutional, and cultural context of a particular country. Conceptual planning models are considered and evaluated, but the focus of the class is on analyzing how planning systems can work effectively in different country contexts. Detailed case studies drawn from the work of the Institute of Public Administration and exercises based on these cases are an integral part of the class.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2367 Health Care Reform: International (4 Credits)**

*Typically offered not typically offered*

All health systems in the industrialized world are grappling with problems of cost, access, equity and quality of health care, and the tradeoffs between these objectives. Reforms based on promoting markets, managed competition, public contracting, improved management, and changing financial incentives are some important issues under discussion in many countries. This seminar applies the tools of public policy analysis and draws on international comparisons of health systems to analyze efforts at health care reform. The readings, lectures, and class discussions should make students more knowledgeable about policy options and policy changes in different countries. The seminar begins with an examination of the key problems in the financing and organization of health systems. Next we focus on ideas, concepts, and theories of health care reform. We then go on to study concrete proposals, as well as implementation of health care reform in the United States and abroad in the United Kingdom, France, Canada, Germany, and the Netherlands.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2368 Applied Survival Analysis (3 Credits)**

This course will provide an introduction to the analysis of survival data, i.e., data subject to incomplete observation due to censoring. Topics include estimation via the Kaplan Meier estimator, comparison of survival data via the log rank and related tests, and regression modeling of survival data using the Cox proportional hazards model and accelerated failure time model. Parametric modeling of survival data will also be covered. Additional topics may include left truncation, competing risks, and multivariate survival data. Examples in Stata, SAS and R will be provided and assignments will involve analysis of survival data.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2372 Applied Bayesian Analysis in Public Health (3 Credits)**

Bayesian analysis is one of the two major statistical paradigms; the other is Frequentist analysis. The course will briefly review the theory behind Bayesian methods and will focus on the practical implementation to public-health and biomedical data. Topics include comparison of Bayesian and Frequentist analyses, Bayesian inference of various one-parameter models and normal models, Markov Chain Monte Carlo algorithms, Bayesian (generalized) linear regression models, and Bayesian hierarchical models. Data analysis with the R software will be emphasized in the course. Upon successful completion of the course, students will be able to formulate Bayesian models for data analysis in public health and biomedicine, and will be able to implement the Bayesian inference using R.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2380 Data-Driven Decision Making in Global Public Health (3 Credits)**

This course develops skills and competencies in making data-driven decisions to improve global public health outcomes, especially in high disease-burden environments. It is based on a framework of enabling environment, supply, demand, and quality factors that affect the effective coverage of services that would prevent outcomes such as under-5 mortality, neonatal mortality, and maternal mortality. The class will introduce decision support platforms developed by UNICEF, WHO, and the World Bank that help public health professionals choose between available strategies and interventions in a high burden country to reduce adverse health outcomes.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2382 A Systems Approach to Food Access (3 Credits)**

*Typically offered occasionally*

This course provides a systems approach to increase students' abilities to respond to global health threats in food and nutrition. Multiple public health disciplines are emphasized, including: nutrition epidemiology; behavioral health/ intervention research; health economics; and health policy & management to provide students with a knowledge base and foundation of skills to design and implement strategies in health and global food systems. The overall approach is to integrate community participatory models into a systems discussion. Further, the course will include both case studies and skills- building exercises to apply various techniques of skills-based learning.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2383 International Population & Family Health (3 Credits)**

*Typically offered occasionally*

A cross-cultural framework is used to compare the health status of populations and families and factors that affect their health in societal subgroups (for example, urban, rural, poor, women and children, and the elderly). The course emphasizes the effects of secular changes in women's roles and status and other societal, economic, and environmental trends on population and family health.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2385 Medical Anthropology in Global Public Health (3 Credits)**

The field of medical anthropology has a long association with public health in highlighting the role of cultural, social and structural factors in health and wellness. From conceptual frameworks-- explanatory models, social suffering, bio-cultures, syndemics--to critical theories of bio-power, medicalization and structural violence, the field has contributed to new understandings of health and illness. Medical anthropologists study bio-cultural identities (gender, race, sexuality) and global problems such as trafficking, addictions, HIV/AIDS, and mental disorders. They also examine institutions--biomedicine, pharmaceuticals and global health organizations--and their role in public health.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2387 Survey Design, Analysis, and Reporting (3 Credits)**

This course will provide students with a comprehensive understanding of survey design, analysis and reporting. The course starts with secondary data analysis and transitions to primary data collection and. Secondary data analysis covers hypothesis testing using nationally representative samples (e.g., NHANES, BRFSS, NHIS, YRBSS) with complex sampling designs, weighted and nested (multilevel) data analysis. Primary data collections includes questionnaire development, scale development, and data analysis of survey data using Stata (e.g., regression modeling, factor analysis, item response theory). Survey administration, study design and sampling, development of web-based surveys using Qualtrics, creating codebooks and managing data are covered through an experiential learning process.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2405 Health Communications: Changing Social Norms in Theory and Practice (3 Credits)**

*Typically offered Spring*

The course provides an introduction about the theory, design, implementation, and evaluation of health communication programs. Several resources are used to allow students to acquire practical knowledge and skills in health communications planning and implementation. Case studies, resources, research tools and examples of different media channels are reviewed and analyzed to explore how to reach different target audiences with the most effective health communication interventions.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2415 Community-Based Health Interventions (3 Credits)**

*Typically offered Spring*

Identification and evaluation of programs designed to reduce health risks among individuals and communities, with a focus on factors influencing the design of interventions, choice of methods, ways to assess the magnitude of change effected by the intervention, and ethical issues raised by the interventions.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2416 Neuroepidemiology (3 Credits)***Typically offered occasionally*

Neuroepidemiology addresses the distribution and determinants of neurologic diseases in populations with the ultimate aim of preventing disease. Knowledge of the unique characteristics of the nervous system is essential to the design and conduct of studies of neurologic diseases. This course will provide an overview of the epidemiology of a variety of neurologic diseases. Particular emphasis will be placed on methodological problems associated with the study of these diseases; for example, difficulties involving the use of proxy respondents in epidemiologic research; the insidious onset of many neurologic diseases, the difficulties inherent in case-finding; the lack of definitive diagnostic test and its effect on prevalence and misclassification of case status and consideration of the long latent periods that are characteristic of some neurologic diseases. Other areas covered will include the pathobiology, symptomology and diagnosis; description of prevalence, incidence and mortality, risk factors and etiologic mechanisms. Students will critique classic and recent papers in the various fields of study and will gain knowledge in methodology as well as in selected substantive areas of Neuroepidemiology. No prior knowledge of the disease to be studied is assumed.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2420 Monitoring and Management of Public Health Programs for Equity (3 Credits)***Typically offered occasionally*

This course develops skills and competencies for key steps in program monitoring and management to improve equity of global public health outcomes, namely situation analysis of equity, modeling effects of management decisions, monitoring changes in equity outcomes, and evaluating equity modeling, monitoring and outcomes. For each of these steps, students learn and apply >>> core concepts, measures, and analytic tools concerning equity of outcomes, bottlenecks in coverage of interventions, and out of pocket health expenditures. The class will introduce databases, methods, and tools developed by UNICEF, World Bank, IHME and WHO, that help public health professionals reduce inequity in health & nutrition outcomes in LMICs.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2425 Continuous Quality Improvement (3 Credits)**

This course encourages students to think creatively about what it means for a healthcare organization to make quality the highest priority. We will explore the current forces driving the push toward quality outcomes and accountability at all levels and settings of healthcare, while focusing on the philosophy of continuous improvement through team work and statistical thinking. Students will use structural tools for analysis, decision making and performance measurement.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2435 Advanced Health & Human Rights (3 Credits)**

This course will build on the introductory Health and Human Rights course by focusing on additional topics, methodologies and debates in the field. Through a case study approach and group projects, students will weigh the relative costs and benefits of using a rights-based approach in a public health context, as well as explore how public health policies, programs and practices can impact human rights. Students will acquire an in-depth knowledge of international human rights as applied to public health through real-world application. Students will write a grant proposal on a health and human rights intervention or research study and present on this topic at the end of the semester.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2440 Emerging Diseases and Bioterrorism (3 Credits)***Typically offered Spring*

The emergence of new pathogens and drug resistance, as well as increased transmission opportunities caused by human migration, political instability and breakdown of healthcare infrastructure, has led to a rising prevalence of infectious disease. This course aims to provide training in the biology, epidemiology and control of emerging diseases. It will provide the necessary skills to analyze the interplay between human host and pathogen in both evolutionary ecology and statistical epidemiology frameworks. There will be a discussion of ?Darwinian Medicine?. Specific bioterrorism pathogens will be discussed, as well as methods of identification and predictive modeling of a bioterrorism incident. In addition to lectures, class time will include practical data handling. Discussion of both methodological and substantive epidemiology papers from the recent literature will be led by the students.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2450 Intermediate Epidemiology (3 Credits)***Typically offered Spring*

This course will develop an understanding of epidemiologic concepts and methods that will be a backbone to in depth training in specialty areas. It will provide a technical and conceptual training in study design, multivariate analysis, sample size calculations and other key epidemiologic techniques. It will build on the basic core course.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2480 Longitudinal Analysis of Public Health Data (3 Credits)***Typically offered Spring*

This course covers modern methods for the analysis of repeated measures, correlated outcomes, and longitudinal data, including the unbalanced and incomplete data that are characteristic of public health research. There are four widely available methods for dealing with dependence: robust standard errors, generalized estimating equations, random effects models and fixed effects models. This course examines each of these methods in some detail, with an eye to discerning their relative advantages and disadvantages. Different methods are considered for quantitative outcomes and categorical outcomes. The course uses Stata statistical software and gives students hand-on experience working with real data.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No

**GPH-GU 2500 Topics in Public Health (3 Credits)***Typically offered occasionally*

See NOTES by Sections An introduction to the public health significance of criminal justice policies and mass incarceration in America and what we can do about it. This course will explain the structure of the US criminal justice system and its role as a determinant of public health. Classes, readings, media, and a new data laboratory will support student research examining the leading public health issues and outcomes of individual and populations criminal justice system involvement and time spent in jails and prisons. We will review the history and sociology of punishment, theories of crime-control, and their relationship to modern epidemics (e.g. drug overdose and AIDS). Our focus will be the immediate and long-term personal and social impacts of mass incarceration on individuals, families, and communities - a public health crisis profoundly affecting human rights and social justice in America.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2501 Special Topics: Data Science and Machine Learning in Public Health Practice and Research (1 Credit)**

This 5-session (2 hours each session), 1 credit course will introduce and encourage thinking around new datasets and methods in epidemiology and public health. The entire data science pipeline, from data gathering, processing, analysis and communication will be considered. Content along each part of the pipeline will include summaries of current and best practices from the literature, discussion of select exemplar research papers and methods in terms of their appropriateness in public health, and approaches to address methodological challenges. Content will be related to both infectious diseases such as COVID-19 as well as non-communicable diseases. The workshop format will be highly interactive with significant time devoted to discussion. Students will be encouraged to spend time before sessions reading identified papers. Students will also be encouraged to bring their own dataset to the course or use publicly available ones to develop their own data science project, and time in the course will be allotted for discussing specific challenges they face in their project. The main outcomes will be exposure to current research and practice in data science and health, an understanding of tradeoffs, challenges and possible approaches. We will spend the last module on discussion and potential design of future research regarding ethics in artificial intelligence (AI) specific to the public health context.

