PH.220 (INTERNATIONAL HEALTH)

PH.220.600. International Travel Preparation, Safety, & Wellness. 1 Credit.
Prepares students who aim to work and live overseas. Explores the epidemiology of common morbidity and mortality among travelers. Examines key prevention, safety, and travel medicine principles and services to contextualize risks and maintain wellness. Reviews applicable interventions, appropriate vaccines, and personal protection methods to prepare students to respond to expected and unexpected situations. Assists students with personal preparations for travel through country-specific assignments. Challenges students to examine travel health and safety priorities through case studies and discussions. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.220.601. Foundations of International Health. 4 Credits.
Provides an overview of foundational approaches and issues in International Health, preparing students to gain the skills and attributes needed to work in global public health. Examines conditions faced by disadvantaged populations, primarily in low and middle income countries (LMICs), and pathways to achieving better health outcomes. Applies principles of health equity and social justice in analyzing global health policies and programs, and develops skills to apply different frameworks for diverse types of public health intervention. Students develop and articulate evidence-informed arguments concerning public health strategies in different contexts, and practice communication skills that demonstrate respect for other cultures and perspectives. They use a range of tools to prepare for work in global public health, including how to conduct situational analyses across a range of settings, how to analyze scale-up, sustainability, and equity, and how to move research into practice. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.220.605. Doctoral Seminar in International Health I. 3 Credits.
Explores topics of relevance to International Health, in a six-module format. Each module comprises a set of readings which are discussed in class by students working in groups. Each session is led by a group of students with facilitation by course faculty and guest faculty as appropriate to the topic. Modules include (1) Health and International Development; (2) Transitions (demographic, epidemiologic, nutritional and migration); (3) Sanitation programs; (4) Disease Eradication Programs, past present and future; (5) Chronic Disease, a new challenge for programs; (6) Primary Health Care, history, evidence and future. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.220.606. Doctoral Seminar in International Health II. 3 Credits.
Discusses how to identify a thesis topic, write a proposal, seek funding, understand challenges in execution, and thesis format and write up. Students read five doctoral theses, one from each Department of International Health program, and student groups lead discussions with the former students and their thesis advisors in class. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.220.608. International and Global Health. 4 Credits.
Introduces students to an international perspective of health, disease, injury, and health systems. Develops requisite knowledge and understanding of globalization and health, global disease burden and international health scenario. Using case studies, students perform a comparative analysis of disease burden in various countries, health systems and policies, in developed and developing countries, health sector reforms and country experiences. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.220.701. School-wide 2nd Year DRPH Seminar. 2 Credits.
Assists 2nd year DrPH students mastering skills related to study design and implementation, as preparation for work on their dissertation proposal. During the course of the year, this seminar series focuses on epistemology, alternative study designs, and how different study designs may best be suited to address different types of research questions. The course builds upon other methods classes and supports students to develop a draft research proposal of their own. While the course is designed to prepare students for their dissertation work, students can complete the course without having decided upon a dissertation topic. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.220.800. MPH Capstone International Health. 2 Credits.
The MPH Capstone is an opportunity for students to work on public health practice projects that are of particular interest to them. The goal is for students to apply the skills and competencies they have acquired to a public health problem that simulates a professional practice experience. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.220.810. Field Placement DRPH Program International Health. 1 - 22 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.220.820. Thesis Research DRPH IH. 1 - 22 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.220.840. Special Studies and Research DRPH Program International Health. 1 - 22 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.220.842. Doctoral Independent Goals Analysis - International Health. 1 Credit.
Develop a doctoral academic plan through discussions with faculty advisor resulting in the development of a written document called the Individual Development Plan. Review course tracking sheet based on skills and methods student plans to learn. The IDP is a living document that is part of the student’s self-assessment and departmental annual review. Supports the student’s successful performance in the program and prepares students for their intended future career. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.220.895. MPH Practicum: International Health. 1 - 4 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).
**PH.221.602. Applications in Managing Health Organizations in Low and Middle income Countries. 3 Credits.**

Uses case studies, a simulation, and group-based activities, supplemented by required weekly online lectures and readings, students explore a variety of settings found in low and middle-income countries in which to apply management concepts. Examines: (1) organizational restructuring in response to decentralization, (2) environmental scanning, (3) systems behavior in hospital organizations, (4) multiple approaches to group decision making, (5) managing to achieve agreement in health organizations, (6) preparing, implementing, and communicating a budget that is based on limited resources within a business, (7) performance improvement concepts and tools in a healthcare organization, and (8) the construct of a "balanced score card" for a health organization. Applies these concepts to the activities and assignments in this management skills learning lab.

Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

**PH.221.604. Case Studies in Management Decision-Making. 3 Credits.**

Students analyze problems and develop strategies based on real dilemmas faced by decision-makers. Students formulate positions before class and actively participate in discussion during class. Cases come from both international and U.S. settings, and deal with issues such as: conflict between budget and program offices, working with governing boards, contracting between government and non-government providers, dysfunctional clinics, reforming hospitals, managing local politics, cutting budgets and collaborating in informal organizations. Develops skills in leadership, negotiation, analysis, communication, and human resource management.

Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

**PH.221.605. History of International Health and Development. 2 Credits.**

Examines the history of western efforts to promote health and nutrition in the "developing world" from the beginnings of tropical medicine to recent efforts of disease eradication. Explores the various economic and political interests, as well as cultural assumptions, that have shaped the development of ideas and practices associated with international health in "developing" countries. Topics include history of international health organizations, strategies, and policies.

Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

**PH.221.606. Training Methods and Continuing Education for Health Workers. 4 Credits.**

Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

**PH.221.607. Essential Skills for Women’s Leadership in Global Health. 3 Credits.**

Provides a robust understanding of the barriers women face in leadership and guides the development of solutions and strategies for individuals and institutions moving forward. Enhances knowledge about women’s leadership in global health including barriers and models/frameworks that have been used to promote women in leadership. Distinguishes various leadership approaches and their implications in different cultural settings, highlighting diversity and intersectionality theories in particular. Builds essential skills including self-awareness, communication, and negotiation. Encourages a solutions-oriented mindset via the development of individual and institutional strategies. Utilizes case studies and discussion exercises that feature diverse organizational and societal contexts.

Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

**PH.221.608. Managing Non-Governmental Organizations in the Health Sector. 3 Credits.**

Familiarizes students with the key competencies required for managing NGOs in the health sector. Though many of the situations described in the lectures are taken from the instructor’s experiences in managing international NGOs in developing countries, the material presented is applicable in organizational settings in developed countries as well. Topics correspond to the key responsibilities of NGO or health program directors. Lectures present guidelines, best practices, and management tools for the area of responsibility followed by a discussion of the lecturer’s and students’ experiences on those topics. Readings, which provide background information, are assigned for each class.

Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

**PH.221.610. Pharmaceuticals Management for Under-Served Populations. 3 Credits.**

Students analyze problems and develop strategies based on real world drug management issues, including regulations, manufacture, procurement, distribution, safety policy, financing and the unique aspects of international pharmaceutical trade, the role of the World Trade Organization – Trade-Related Aspects of Intellectual Property Rights (WTO-TRIPS), government, NGOs and individuals in the selection and use of pharmaceutical products. Course materials are drawn from both developed and developing countries so that the student will be knowledgeable about the role of Essential Medicines and the formation of a National Drug Policy. Uses a multidisciplinary approach to provide students with an operational understanding of factors influencing access to and use of pharmaceuticals and other health commodities. Collectively, these materials and approaches are intended to stimulate critical thinking on how to improve access to and the use of pharmaceutical products.

Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).
PH.221.611. Food Security and Nutrition in Humanitarian Emergencies. 2 Credits.
Examines food aid, food insecurity, and nutritional deficiencies as they appear in different types of humanitarian emergencies. Discusses profiles of major international relief organizations involved in nutrition and food assistance and common programmatic interventions used in response to food crises. Emphasizes development of practical skills and knowledge that can be applied in field settings. Students learn to appraise and compare content, cost, and logistical considerations associated with large-scale feeding programs, and become familiar with nutrition surveys and curative nutrition programs. Factors contributing to food insecurity are considered and various response modalities, including in-kind assistance and cash-based approaches, discussed.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.612. Confronting the Burden of Injuries: A Global Perspective. 3 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.613. Introduction to Humanitarian Emergencies. 3 Credits.
Introduces different types of humanitarian emergencies, humanitarian architecture and provides an overview of sectoral focus areas of humanitarian response. Informs students of the environment in which these emergencies occur and how public health responses in various types of emergencies and contexts differ. Explores mechanisms of preparedness, management of response to humanitarian emergencies and long-term recovery.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.614. International Political Science for Ph Practitioners. 2 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.615. Health Emergencies in Large Populations (H.E.L.P.). 5 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.616. Ethics of Public Health Practice in Developing Countries. 2 Credits.
Provides a forum for discussion and deliberation about ethical issues in the practice of public health (including the conduct of research) in developing countries. Equips students to identify and analyze critical ethical issues and to consider systematically the ethical responsibilities of all parties involved.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.617. Behavioral Economics in Health Decisions. 2 Credits.
Prepares students to challenge superficial intuitive judgments that are attractive because they make obvious sense, but which overlook important considerations that demand more analytical assessment. Discusses human behaviors that then come into play in a more careful analysis, which are then examined for their legitimacy and reasonableness in resolving questions that are traditionally considered to be economic in nature. Develops ways to blend relevant behavioral factors with economic perspectives and methods to design balanced action strategies.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.619. Introduction to Microeconomics. 3 Credits.
Introduces economics of the business enterprise, the household, and the industry. Topics include supply and demand, price and income elasticity, equilibrium of the firm, and the measurement of poverty and inequality.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.620. Applying Summary Measures of Population Health to Improve Health Systems. 3 Credits.
Explores the conceptual basis and application of summary measures of population health status. Presents approaches to measuring the burden of disease in populations and their use for guiding resource allocation and planning efficient and equitable health care systems. Lectures, discussions, and group exercises focus on composite indicators, exploring social and ethical value choices, and assessing the burden of disease at national level.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.621. Gender and Health: Foundational Theories and Applications. 2 Credits.
Provides a broad overview of the field of gender as applied to public health. Discusses the distinction between sex and gender and how they intertwine. Examines the effect of gender power relations on women's, men's, and gender minorities' health, including transgender and cisgender people. Prepares students to apply foundational theories in gender and health to a broad range of health topics. Presents strategies for incorporating gender analysis into health research and interventions.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.622. Using Qualitative Methods for Program Planning and Evaluation. 1 Credit.
Introduces students to the role of qualitative methods in assessing population needs and designing acceptable interventions. Emphasizes the complementarity of qualitative and quantitative methods and how both should be combined for effective program design, implementation, monitoring, and evaluation.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.623. Water, Sanitation and Hygiene in Humanitarian Emergencies. 2 Credits.
Water, sanitation and hygiene (WASH) is an essential component of humanitarian emergency planning and response. This course provides WASH introductory concepts, technical knowledge and practice in humanitarian contexts, including conflict, natural disasters and disease epidemics. Essential cross-cutting issues such as coordination, intersectoral planning and response as well as community and behavioral aspects are provided with examples from recent disasters.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.624. Urban Health in Developing Countries. 3 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).
PH.221.625. Evaluation of District-Level Primary Health Care Implementation in Low- and Middle-income Settings. 3 Credits.
Prepares students to analyze local contexts and project implementation designs in order to develop evaluation plans that can be practically applied to programs in middle and low-resource settings. Discusses actual experiences of helping implementers design evaluations for district level programs, taking into consideration time and budget limitations. Focuses on developing pre-post evaluation plans that measure adequacy of implementation, based on evaluation conceptual frameworks, following theory of change logic. Explores choosing the proper evaluation methodology (i.e. Qualitative and/or Quantitative). Includes choosing appropriate indicators based on internationally accepted primary health care indicators. Explores alternatives for addressing mortality measurement.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.626. Introduction to Household Surveys for Evaluation of Primary Health Care Programs in Low- and Middle-Resource Settings. 3 Credits.
Introduces participants to fundamental skills needed to design and manage implementation of household surveys. Presents real world experiences of using the Knowledge, Practice, and Coverage (KPC) tool for household surveys in middle and low-resource settings.
Includes constructing a questionnaire from standard KPC modules, indicator selection, sampling plan development, use of parallel sampling, household selection, management and oversight plan, and ethical considerations. Introduces participants to adjustments that can be made so that the survey can be implemented within time and budget constraints.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.627. Issues in the Reduction of Maternal and