**Grading:** School of Global Public Health Pass/Fail**Repeatable for additional credit:** No**GPH-GU 2502 Special Topics: Outbreak Epidemiology: Re-emerging and Emerging Infectious Diseases\* (3 Credits)**

Over the last 20 years, we have witnessed a number of local as well as large-scale, multi-state and multi-country disease outbreaks and pandemics of re-emerging and emerging diseases – including measles, H1N1, Zika, Ebola, SARS, MERS, and currently SARS-CoV-2 (COVID-19). In light of the emergence and re-emergence of these infectious disease outbreaks, the overall objective of this course is to introduce students to the essential elements of outbreak investigations in both local, national and global settings. The course covers three broad content areas that include understanding and detecting infectious diseases, investigating outbreaks, and communication and prevention of future outbreaks.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2503 Special Topics: Through the COVID-19 Magnifying Glass: An Examination of Racial and SES Disparities (1 Credit)**

This 5-session (2 hours each session), 1 credit, course will examine the racial, ethnic, and socioeconomic health disparities in COVID-19 infections, hospitalizations, and mortality. Session 1 will provide an overview of our current understanding of the biology, clinical manifestations, and epidemiology of COVID-19. Students' understanding of COVID-19 health disparities will be centered in the pre-existing and entrenched health disparities in Session 2 with Session 3 specifically examining COVID-19 infections, hospitalizations, and mortality disparities. Session 4 will explore disparities in the impact of COVID-19 mitigation strategies. Finally, Session 5 will end the course with a discussion of best practices to addressing COVID-19 health disparities in the US.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2504 Special Topics: Introduction to Clinical Trials: COVID-19 as a Case Study (1 Credit)**

This 5-session (2 hours each session), 1 credit, course will introduce students to the many facets of clinical trials, including their justification and structure, along with many real examples drawn from the over 800 COVID-19 clinical trials worldwide that have been registered as of May 5, 2020 (<https://www.covid19-trials.com/>). The course will cover designs and methods for the various phases of clinical trials. For each class, students will read reports on clinical trials from the medical literature that exemplify designs and issues discussed in class. Students will develop a full clinical trial design during the course.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2505 Special Topics: Social Network Data Analysis with R, with Application to COVID-19 (1 Credit)**

This 5-session (2 hours each session), 1 credit, course will introduce students to social network data analysis with demonstrations in R. The past decade has witnessed a surge of the network data generation in the areas of technological, biological, social, and informational. This course will provide an introduction to networks. It will cover the descriptive analysis of network, network visualization, network models, and community detection. Various concepts and visualizations will be demonstrated using the R language. As a final project, the student will analyze a real network dataset from the COVID-19 pandemic and write a report.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2506 Special Topics: Statistical and Epidemiological Evaluation of COVID-19 Studies (1 Credit)**

Pre-requisites: none. This 5-session (2 hours each session), 1 credit, course will examine the rapidly evolving research on COVID-19 and engage students in its critical evaluation. An introduction to infectious disease epidemiology and modeling will be provided, as well as to the wide array of publicly available data sources for COVID-19, including databases and social media, and their use in COVID-19 research. Students will discuss research reports in the media and scientific publications and their interpretations in light of the design and data analysis of the underlying studies. Using what they have learned in the course, students will write a report or op-ed type article or develop a video presentation incorporating an infographic or data visualization that critically evaluates a particular COVID-19 topic.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No

**GPH-GU 2507 Special Topics: The Impact of COVID-19 in Global and Environmental Health (1 Credit)**

This course is designed to introduce students to the breadth and depth of expertise of the faculty in the Global and Environmental Public Health Program. It will not only provide students with an overview of the ongoing research and projects faculty are engaged in but will also highlight how COVID-19 has impacted their work. It will explore the implications of the pandemic on the future global health and what it means for the next generation of public health practitioners. The course will touch on a diverse set of topics, including urban health, climate change, community engagement, and health disparities in the context of COVID-19.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2509 Special Topics: Public Health Policy and Management Challenges (1 Credit)**

This course introduces students to public health policy and management challenges related to the COVID-19 pandemic from the perspective of experts in the field. The course includes an overview of the impact of COVID-19 on public health and healthcare systems, a description of misinformation issues and government responses, community and primary care challenges, and a critical assessment of the responses of public health and healthcare systems to the crisis.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2510 Special Topics: Healthcare Claims Data Analysis (3 Credits)**

*Typically offered not typically offered*

This course will introduce students to the richness, complexities, and limitations of healthcare claims data and how the data may be deployed to answer a variety of real-world population health questions. Topics covered in the course include an introduction to claims data and how it is used in population health analysis and quality of care measurement, data basics, claims coding, and how claims data is used in business and academic research. Students will work hands-on with claims data to complete course assignments and a project.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2512 Special Topics: Applied Spatial Statistics for Public Health (1 Credit)**

This 5-session (2 hours each session), 1 credit, course will survey topics on the statistical analysis of data collected in space, with application to public health. Topics include defining geostatistical, areal and point processes, visualizing spatial data, spatial covariance functions, prediction and kriging, conditional autoregressive models, intensity functions, and K functions. Through in-class labs, students will learn to analyze spatial data in practice. Using what they have learned in the course, students will write a group report about a spatial data analysis.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2513 Special Topics: Advanced Epidemiological Methods: Evaluation of Epidemiological Studies (3 Credits)**

The goal of this advanced course in epidemiology is to provide students with the ability to evaluate a body of evidence on key public health issues. To achieve this goal, students will apply their extant knowledge of study design and analytic approaches used in epidemiology to critically evaluate the strengths and limitations of the methods reported in the scientific literature. The course will provide skills in conducting systematic literature reviews and meta-analyses. By reviewing the epidemiologic literature on key topics in public health, students will be able to (1) evaluate issues impacting the internal and external validity of the evidence presented in these studies; and (2) apply the knowledge and skills gained in the course to developing and writing empirical papers and systematic reviews as well as grants and research proposals.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2520 Issues in Global Pediatric Oral Health (3 Credits)**

*Typically offered Spring*

Children in disadvantaged communities of developing countries have rates of untreated oral diseases that range from 32-90%. In over forty of the least developed countries, many communities have no basic or emergency care for their populations. This course will allow the student to: a) understand the epidemiology of oral diseases in children, b) understand and develop ways to meet the challenge of untreated oral diseases in disadvantaged communities, c) identify significant issues that affect the oral health of children worldwide and proposed ways to improve the oral health of children, and d) acquire the skills necessary to develop oral health promotion strategies directed at children across the world.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2530 Water Fluoridation: Half Century of Evidence (3 Credits)**

*Typically offered not typically offered*

This course will provide students with detailed knowledge regarding the efficacy of water fluoridation, the safety of water fluoridation and the swirling controversies of alleged detrimental health effects of water fluoridation since its introduction in the late 1940s. The course will present the initial community trials which established it as the major dental public health program in the U.S., as well as the evidence from around the world regarding the relationship between water fluoridation and an array of diseases and conditions, including Downs Syndrome, heart disease, aging, skin disease and cancer. Students will assess the quality of the evidence for adverse health effects, and the pattern of presentation by the anti-fluoridationists.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2540 Oral Health Promotion Planning in Developing Countries (3 Credits)**

*Typically offered not typically offered*

In this course the basic concepts and the importance of oral health promotion in the community are discussed. The course builds on the basic epidemiology course and other core courses as they apply to the planning and evaluation of community-based oral health programs designed to improve the oral health of a target population. It compares cross national oral health promotion programs and discusses current trends in the oral health sector as it pertains to their goals, programs, costs and achievements. Environmental, social, cultural and behavioral mediators of oral health and access to care will be discussed as well as specific approaches to prevent and promote good oral health.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2550 Society & Oral Health Seminar (3 Credits)**

During recent years dramatic changing patterns of oral diseases have been observed at a global level. While some oral diseases seem to be in decline among certain groups of the developed countries they are reaching epidemic levels in developing countries. A proper understanding of the social context of oral health and illness is important for the development of oral health programs. In this course we will explore issues related to oral health inequalities in developed and developing countries and how these inequalities can be influenced by the value placed in oral health by political and social organizations

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2560 Public Health Research & Pract:Less Dev Countries (3 Credits)**

*Typically offered not typically offered*

International public health careers may expose professionals to a wide variety of political, social, cultural and infrastructure conditions. Operations in some less developed countries may be even more challenging with degrees of low-level conflict. Some may choose to participate in humanitarian disasters. These conditions require an appreciation of local partners, planning details, resources, while basing public health practice on scientific principals. Using a "gold standard" NIH funded international research protocol as a framework for topical discussions, critical issues of international work will be explored, e.g., travel medicine, logistics, safety, application of scientific principals. Additionally, this pedagogical process will orientate the student to NIH grant procedures, and by the nature of the issues, challenge the student to consider practical ethical problems associated with international public health.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2570 Lit Review of Clinical Studies I:Basic Skills (3 Credits)**

*Typically offered not typically offered*

The overall goal of this course is to provide the student with the necessary foundation for the literature based learning. Basic research designs will be introduced and epidemiological and biostatistical measures commonly used in research studies will be reviewed using a series of lectures and guided seminars.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2580 Fund of Clinical Trials (3 Credits)**

*Typically offered all terms*

The overall goal of this course would be to provide the student with the necessary foundation for understanding clinical trials through a series of lectures and guided seminars.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2610 Practicum in Global Health Leadership (3 Credits)**

*Typically offered not typically offered*

This is a required course that integrates skills and knowledge from the classroom and lays the foundation of global health work experience for the capstone course. The internship must be completed before enrollment in the capstone course. The Internship consists of two components: 1) a minimum of 120 hours of direct field work in an approved public or private organization or program that is engaged in the prevention of disease, health promotion, health policy development, health service delivery or research in a global context; 2) required attendance at a day-long workshop at the end of the internship. The internship hours can be started any time after completion of the first semester of the program and for full-time students, should be completed no later than the third semester of the program. The workshop will be offered in the Spring (May) for students completing fieldwork hours in the Spring and Fall (September) for those who complete their fieldwork hours during the summer. Students register for U10.2610 for the semester in which they will attend the workshop. Using the internship guidelines provided at orientation, students will be responsible for identifying relevant organizations or programs, obtaining a mutually agreed upon assignment and submitting the internship plan at least one month before the internship begins to the Administrative Director for approval. The assignment should include a "shadowing" experience with a senior staff member for at least one working day. The assignment at the organization should be relevant to the student's career goals and cannot be the student's current job.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2621 Capstone I: Practice and Integrative Learning Experiences (2 Credits)**

*Typically offered Fall*

Capstone is learning in action. Part of the core curriculum of the Masters program in Global Public Health, it provides students with both a critical learning experience and an opportunity to perform a public service. Over the course of an academic year, students work in teams – either to address challenges, solve problems and identify opportunities for a client organization or to conduct research on a preCapstone is learning in action. Part of the core curriculum of the Masters program in Global Public Health, it provides students with both a critical learning experience and an opportunity to perform a public service. Over the course of an academic year, students work in teams – either to address challenges, solve problems and identify opportunities for a client organization or to conduct research on a pressing social question. Ultimately, Capstone contributes not only to the students' education, but is a university resource for the public good. In architecture, the capstone is the crowning piece of an arch, the center stone that holds the arch together, giving it shape and strength. MPGPH's Capstone program plays a similar role, by integrating and enhancing student learning in several different arenas: a content or issue area, key process skills including project management and teamwork, and methods for gathering, analyzing and reporting data. Capstone requires students to interweave their learning in all these areas, and to do so in real time, in an unpredictable, complex real world environment. Although each student will be assigned to a team, the class will work as a learning community dedicated to the success of all the projects.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No



**GPH-GU 2622 Capstone II: Practice and Integrative Learning Experiences (2 Credits)**

*Typically offered Spring*

Capstone is learning in action. Part of the core curriculum of the Masters program in Global Public Health, it provides students with both a critical learning experience and an opportunity to perform a public service.

Over the course of an academic year, students work in teams – either to address challenges, solve problems and identify opportunities for a client organization or to conduct research on a pressing social question.

Ultimately, Capstone contributes not only to the students' education, but is a university resource for the public good. In architecture, the capstone is the crowning piece of an arch, the center stone that holds the arch together, giving it shape and strength. MPGPH's Capstone program plays a similar role, by integrating and enhancing student learning in several different arenas: a content or issue area, key process skills including project management and teamwork, and methods for gathering, analyzing and reporting data. Capstone requires students to interweave their learning in all these areas, and to do so in real time, in an unpredictable, complex real world environment. Although each student will be assigned to a team, the class will work as a learning community dedicated to the success of all the projects.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2686 Thesis I: Practice and Integrative Learning Experiences (2 Credits)**

*Typically offered Fall*

This course (part of a two-semester series; Thesis I and Thesis II) introduces the thesis as the culminating experience for MPH candidates in the Biostatistics (BIO), Epidemiology (EPI), and Social and Behavioral Science (SBS) tracks, and allows students to develop skills in conducting public health research, analyzing and interpreting data and presenting study findings. The thesis is intended to reflect the training students have received in the MPH program and demonstrate their ability to integrate, synthesize, and apply the knowledge and skills from coursework and practicum experiences to a real world public health problem or issue that is relevant to their major field of interest. In Thesis I students will also have the opportunity to reflect on their practice experiences, most often in the site from which the thesis is drawn. The course provides students with the knowledge and skills to develop and refine research questions, conduct a comprehensive review and analysis of the literature relevant to the topic of interest, select a theory or organizing framework, outline the methods, formulate a plan for data collection and analysis, and develop an annotated outline of the project.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2687 Thesis II: Practice and Integrative Learning Experiences (2 Credits)**

*Typically offered Spring*

This is the second course in a two-semester series that continues work on the culminating activity, the thesis, for Biostatistics (BIOS-MS and BIOS-MPH), Epidemiology (EPI-MPH), and Social and Behavioral Sciences (SBS-MPH) concentrations. The focus of this course is on completing the proposed thesis and preparing for the presentation of the final thesis. Students will work closely with their thesis advisor during the semester, but the course instructor will provide structural guidance on several remaining sections (results, discussion, structured abstract) of the thesis. The thesis should demonstrate the student's ability to think critically, synthesize foundational and concentration competencies, provide understanding and insight into a substantive area of inquiry, and convey ideas effectively to an intended audience. Pre-requisite: GPH-GU 2686

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2910 Biological Basis for Public Health (3 Credits)**

*Typically offered not typically offered*

This course is designed to offer an integrative biological perspective for disorders of global public health importance. The course provides an understanding of foundational biological principles and mechanisms underlying the genetic, environmental, and infectious etiologies of diseases that are common, burdensome, or costly. In addressing these themes, special attention will be given to how these areas of inquiry relate to human morbidity and population health.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2930 Epidemiological Methods and Design (3 Credits)**

*Typically offered Fall*

This 3-unit course will cover in-depth, advanced methods for modern epidemiologic study design, sampling, quantitative measurement, including reliability and validity, and statistical analysis appropriate for selected study designs relevant to global health research and practice. Considerations regarding the responsible conduct of research in international settings will be integrated throughout the course. This doctoral-level lecture/seminar course is offered to graduate students with a basic knowledge of epidemiologic and biostatistical principles, including causal inference, standard study design, confounding, bias, validity, and commonly-used analytical methods.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 2960 Theories in Public Health, Practice, Policy & Research (3 Credits)***Typically offered Fall*

The 'intervention imperative' in public health has traditionally overshadowed theory development (Connelly, 2005; Potvin et al., 2005). Consequently, many public health practices and interventions are predicated upon unexamined or under-theorized assumptions about etiology. As the scope of public health expanded beyond infectious diseases, its theoretical foundations extended beyond biomedical 'germ theory' explanations to include behavioral psychology. By the late 20th century, these foundations grew to incorporate multi-factorial etiologies and systems approaches borrowing from social science theories and methods. This course examines an array of paradigms, theories and conceptual models used in public health. These will be roughly categorized into the following domains: a) biomedical; b) psychological; c) organizational; d) socio-cultural; and e) structural /critical. Specific public health problems—HIV/AIDS, cancer and mental disorders—will be examined using relevant theories. Emphasis will be on adopting a comparative, critical and integrative (biopsychosocial) perspective on theories and key concepts in public health practice, policy and research.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2970 Applying Social Theory in Public Health (3 Credits)***Typically offered occasionally*

This course builds upon Theories in Public Health Practice, Policy and Research (GPH-GU 2960) by focusing on social science theories of critical engagement with problems in public health. Students will learn about the historic role of social theories in public health and their current influence on thinking about INEQUALITY, poverty, race, gender and other social and structural determinants of health. Extended case studies will play a critical role in the inquiry

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 2995 Biostatistics for Public Health (3 Credits)***Typically offered Fall and Spring*

This course covers basic probability, descriptive and inferential statistics, and the role of biostatistics in the practice of public health. Specific attention will be given to common probability distributions in public health and medicine, t-tests, Analysis of Variance, multiple linear and logistic regression, categorical data analysis, and survival analysis. Statistical topics are presented conceptually with little derivation, and applications are demonstrated using common statistical software. The course can be taken online or in-person.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 3000 Perspectives in Public Health: Doctoral Seminar I (1.5 Credits)***Typically offered Fall and Spring*

The Global Public Health Doctoral Colloquium is a forum in which prominent and up and coming researchers present their work on pressing topics related to global public health. It offers doctoral students and faculty a chance to hear from their colleagues, while engaging in a dialogue about current research.

**Grading:** School of Global Public Health Pass/Fail**Repeatable for additional credit:** No**GPH-GU 3010 Perspectives in Public Health: Doctoral Seminar II (1.5 Credits)**

The Doctoral Colloquium II is a forum in which builds on part I, in which distinguished faculty and researchers present their work on important topics in public health. In addition to engaging in a dialogue about current research and scholarship, students learn some about various methodology used in public health research; they develop foundational skills that are required for their doctoral program including literature reviews, aspects of manuscript writing, revising and submission of manuscripts, research dissemination and learning about pre-doctoral grant funding.

**Grading:** School of Global Public Health Pass/Fail**Repeatable for additional credit:** No**GPH-GU 3020 Evidence-Based Public Health & Systematic Review Best Practices (0 Credits)**

Training scholars in evidence-based Public Health (PH) practice is essential as practitioners seek to develop high-quality, community-based interventions and implementation plans, create and evaluate PH policies, and seek guidance in the decision-making process. Thus, evidence-based PH relies on the most current high-quality information. This course will focus on significant evidence-based PH skills including literature searching, critical appraisal of PH outcomes, data management and publication through the use of applicable informatics tools and discussion. After completion of this course, doctoral students will have a strong foundation for conducting literature reviews and participating in the research process in academia or when practicing in the field of PH.

**Grading:** School of Global Public Health Pass/Fail**Repeatable for additional credit:** No**GPH-GU 3030 DrPH Public Health Leadership Seminar I (1.5 Credits)**

The DrPH Public Health Leadership Seminar serves as a vehicle for co-creating with DrPH students a community of learning and action to facilitate application of learnings from their courses and real-life challenges as public health leaders in an experiential peer-learning platform. The seminar will introduce students to public health leaders at local, national, and global levels and to expert researchers, practitioners and policy makers speaking on critical public health issues. It will also offer structured activities to strengthen students' leadership skills at the personal, organizational, national and global levels in order to manage the process of organizational change needed to advance population health and health equity in public health programs and policy.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 3035 DrPH Public Health Leadership Seminar II (1.5 Credits)**

The DrPH Public Health Leadership Seminar is a two-semester course sequence that serves as the vehicle for co-creating with DrPH students of a community of learning and action. The seminar introduces students to public health leaders at local, national, and global levels and to expert researchers, practitioners and policy makers speaking on critical public health issues. The seminar also serves as a platform for students to apply learnings from their courses and real-life challenges as public health leaders into an experiential peer-learning platform – the Action Learning Set, with the goals of strengthening leadership skills at the personal, organizational, national and global levels and developing the ability to manage organizational change and advance population health and health equity.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No

**GPH-GU 3040 Intervention & Prevention Science (3 Credits)***Typically offered Spring*

The findings from clinical, health services, and social science research cannot change population health outcomes unless health care systems, organizations, and professionals adopt them in practice and communities are receptive to them (Eccles et al 2009). This doctoral-level course provides students a set of frameworks for understanding the basis for health promotion and disease prevention interventions; reviews critical elements in planning, implementing, and evaluating such interventions; identifies challenges in scaling up interventions; and reviews the state of the art in knowledge about translating research findings into large-scale programs and policies.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 3050 Methods in Community Health Research (3 Credits)***Typically offered Fall*

Research in communities and natural (non-laboratory) settings requires flexibility and adaptability, especially when conducted in global sites where conditions are dynamic and often uncontrolled. This 1.5 credit doctoral-level course will explore approaches to conducting research with and in communities experiencing health disparities, in particular, the Community Based Participatory Research (CBPR) approach. Participants will become familiar with the historical, theoretical and philosophical perspectives that have informed CBPR. The course will review research methods utilized in conducting community health research including qualitative methods such as ethnographic observation and in-depth interviews (individual or focus group), use of quantitative surveys in combination with qualitative data or other data sources such as analyses of clinical or administrative data, geospatial methods (GIS) and Photovoice (Mixed Methods). Students will have the opportunity of interviewing collaborating community and academic partners. This course assumes the student has had previous coursework in research design and data collection in both quantitative and qualitative methods.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 3052 Methods in Community Health Research II (1.5 Credits)**

Research in communities and natural (non-laboratory) settings requires flexibility and adaptability, especially when conducted in global sites where conditions are dynamic and often uncontrolled. This 1.5 credit doctoral-level course will explore approaches to conducting research with and in communities experiencing health disparities, in particular, the Community Based Participatory Research (CBPR) approach. Participants will become familiar with the historical, theoretical and philosophical perspectives that have informed CBPR. The course will review research methods utilized in conducting community health research including qualitative methods such as ethnographic observation and in-depth interviews (individual or focus group), use of quantitative surveys in combination with qualitative data or other data sources such as analyses of clinical or administrative data, geospatial methods (GIS) and Photovoice (Mixed Methods). Students will have the opportunity of interviewing collaborating community and academic partners. This course assumes the student has had previous coursework in research design and data collection in both quantitative and qualitative methods.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 3110 Advanced Public Health Policy & Management (3 Credits)**

This course provides students with an opportunity to study advanced public health policy and management topics, develop research questions and apply research methods in public health policy and management. Each topic is introduced through specific applications and methodological approaches from the health policy and management scholarly literature. Class discussions focus on the applications of advanced research methods to address specific key research questions developed by students. Topics addressed include public health policy and management applications to evaluate different research design approaches and hands on application of key statistical methods.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 3152 Advanced Agent-Based Modeling (3 Credits)**

Agent-Based Modeling is a computational method for studying how interactions between agents generate global statistical regularities. Agents represent autonomous entities that are relevant to the phenomenon of interest such as individuals, households, and organizations. The course introduces the application of ABM in the context of epidemiology, public health, and the social sciences. The course trains students in using and developing models of various levels of complexity. From simple toy models that offer insight on the fundamental mechanisms of a phenomenon (such as the spread of an infectious disease) to realistic models that are calibrated to real-world observations and used for evaluating scenarios and interventions.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 3175 Design, Conduct, and Analysis of Cohort Studies (3 Credits)**

Cohort studies are critical to understanding the natural history of disease and making causal inferences about risk factors for disease. This course provides a comprehensive look at the design, conduct, and analysis of cohort studies. Emphasis is placed on the conceptual framework underlying cohort studies and the need to assess longitudinal relationships with time-varying exposures and outcomes. The course will teach students basic and advanced concepts in cohort study design, data analysis techniques, and interpretation of study results. The course will also introduce students to the conduct of cohort studies, with an emphasis on recruitment, retention, quality assurance, and quality control.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 3185 Health Services and Policy Research (3 Credits)**

This course introduces key concepts and ideas in health services and policy research. Health services research is a multidisciplinary field of study that seeks to understand how economic, social, individual and structural factors are related to health care access, utilization, quality and costs. Insights from health services research are critical to inform health policy decisions across sectors and populations. Topics addressed in this course include health care quality, population health, health care costs, survey and administrative data sources used in health services and policy research, experimental and observational study designs, data management and comparative effectiveness research.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No

**GPH-GU 3200 Dissertation Proposal Seminar (3 Credits)***Typically offered Fall and Spring*

This course provides doctoral students with a learning context taught in the form of a workshop to fully develop the dissertation proposal, including the delineation of the format of the dissertation, the dissertation rationale, significance and aims, the conceptual framework guiding the work, and the methodological approaches to be utilized in the dissertation proposal. Each student's dissertation proposal will be discussed and workshopped throughout the course of the semester in class, and it is expected that throughout the course each student will work closely with their dissertation Chairperson in refining the content and the details of the study. This course will guide students from conceptual clarity to the completion of a full draft of the written proposal. Each student will complete a draft of the proposal by the close of the semester.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 3205 Introduction to Intervention Optimization (3 Credits)**

Intervention optimization is an approach for developing behavioral interventions (broadly defined) so as to achieve maximum public health impact. This course will provide a survey of innovative intervention optimization strategies, with an emphasis on the engineering-inspired multiphase optimization strategy (MOST). Through the lens of principles of behavior change, students will critically examine methods of intervention development; contrast methods to define/develop intervention components; and consider how to balance effectiveness against implementation constraints (e.g., cost, time). Students will develop a detailed, theoretically- and evidence-informed approach for an intervention in their area of interest.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 3210 Qualitative Analysis: Interviewing and Mixed Methods Approaches (3 Credits)**

This course is designed for students who are willing to engage in focused, hands-on training for in-depth interviewing and mixed methods research to answer critical public health questions. It aims to provide a detailed "how to" of in-depth interviewing as a standalone or mixed methods approach. During this process, you will examine the epistemological, theoretical, and practical application of qualitative methods and learn how to carry out an independent interview study, including data collection and analysis. Students will share experiences, transcripts, and constructive criticism as they embark their field work. Through readings and discussions, the class will critically examine a number of aspects and approaches to doing, analyzing, and disseminating in-depth interview and mixed methods research.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 3220 Experimental Study Designs in Epidemiology (3 Credits)**

Experimental study designs are key to evaluating public health interventions. This course covers quasi-experimental and experimental study designs used in epidemiology. Topics include the definition and history of clinical trials; study designs, including quasi-experimental, phase I-IV, cross-over, adaptive trials, and pragmatic trials; internal and external validity; controls, randomization, and masking; ethical issues; data analysis principles; monitoring of accumulating safety and efficacy data; and interpretation of results. Students will critically evaluate quasi-experimental and experimental studies, analyze trial data, and develop trial designs.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 3225 Statistical Inference (3 Credits)**

This course will provide an introduction to the fundamentals of probability and statistics that are the foundations of analytical methods in public health research. Topics to be covered include axioms of probability, common distributions (normal, binomial, Poisson), expectations, variances, convergence theorems, parameter estimation (method of moments, maximum likelihood, Bayesian methods), confidence intervals, hypothesis testing (likelihood ratio, Wald and score tests), bootstrap methods, permutation testing. All theoretical material will be motivated with problems from epidemiology, biostatistics, environmental health and other public health areas. Background in algebra and calculus is required. This is a doctoral level course and is open to Masters students who have the requisite background.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 3235 Biostatistical Consulting (3 Credits)**

This course will provide an introduction to biostatistical consultation. Students will learn about ethical principles, professional standards for communication and interaction, interpretation of a scientific or public health problem and its translation into a statistical framework, execution of the required tasks (e.g., design, analysis plan, data analysis, interpretation), and clear communication of the results. Students will participate in mentored group consultations with investigators from across NYU. Students will read and discuss literature on the art and science of biostatistical consulting. Students will write up summary reports for two projects and present one to the class. Some projects may turn into an applied practice experience or thesis. This PhD level course may be taken by MS/MPH students who have sufficient background.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 3240 Organizational Theory and Behavior in Health Care (3 Credits)**

This course introduces key concepts and ideas in organizational theory and behavior in health care. The purpose of this course is to familiarize you with theories, methods and approaches that are characteristic of both "micro" organizational behavior and "macro" organizational theory. We will explore classic and contemporary theories and empirical research on OB and OT and learn how to assess the assumptions, strengths, weakness, and their application in health care settings. Throughout the course, special emphasis is placed on comparing alternative theoretical perspectives and research strategies, and on identifying issues for organizational research in the health care sector

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No**GPH-GU 3248 Teams and Strategies in Public Health Management (3 Credits)**

This course aims to equip learners with two inter-related domains that leaders and managers in public health organizations often have to focus on to improve organizational performance: teams and strategy. This course helps learners answer the question: "Why do some teams and organizations do better than others?" You will learn how to recognize suitable approaches to analyze team conditions and improve team performance, prioritize organizational activities and resources to create advantage or value for stakeholders, and communicate and implement strategic plans. Overall, this course will provide learners with useful theories, frameworks, and perspectives as well as improve their critical analytical skills around the effective use of teams and strategy to maximize organizational performance.

**Grading:** School of Global Public Health Graded**Repeatable for additional credit:** No

**GPH-GU 3260 Complex Systems, Disasters, and the Social Ecology of Health (3 Credits)**

Much of a population's health and well-being is dependent upon numerous complex systems, ranging from biological systems, through social and cultural systems, to public health and medical systems, to critical infrastructure and lifeline systems, to larger environmental and ecological systems. This course will explore the systems that contribute to a social ecology of health, considering the theoretical approaches for studying such systems, and examining methodological approaches for studying complex adaptive systems and their relationship to health. A major aspect of the course will be to employ disaster case studies as a means of understanding such complex systems. This course will be particularly valuable for students interested in systems thinking as it relates to public health research.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 3294 Designing and Managing Organizations in Public Health (3 Credits)**

This course has two overall goals. The first is to increase your effectiveness in leading individuals and teams within and across organizations, sectors and agencies that seek to improve public health. The course's second goal is to prepare you to effectively design organizations and master organizational processes to impact population health. This course prepares to achieve your objectives by providing you with fundamental frameworks and tools developed from the behavioral and social sciences and tested by leaders in organizations across the public, non-profit, and for-profit sectors.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 3338 Machine Learning in Public Health (3 Credits)**

This course provides students with a strong foundation in machine learning relevant to public health and biomedical applications. Topics include the data generating process, model selection and evaluation, generalized linear models, common supervised and unsupervised machine learning algorithms such as support vector machines, decision trees, random forests, neural networks, and k-means, and ethics and communication. Students will learn methods for optimal and proper implementation of machine learning, such as assessment of assumptions about the data generating process, feature generation, treatment of missing data, and reduction of bias. Students will gain familiarity with the potential power of machine learning in public health, as well as its particular challenges inherent to public health applications.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 3347 Tackling Global Health Disparities through Implementation (3 Credits)**

Students will examine and review the core concepts of implementation science research in global health with a particular focus on tackling global health challenges in low- and middle-income countries (LMIC). Key concepts of implementation science research including 'what it is' and 'how to do it' will be reviewed. Students will review how to develop a practical approach to designing global health interventions as well as understanding the continuum from their implementation through to evaluation through a global health and implementation science research lens. This course will introduce important aspects of implementation research including: conceptual frameworks, research design, and evaluation and will provide a practical approach to understanding these concepts through their application to 'real life' examples of implementation research programs in the global health context.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 3353 Regression I: Linear Regression and Modeling (3 Credits)**

Regression models are one of the most important statistical techniques used in public health. This course focuses on data analysis that use linear regression models for continuous outcomes. The first part of this course introduces simple and multiple linear regressions, principles of ordinary least square regression models, model assumptions, and inferences about model parameters. The second part of the course focus on important practical matters, such as prediction, variable selection, moderated effects, and mediation. These two parts together provide the foundations for more advanced statistics modeling. Examples are drawn from broad areas of public health research. All the analyses will be taught and performed using Stata and/or R statistical software.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 3354 Regression II: Categorical Data Analysis (3 Credits)**

Regression models are one of the most important statistical techniques used in public health. This course focuses on data analysis that use linear regression models for continuous outcomes. The first part of this course introduces simple and multiple linear regressions, principles of ordinary least square regression models, model assumptions, and inferences about model parameters. The second part of the course focus on important > practical matters, such as prediction, variable selection, moderated effects, and mediation. These two parts together provide the foundations for more advanced statistics modeling. Examples are drawn from broad areas > of public health research. All the analyses will be taught and performed using Stata statistical software.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 3368 Applied Survival Analysis (3 Credits)**

This course will provide an introduction to the analysis of survival data, i.e., data subject to incomplete observation due to censoring. Topics include estimation via the Kaplan Meier estimator, comparison of survival data via the log rank and related tests, and regression modeling of survival data using the Cox proportional hazards model and accelerated failure time model. Parametric modeling of survival data will also be covered. Additional topics may include left truncation, competing risks, and study design. Students may select any software package to use for assignments; examples in Stata, SAS and R will be provided. Assignments will involve analysis of survival data from Public Health and biomedical studies.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 3372 Applied Bayesian Analysis in Public Health (3 Credits)**

Bayesian analysis is one of the two major statistical paradigms; the other is Frequentist analysis. The course will briefly review the theory behind Bayesian methods and will focus on the practical implementation to public-health and biomedical data. Topics include comparison of Bayesian and Frequentist analyses, Bayesian inference of various one-parameter models and normal models, Markov Chain Monte Carlo algorithms, Bayesian (generalized) linear regression models, and Bayesian hierarchical models. Data analysis with the R software will be emphasized in the course. Upon successful completion of the course, students will be able to formulate Bayesian models for data analysis in public health and biomedicine, and will be able to implement the Bayesian inference using R. Pre-requisites: GPH-GU 3353 and GPH-GU 2184.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 3450 Intermediate Epidemiology (3 Credits)**

This course will develop an understanding of epidemiologic concepts and methods that will be a backbone to in depth training in specialty areas. It will provide a technical and conceptual training in study design, multivariate analysis, sample size calculations and other key epidemiologic techniques. It will build on the basic core course. This course is the second course in a three course sequence on the theory and practice of epidemiology and is intended for masters- and doctoral-level students. The course consists of two components: lecture and lab sessions. Lectures will cover key epidemiologic methods and concepts in greater detail. Lab sessions will include review and practice of fundamental data analytic techniques employing STATA.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 3555 Bioethics Practicum (2-4 Credits)**

*Typically offered Fall, Spring, and Summer terms*

Prerequisite: One semester in the Program, or a minimum of three courses.

**Grading:** School of Global Public Health Pass/Fail

**Repeatable for additional credit:** No

**GPH-GU 3960 Theories in Public Health Practice & Research (3 Credits)**

The 'intervention imperative' in public health has traditionally overshadowed theory development. Consequently, many public health practices and interventions are predicated upon unexamined or under-theorized assumptions. As the scope of public health widened from infectious diseases, its theoretical foundations extended beyond biomedical 'germ theory' explanations to include behavioral psychology. By the late 20th century, these foundations grew to incorporate multi-factorial etiologies and systems approaches borrowing from social science theories and methods. This course examines an array of theories and conceptual models used in public health. They are roughly categorized into the following domains: a) biomedical; b) psychological; c) socio-cultural; d) organizational/community; and e) structural / critical. Theoretical perspectives on specific public health problems as well as topics of interest to students in the class will be examined and discussed. Emphasis will be on adopting a comparative, critical and integrative perspective on theories and key concepts in public health practice, policy and research.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5010 Foundations for Epidemiology and Biostatistics (0 Credits)**

This course builds foundational skills that you will utilize as you work towards your degree. It consists of three modules. The Basic Math section covers basic math components that are utilized within the topics of Epidemiology and Biostatistics. The Biostatistics section covers fundamental statistical concepts that will help prepare you for Biostatistics. The final section looks at fundamental concepts that will help prepare you for Epidemiology. Both Epidemiology and Biostatistics, as well as other methodology courses in the curriculum, are fields that use samples from the population to look for trends, relationships, and associations. Findings are then used to make inferences about the population from which the sample was taken. The skills offered in this course provide a refresher of the basic knowledge needed to succeed in Epidemiology and Biostatistics and other courses are you complete your degree.

**Grading:** Class does not print on the transcript

**Repeatable for additional credit:** No

**GPH-GU 5106 Epidemiology (3 Credits)**

*Typically offered Fall and Spring*

Introduces students to the field of public health epidemiology, emphasizing the sociocultural factors associated with the distribution and etiology of health and disease. Methodological skills including the calculation of rates, analysis of vital statistics, and programming data using a basic statistical package are covered.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** Yes

**GPH-GU 5110 Health Care Policy (1.5 Credits)**

*Typically offered Fall and Spring*

This course introduces students to key concepts, principles and practices in the field of health policy in the United States and other national health systems. The course will examine issues that concern quality, costs, access to healthcare and public health services for individuals and populations. The course emphasizes the need for leaders in today's world of public health to understand central issues in health policy. The overall goal of the course is to provide information for students to build an understanding of the fundamental ideas, issues, and problems currently debated in health policy and to provide a foundation for practice in a range of careers in public health and health care policy.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5112 Public Health Management and Leadership (1.5 Credits)**

This course introduces students to key concepts, principles and practices in the field of public health management and leadership. This course provides information for students to build an understanding of the fundamental ideas, issues, and problems currently debated in health management and to provide a foundation for practice in a range of careers in public health and health care management. The overall goal of the course is to prepare students to increase their effectiveness in managing and leading individuals and teams in public health and health care organizations.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5115 Introduction to Principles of Nutrition in Public Health (3 Credits)**

This course will cover the basic concepts of the science of nutrition detailing the nutrients, food sources, function and nutritional requirements. The course will integrate the nutritional needs of populations, both nationally and globally, with emphasis on undernutrition, over nutrition and the double burden of malnutrition. The principles of nutritional needs will be applied to promoting health in vulnerable populations.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5120 HIV/AIDS from a Global Perspective (3 Credits)**

*Typically offered occasionally*

Students will examine the evolution of the HIV epidemic globally using a public health lens and emphasis on health promotion strategies and responses of health systems; concepts will be examined in regions with different epidemics: Africa, Eastern Europe/Asia, and the United States/Western Europe. Students will learn about HIV/AIDS history, biomedical aspects including testing and treatment, epidemiology, socio-bio-behavioral drivers, public health policies, and calls to action around the globe. Students will examine, analyze, apply, and evaluate theoretical paradigms and research, drawn from public health and interrelated disciplines with regard to HIV prevention, treatment, and care across all segments of the population. Theory-based HIV prevention and care are emphasized as is a biopsychosocial framework. Pre-requisites: GPH-GU 2106 OR GPH-GU 5106, GPH-GU 2140 OR GPH-GU 5140, > and GPH-GU 2190 OR GPH-GU 5190.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5121 Foundations of Global Health (3 Credits)**

This course prepares students to critically examine public health issues from a global perspective. It will guide students to understand how processes of socioeconomic development and globalization influence the health of populations throughout the world. It will explore the current key challenges in global health and present the state of the art in addressing global health problems, introducing the primary actors involved in setting global health policies and the architecture of global health governance and financing. The course will also touch upon the human rights and ethical dimensions of global public health, including conflicts between individuals, communities, and nations.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5130 Food Marketing and Communications (3 Credits)**

With this course our intention is to familiarize students with the interplay between public health nutrition and marketing—from historical, theoretical, analytical, and practical perspectives. To that end, students will characterize the underlying trends of past and present marketing campaigns from major food companies and examine how these marketing strategies have evolved over time and affected consumers' perceptions, purchases, and eating behaviors. We will spend time discussing knotty issues entangled with food marketing and how these concerning practices play out today and perpetuate health inequity through structural racism.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5140 Global Issues in Social and Behavioral Health (3 Credits)**

*Typically offered Fall and Spring*

This course begins by examining social, psychological, and cultural factors that have an impact on public health in community, national, and global contexts. These factors include population characteristics, individual beliefs and behaviors, and policies that affect public health problems and their solutions. The second half of the course introduces students to methods that public health professionals use to address the social and behavioral determinants of health. These methods include theories and perspectives drawn from the social/behavioral sciences, interventions and policies designed to alleviate health disparities, and methods to evaluate interventions and disseminate the results.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5150 Emergency Preparedness for Healthcare Organizations (3 Credits)**

The healthcare system is uniquely challenged by large-scale disasters, which are on the increase in the United States and throughout the world. Every setting of healthcare, from hospitals to outpatient clinics may be affected by acute emergencies and disaster events. Therefore, as public health professionals, healthcare professionals, emergency managers, or other professionals in charge of ensuring a safe patient care environment, it is essential to become familiar with the current disaster management paradigm (mitigation, preparedness, response, and recovery) as it pertains to the healthcare environment. This course is designed to provide students with disaster management capabilities that will have applicability in their current or future employment.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5152 Introduction to Agent-Based Modeling (3 Credits)**

How do local (micro-scale) interactions between individuals generate global (macro-scale) societal patterns—of disease, of conflict, of inequality? Agent-based modeling (ABM) is a powerful new way to address such questions computationally. In ABMs, software individuals and the interactions between them are explicitly represented, and these local interactions generate the global patterns we wish to explain, and to alter through policy, epidemics being prime examples. This course introduces students to ABMs from epidemiology, public health, and social science. It teaches students without prior programming experience to build, analyze, extend, test, and present simple models in NetLogo.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5153 Global Environmental Health (3 Credits)**

*Typically offered Fall, Spring, and Summer terms*

Environmental health sciences represent the study of biological, physical, and chemical agents that affect the health of both communities and workers. This course provides students with an introduction to key areas of environmental health. Students gain an understanding of the interaction of individuals and communities with their environment, the impact of environmental agents on human health, and specific applications of concepts of environmental health including exposure assessment and engineering controls. The impact of global environmental issues on health equity will be considered, as well as scientific, political, legal, and economic perspectives on global environmental health. Emphasis is placed on issues in environmental health that transcend national boundaries.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5170 Introduction to Public Health (0 Credits)**

This course provides an introduction to foundational principles, concepts, and methods in public health. Topics include: the history of public health; public health values and principles; core functions of public health; the role of biostatistics and epidemiology in measuring population health; the use of evidence; environmental, social, and behavioral influences on health; and globalization and health

**Grading:** School of Global Public Health Pass/Fail

**Repeatable for additional credit:** No

**GPH-GU 5171 Global Public Health Informatics (0 Credits)**

*Typically offered Fall and Summer terms*

Public Health Informatics is a new field that is concerned with the systematic application of information and computer sciences to practice, research and learning. This course is created to ensure that graduates of the program have working knowledge of information resources available for program planning, surveillance and data management and working knowledge in the use of evidence-based public health information tools that ensure use of current best practices and for lifelong learning.

**Grading:** School of Global Public Health Pass/Fail

**Repeatable for additional credit:** No

**GPH-GU 5175 Readings in the History and Philosophy of Public Health I (0 Credits)**

*Typically offered Fall*

This non-credit bearing course will require students to read and discuss important global public health books exploring the evolution of the field of public health in global perspective from the 19th century to the present. All MPH students will be required to complete 3 of these non-credit bearing courses prior to graduation. For each of these course sessions, a book will be discussed in a public lecture by its author; students are expected to read the book in advance, responding with a "forum" posting on the "NYU Classes" website one week in advance of the lecture, including a question raised by the book about public health. Questions will be collected and forwarded to our author-speakers in advance of their public lectures. The lecture and Q&A will be chaired by a member of the GIPH faculty and will last for two hours. Students are expected to sign up for/ complete the reading and written response/ attend the lecture for at least three books in the history of global public health over the semesters in which they are earning their graduate degrees. The successful completion of three or more of these course sessions will lead towards the achieving this critical content as described by ASPPH for the 21st century MPH: "History and philosophy of public health as well as its core values, concepts, functions, and leadership roles.

**Grading:** School of Global Public Health Pass/Fail

**Repeatable for additional credit:** No

**GPH-GU 5180 Readings in The History & Philosophy of Public Health II (0 Credits)**

*Typically offered Spring*

This non-credit bearing course will require students to read and discuss important global public health books exploring the evolution of the field of public health in global perspective from the 19th century to the present. All MPH students will be required to complete 3 of these non-credit bearing courses prior to graduation. For each of these course sessions, a book will be discussed in a public lecture by its author; students are expected to read the book in advance, responding with a "forum" posting on the "NYU Classes" website one week in advance of the lecture, including a question raised by the book about public health. Questions will be collected and forwarded to our author-speakers in advance of their public lectures. The lecture and Q&A will be chaired by a member of the GIPH faculty and will last for two hours. Students are expected to sign up for/ complete the reading and written response/ attend the lecture for at least three books in the history of global public health over the semesters in which they are earning their graduate degrees. The successful completion of three or more of these course sessions will lead towards the achieving this critical content as described by ASPPH for the 21st century MPH: "History and philosophy of public health as well as its core values, concepts, functions, and leadership roles."

**Grading:** School of Global Public Health Pass/Fail

**Repeatable for additional credit:** No

**GPH-GU 5185 Readings in the History & Philosophy of Public Health III (0 Credits)**

*Typically offered Spring*

This non-credit bearing course introduces students to important public health readings exploring the field of public health in global perspective from the 19th century to the present. In advance of each course session, the instructors will post discussion questions based on the assigned readings. Students are expected to come to class prepared to discuss the questions. All MPH students are required to complete 3 of these non-credit bearing courses prior to graduation. The successful completion of three or more of these course sessions will lead towards achieving this critical content as described by ASPPH for the 21st century MPH: "History and philosophy of public health as well as its core values, concepts, functions, and leadership roles.

**Grading:** School of Global Public Health Pass/Fail

**Repeatable for additional credit:** No

**GPH-GU 5190 Essentials of Public Health Biology (3 Credits)**

*Typically offered Fall and Spring*

This course introduces MPH students with minimal formal training in biology to the biological and molecular context of public health. The course provides an overview of: a) basic biological principles and mechanisms relevant to public health practice; and b) biomedical technology as applied in public health. The course covers basic principles of genetics, immunology, microbiology, and cell biology in the context of global public health. Areas covered include infectious diseases, genetic and chronic diseases, allostatic load, environmental factors affecting health, and prevention and treatment strategies.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No



**GPH-GU 5210 Global Health Disaster Preparedness & Response (3 Credits)**

Large-scale disasters and catastrophes, also referred to as mega-disasters or hyper-complex emergencies, are of such magnitude that they affect an entire country- either directly or indirectly and require multi-national or international response capabilities to recover. Incidents or events such as pandemics and climate change that impact more than one country or region are also considered global disasters. In this course, students will define and characterize major catastrophic threats, assess data for mitigation purposes, conduct risk assessments for public health impact and structural and non-structural damages, identify recovery strategies and assess role of memorialization on community recovery. Students will prepare a Disaster Plan and appropriate Plan Annexes. This is an online course

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5213 Public Health Nutrition (3 Credits)**

Public Health Nutrition involves the application of food and nutrition knowledge, policy, and research to improve the nutritional status and health of populations. This course emphasizes the distinction between population-based and individual-based approaches to prevention and alleviation of diet-related conditions, and the barriers to improving the nutritional status and health of diverse population groups. The course will discuss the social, behavioral, and food- and nutrition-related factors that affect health both nationally and globally. Lectures will integrate nutritional science, applied practice and nutrition research, and their application to initiatives and programs designed to improve the nutritional status of populations.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5218 Assessing Community Health Needs & Resources (3 Credits)**

Community health assessments comprehensively identify the assets and needs of a defined group. When conducted in tandem with community members, community health assessments provide a window into how a community sees itself, the systems and patterns it functions by, and its assets and needs. Public health practitioners can use this information to work with a community to utilize its strengths to address mutually acknowledged needs. In this course, students will work in teams to conduct a community assessment of an assigned United Health Fund district within New York City. The focus of the course will be on introducing the basic content/skills of on-the-ground field research, collecting, analyzing, and summarizing data. Specifically, students will use primary data (surveys, in-depth interviews, observations) and secondary data (public data sets) collection along with systems thinking to describe and understand the health, demographics, and socio-economic profile of the community. Students will survey and/or interview community leaders, community based organization representatives, health practitioners, and/or community residents. Students will summarize the findings and offer recommendations in a final report and presentation.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5220 Accelerating Progress Towards Health-Related SDGs (3 Credits)**

*Typically offered Spring*

This course provides an overview of the state-of-the-art concerning the Global Burden of Disease, the Disease Control Priorities, Universal Health Coverage and Health Systems Analyses. Students apply systems thinking and evaluation methods in designing policies to accelerate progress toward the health related Sustainable Development Goals (SDGs), by categorizing health related targets within the SDGs according to mortality, incidence/prevalence of disease, risk factors, cost effective interventions and health system platforms. For each of these dimensions, students analyze concepts, methods, information sources and existing data for countries with differing burdens of disease.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5230 Global Non-Communicable Disease Epidemiology & Control (3 Credits)**

This course will focus on the considerable and increasing burden of disease due to chronic diseases, mental health, substance use (alcohol, tobacco, other drugs), risk factors (obesity, lack of physical activity), and injuries within the developing world. It will present methods for measuring the burden of non-communicable disease, review approaches to program and service development to modify risk factors, present lessons learned from successful developing country programs, and discuss implications for health services development and international development policies.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5232 Disease Elimination and Eradication Strategies for Infectious Diseases in LMICs (3 Credits)**

Students will examine the core principles of disease elimination and eradication (E&E) - with a focus on challenges in low-resource settings - and co-develop a draft strategy in a specific country. Students will analyze case studies to better understand lessons learned, challenges faced, and effective interventions needed to achieve disease E&E. The class will provide an introduction to ethical issues in disease E&E, political, social, behavioral, and environmental/climate factors, health system strengthening, the integration of disease E&E programs with existing health systems, and communication and advocacy. Different thinking models (systems, design, strategic & evaluative) will be introduced to help students in their development of interventions to reduce and eventually eliminate disease in a given geography.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5240 Budgeting for Sustainable Health Returns on Investment (3 Credits)**

This course develops budget and resource management competencies and skills. Students will identify, apply and evaluate existing methods and tools that were developed and implemented by the World Bank, UNICEF, WHO and other agencies to support analysis of additional costs, returns on investment, budget requirements and fiscal sustainability. Case studies, readings and datasets are based on real life applications to equity focused approaches and health system strengthening for the Millennium Development Goals (MDGs). Students will synthesize additional costs, budgets, sustainability, and returns on investment, and propose priority analytic tools to be applied or further developed for budget and resource management for the health related targets of the Sustainable Development Goals (SDGs).

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5250 Health & Human Rights (3 Credits)**

This course approaches global health and justice from international human rights and humanitarian law. The course is designed to provide public policy and public health students with the basis for literacy about human rights and humanitarian law. Through lectures, case studies and practical training, students will be able to gain knowledge and skills to determine how rights violations impact health, and how to engage in using the human rights approach to improve health outcomes. Topics, including HIV/AIDS, sexual and reproductive rights, the right to health in war and disasters, access to medicines and the ethical obligations of public health professionals, will be used to illustrate practical applications of human rights to global health.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5270 Management of Public Health Disasters (3 Credits)**

This course introduces basic principles and practices of public health disaster management. Students explore threat and hazard identification, mitigation, preparedness, response and recovery, and will apply their new skills and knowledge to address a wide range of natural and man-made disaster events of concern to public health. The course includes legal/ethical considerations, psychological impacts of disasters, community resiliency, planning for the needs of vulnerable populations, and other topics relevant to disaster management. For the culminating project for this course, students develop a disaster plan for their local department of health or for their workplace. Students also complete (no-cost) on-line FEMA ICS certification training as part of this course.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5271 Translating Research into Practice: Adapting and Implementing Evidence-Based Public (3 Credits)**

Evidence-based public health is now recognized as the foundational gold standard for developing programs and interventions to improve population health. In practice, many challenges exist to identifying appropriate evidence-based interventions and adapting them to perform as intended in new settings. This course will examine approaches for selecting, adapting, and implementing evidence-based public health interventions. The framework presented in the course will help prepare students to adapt and implement programs that are theory- and evidence-based, community-based, and reality-based.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5275 Nutrition Epidemiology for Public Health (3 Credits)**

The course provides in-depth knowledge of the principles and challenges inherent to the discipline of nutritional epidemiology. In addition to covering fundamentals of nutritional epidemiology such as collection, analysis, and interpretation of data on dietary intake and nutritional status within diverse population groups, the course will place strong emphasis on methodological considerations in study design and pertinent statistical issues, including measurement error. The course emphasizes critical evaluation of dietary assessment methods and the results of research studies associating intake of foods, nutrients and dietary patterns with the risk of chronic diseases. Importantly, the course addresses the translation of scientific findings into nutritional recommendations and policies.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5288 Perspectives in Migrant Health & Human Rights (3 Credits)**

*Typically offered occasionally*

This course is a forum where public health and related practitioners share their professional experiences and insights working with a range of migrant populations. Through an online learning environment, students will examine current trends in the field of migrant health and human rights, with a focus on gaining practical skills and engaging in critical self-reflection. The course will enhance students' abilities to think critically and analytically about current problems and challenges confronting the field, and will complement conceptual and theoretical coursework, emphasizing the processes of implementing migrant health and human rights programming from practitioners' and migrants' perspectives.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5292 Public Health Law (3 Credits)**

Many of public health's greatest successes have been based on the successful use of the law. Therefore, an understanding of the fundamentals of public health law and the legal foundations of public health is essential to appreciating the tools available to government to address public health threats. This class will examine the U.S. government's authorities and also the legal limitations on government enacting law to improve population health at the federal, state, and local levels and by the executive, legislative, and judicial branches. We will additionally analyze core public health issues in the context of this legal framework.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5296 Public Health Innovation and Entrepreneurship (3 Credits)**

This course helps current and future public health practitioners develop skills to create innovative, sustainable, and scalable solutions that address public health challenges. Student teams explore gaps in the availability, accessibility, acceptability, adequacy, and appropriateness of health-related goods and services in target communities and propose innovations that would narrow those gaps and improve health outcomes. Then, using a stepwise, structured approach, the teams develop and refine a business model for the innovation through stakeholder interviews designed to maximize product-market fit and minimize failure risk.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5312 Global Perspectives in Reproductive Health & Human Rights (3 Credits)**

This course examines reproductive health from a human rights perspective both nationally and internationally. After a review of the intersection of reproductive health and human rights, topics to be covered include: the demographic transition and declining birth rates; the rights of women with HIV infection and other vulnerable populations; men's influence on reproductive rights; viewing traditional practices through a human rights lens; and current reproductive rights.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5319 Writing Grants and Funding Proposals for Health-Related Programs (3 Credits)**

This course introduces the principles and foundational skills of grant writing. This includes skills in locating potential funding sources, understanding the process and procedures of assembling a complete proposal, leveraging the diverse professional roles involved in completing a proposal (principal investigator, co-investigator, consultant, pre-award specialist, research associate, etc), and using appropriate grant-writing style & technique. Students are guided through the development of an U.S. National Institutes of Health (NIH) grant proposal, taking a team science approach. Student teams will develop a mock NIH proposal, from locating appropriate NIH Institutes through development of program objectives, background, & methods; to the peer review process.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5320 Data Utilization in Public Health Practice (3 Credits)**

*Typically offered Fall*

Data Utilization in Public Health Practice (3 credits) Public health practice typically demands competencies in identifying, extracting, analyzing, interpreting and disseminating information from large surveys, administrative data sets, government reports, qualitative studies, and other data sources. This course will develop these competencies through rigorous evaluation of existing data resources (including their strengths and limitations for answering specific public health questions) and best practices in data utilization for situational assessment; monitoring; policy, program and strategy development; and surveillance of health outcomes through real-world case studies and assignments. The course will also provide students with basic skills in data analysis and visualization using Microsoft Excel and an interactive, online mapping software (Carto).

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5342 Global Issues in Public Health Nutrition (3 Credits)**

This course addresses major global nutrition issues that we face today. Food insecurity, and all forms of malnutrition, underweight, obesity and micronutrient deficiencies are leading risk factors of mortality and comorbidity worldwide. The course is developed in the context of the United Nations System, through the lens of the Sustainable Development Goals (SDGs) and the 2030 Agenda. We will discuss climate change, conflict, and economic downturn as determinants of food insecurity that are worsening non-communicable disease prevalence. Next, we understand malnutrition, its major determinants and its interconnections with the food systems. Students will design a solution for these issues, using the systems approach and principles from social entrepreneurship in the the global landscape.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5349 Program Planning & Evaluation (3 Credits)**

This course will introduce the major principles, concepts and methods used to plan, monitor and evaluate public health interventions and programs. Emphasis is placed on helping students develop the essential skills required in developing program plans, monitoring program implementation, and conducting evaluations for public health practice.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5359 Applied Practice Experience (2 Credits)**

This course complements the internship applied practice experience by providing a structured and supportive environment to reinforce the internship goals of developing public health competencies, gaining valuable work experience, and cultivating professionalism. Students complete the internship in the summer or fall of their final year in the program, and enroll in the course in the fall. The internship and course fulfill the Applied Practice Experience requirement for the following MPH concentrations: Community Health Science & Practice, Environmental Health Sciences, Global Health, Health Policy, Management, and Public Health Nutrition.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5360 Integrative Learning Experience (2 Credits)**

A key goal of the MPH program is to enable students to synthesize principles, concepts, and competencies learned through coursework and the Applied Practice Experience. This course provides a structured and supportive environment to help students achieve this goal and to develop professionalism. Students prepare a professional report, poster, and critical reflection paper, comprising the MPH integrative learning experience. Students enroll in the course in their final spring semester. The course fulfills the Integrative Learning Experience requirement for the following MPH concentrations: Community Health Science & Practice, Environmental Health Sciences, Global Health, Public Health Policy & Management, and Public Health Nutrition.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5361 Research Methods in Public Health (3 Credits)**

This course is a review of research and original writings related to public health. Students will learn to apply research methodology to problems in public health. This course provides an introduction to the fundamentals of research study design and methods. It serves as an introduction to quantitative and qualitative approaches to research, as well as ethical issues in conducting research. Through the mix of texts, articles from the public health literature and course work, students will build skills for conducting research and critically evaluating research designs and research findings.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5380 Data-Driven Decision-Making in Global Public Health (3 Credits)**

*Typically offered Spring*

This course develops skills and competencies in making data-driven decisions to improve global public health outcomes, especially in high disease and malnutrition-burden environments. It is based on a framework of enabling environment, supply, demand, and quality factors that affect the effective coverage of services that would prevent outcomes such as under-5 mortality, neonatal mortality, maternal mortality and stunting. The class will introduce decision support platforms developed by UNICEF, WHO, and the World Bank that help public health professionals choose between available strategies and interventions in a high burden country to reduce adverse health and nutrition outcomes.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5382 A Systems Approach to Food Access (3 Credits)**

This course provides a systems approach to increase students' abilities to respond to global health threats in food and nutrition. Multiple public health disciplines are emphasized, including: nutrition epidemiology; behavioral health/ intervention research; health economics; and health policy & management to provide students with a knowledge base and foundation of skills to design and implement strategies in health and global food systems. The overall approach is to integrate community participatory models into a systems discussion. Further, the course will include both case studies and skills- building exercises to apply various techniques of skills-based learning.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5405 Health Communications: Changing Social Norms in Theory and Practice (3 Credits)**

This course provides an introduction to the theory, design, implementation, and evaluation of health communication programs. Several resources are used to allow students to acquire practical knowledge and skills in health communications planning and implementation. Case studies, resources, research tools and examples of different media channels are reviewed and analyzed to explore how to reach different target audiences with the most effective health communication interventions.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5410 Results-Focused Strengthening of Health Systems in LMIC Countries (3 Credits)**

This course covers elements that are necessary for developing impactful global public health programs in Low and Middle Income Countries (LMIC), including but not limited to: a comprehensive overview of health systems and their specific components# an explanation of how the health system functions in different country settings# and an overview of crosscutting system-wide supply and demand bottlenecks and evidence-based strategies to address these. Assignments use practical country case studies and analyses of data sets on health system bottlenecks, strategic shifts, and enabling environments as well as estimations of resource requirements, cost effectiveness, and financing needs for health system strengthening.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5415 Community-Based Health Interventions (3 Credits)**

Community-based health interventions are a major public health strategy for promoting population health. This course introduces the principles, methods, and applications of community-based interventions. Theoretical and conceptual frameworks shaping community health programs are examined, with a focus on the social ecological model and community participation. Major evidence-based strategies are identified, and case studies provide examples of applications, including challenges and factors influencing success. Challenges to evaluating and sustaining community-based health interventions are examined. Assignments prepare students to identify effective intervention strategies and develop a theory of change to address a specific public health issue.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5420 Monitoring and Management of Public Health Programs for Equity (3 Credits)**

*Typically offered occasionally*

This course develops skills and competencies for key steps in program monitoring and management to improve equity of global public health outcomes, namely situation analysis of equity, modeling effects of management decisions, monitoring changes in equity outcomes, and evaluating equity modeling, monitoring and outcomes. For each of these steps, students learn and apply core concepts, measures, and analytic tools concerning equity of outcomes, bottlenecks in coverage of interventions, and out of pocket health expenditures. The class will introduce databases, methods, and tools developed by UNICEF, World Bank, IHME and WHO, that help public health professionals reduce inequity in health & nutrition outcomes in LMICs.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 5995 Biostatistics for Public Health (3 Credits)**

*Typically offered Fall and Spring*

GPH-GU 5995 Biostatistics for Public Health (3) This course covers basic probability, descriptive and inferential statistics, and the role of biostatistics in the practice of public health. Specific attention will be given to common probability distributions in public health and medicine, t-tests, Analysis of Variance, multiple linear and logistic regression, categorical data analysis, and survival analysis. Statistical topics are presented conceptually with little derivation, and applications are demonstrated using common statistical software. The course can be taken online or in-person.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 9130 Global Health Diplomacy (3 Credits)**

Many of the geopolitical forces that shape global health (global disease burden and our collective response to it) lie outside of the health sphere. This course will explore the ways in which global health is influenced by, and can influence, other global forces including foreign policy, trade/ economic policy, environmental policy, and security policy in a globalizing world. Effective responses to current and future global health challenges require that public health professionals (particularly those working in policy or at a policy-level) understand these dynamics and how best to leverage them in order to achieve better health outcomes globally.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 9153 Global Environmental Health (3 Credits)**

Environmental health sciences represent the study of biological, physical, and chemical agents that affect the health of both communities and workers. This course provides students with an introduction to key areas of environmental health. Students gain an understanding of the interaction of individuals and communities with their environment, the impact of environmental agents on human health, and specific applications of concepts of environmental health including exposure assessment and engineering controls. The impact of global environmental issues on health equity will be considered, as well as scientific, political, legal, and economic perspectives on global environmental health. Emphasis is placed on issues in environmental health that transcend national boundaries

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 9202 Aging, Health, and the Environment: A Global Perspective (3 Credits)**

this course will contrast U.S. and international approaches to aging, health, and environmental risk. The world population is growing older: by 2050 the global population of those over 60 years old will reach nearly 2 billion. Italy, in particular, has the largest proportion (21.4%) of elderly citizens in all of Europe. There are several environmental risk factors that affect the aging process, including disasters, climate change, and pollutants. We will cover theories and principles of gerontology, climate change, disasters, and the built environment with the goal of understanding how environmental risk factors shape the aging process. Lastly, we will consider how Italian approaches to aging and health, including those of policymakers and local stakeholders, differ from the U.S. model

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 9211 Environmental Injustice: From Local to Global (3 Credits)**

Environmental justice has implications for public health practice both locally and globally because marginalized groups such as people of color and people of low socioeconomic status continue to be exposed to greater numbers of environmental hazards in their homes, in their jobs, in their communities, and in the food they eat, relative to the society at large. This course will explore the links between the environmental justice movement and civil rights. Students will examine the political response to the movement, both locally and globally, through legislative and regulatory actions. The first half of this course will focus on the history of environmental injustice and cover seminal readings, regulations and laws. The second half will focus on local and global air, water, food and land based environmental exposures.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 9228 Global Food Policy for Public (3 Credits)**

The global food system plays an essential role in public health by implicating nutrition, environmental concerns, and sustainability. Food and its many aspects has become a mainstay of international public health policy, discourse, and debate. This course examines current health policy issues related to the global food environment and delves into globalization, and international nutrition and food programs and policies on labeling, marketing, and pricing. We will additionally explore issues related to the food industry, world trade, and agricultural and environmental food production concerns. A portion of the course will take place live at one of NYU's global sites.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 9230 Global Non-Communicable Disease Epidemiology & Control (3 Credits)**

This course will focus on the considerable and increasing burden of disease due to chronic diseases, mental health, substance use (alcohol, tobacco, other drugs), risk factors (obesity, lack of physical activity), and injuries within the developing world. It will present methods for measuring the burden of non-communicable disease, review approaches to program and service development to modify risk factors, present lessons learned from successful developing country programs, and discuss implications for health services development and international development policies.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 9232 Disease Elimination and Eradication Strategies for Infectious Diseases in LMICs (3 Credits)**

Students will examine the core principles of disease elimination and eradication (E&E) - with a focus on challenges in low-resource settings - and co-develop a draft strategy in a specific country. Students will analyze case studies to better understand lessons learned, challenges faced, and effective interventions needed to achieve disease E&E. The class will provide an introduction to ethical issues in disease E&E, political, social, behavioral, and environmental/climate factors, health system strengthening, the integration of disease E&E programs with existing health systems, and communication and advocacy. Different thinking models (systems, design, strategic & evaluative) will be introduced to help students in their development of interventions to reduce and eventually eliminate disease in a given geography.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 9240 Perspectives in Global Mental Health (3 Credits)**

Common mental disorders such as depression, anxiety and substance use disorders are leading causes of disease burden in the world today, rivaling HIV, malaria and heart disease in that respect. They are associated with serious functional impairment, reduced quality of life, unemployment and homelessness and exacerbate risk for, and severity of, medical illness. Yet they tend to get lost on the global health agenda. Lack of familiarity with interventions, measuring challenges, and stigma are, in part, to blame. Public health approaches to common mental disorders are also only recently demonstrating new rigor and maturity. This course provides exposure to this increasingly relevant public health challenge from a global perspective, with a particular focus on the epidemiology, risk factors and consequences, individual- and population-level approaches to treatment and prevention, and delivery of care for mental health problems in different settings worldwide. This course will challenge students to think critically about the existing literature in this area and about the role of culture, context and stigma in shaping public health responses to mental disorders.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 9252 Urban Health Equity: New York and London - A Comparative Perspective (3 Credits)**

This course will introduce students to urban health and its broad determinants. A one day pre-course session in NYC with NYC DOHMH officials and NYU faculty will be followed by the London program with London based urban health researchers, practitioners and policy makers. About half of the course time will involve an academic and applied overview of conceptual frameworks for urban health and equity from a global perspective and presentations from guest lecturers who will discuss their work implementing and evaluating interventions in cities. The other half of the time will involve work on a field project being developed collaboratively by the NYCDOHMH Center for Health Equity and the Office of the Director, Public Health England for London as part of a plan to establish an ongoing learning platform for intercity exchange of knowledge and practice in urban health and health equity.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 9265 Climate Change and Global Public Health (3 Credits)**

This course is about Climate Change i.e. Global Warming! Climate Change has been cited as the most significant public policy challenge of the 21st century. We will intensively cover the climate change science, public health impacts, ecological consequences, fossil fuel air pollution, global food and security, and policy options. Adaptation strategies to control outcomes of storm flooding, increased ozone and heat waves, drought, and threats to biodiversity will be covered. Mitigation by 100% renewables with texts on wind and solar energy will be assessed. Policy solutions will be evaluated from city governments, States, Countries, to Global treaties such as UN Framework Convention on Climate Change-Conference of the Parties Paris Agreement. Climate Denialism is reviewed with the text, "The Madhouse Effect."

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 9278 Global Cancer Epidemiology (3 Credits)**

Cancer is a major public health concern globally, surpassing rates of cardiovascular disease in adults <75 years. It is a multifactorial disease with genetic, environmental and modifiable lifestyle risk factors. This course provides an overview of: a) the global and national burden of cancer; b) risk factors including genetic, early life risk factors and modifiable factors: tobacco, excess adiposity and diet (carbohydrates, processed foods, sugar-sweetened beverages, and alcohol); and c) cancer surveillance and policy as it relates to primary and secondary prevention of cancer. Students will discuss landmark studies in cancer epidemiology with an emphasis on population studies in the US and Europe. Students will also gain an understanding of cancer biology and important mechanisms that underlie carcinogenesis.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 9325 Behavioral and Communication Strategies for Global Epidemics (3 Credits)**

This course focuses on the integration of three public health disciplines for emergency action: epidemiology, behavioral health/ intervention research and public health communication to provide students with a knowledge base and foundation of skills to be able to design and implement strategies in disease prevention and response in outbreak situations, with a focus on the reemergence of Polio and Ebola.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 9343 HIV/AIDS Public Health Promotion (3 Credits)**

Students will examine the evolution of the HIV epidemic in the United Kingdom (U.K.) and the United States (U.S.) throughout the last four decades using a public health lens with an emphasis on population-based health promotion strategies and responses of the respective health system within each country. Students will learn about the history of the disease in the U.K., U.S and within a global context, the biomedical aspects of the disease including HIV testing, and treatment, the epidemiology of the disease, the socio-bio-behavioral drivers of the disease, and HIV/AIDS public health policies and calls to action both within the U.K. and the U.S. Students will examine, analyze, apply, and evaluate theoretical paradigms and research, drawn from public health and interrelated disciplines with regard to HIV prevention, treatment, and care as it is manifested in the across all segments of the population. The course utilizes a biopsychosocial framework for understanding illness and health promotion and emphasizes theory-based HIV prevention and care. The course uses an experiential learning approach; students engage with local AIDS service organizations, health care facilities, and thought leaders, all with an eye to bring an end to the AIDS epidemic.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 9345 Public Health Emergency Preparedness and Response: A Global Perspective (3 Credits)**

This course examines global approaches to public health emergency preparedness, response, and recovery by visiting an international site exposed to or vulnerable to significant catastrophic events. There is a particular emphasis on governmental and non-governmental response, recovery, and policy systems; critical decision-making inflection points; and issues associated with risk communication, coordination of public health and medical resources, and the public's trust in political and scientific authority. The course will also review broad principles of surveillance, mitigation, preparedness, response and recovery from various hazards, and cover both US and international emergency management and public health frameworks.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No

**GPH-GU 9500 Topics in Public Health: Current Issues in Latino Health (3 Credits)**

This course provides an overview of selected current research issues and theories concerning the mental and physical health of Latino populations in the United States. Topics addressed include: the heterogeneity and health status of Latino groups; conceptual and methodological issues related to Latino health; acculturation and identity theory; the association between health and various stressors, including discrimination and immigration; access to health care; and neighborhoods and health. The course highlights the need to integrate cultural issues in theory and research.

**Grading:** School of Global Public Health Graded

**Repeatable for additional credit:** No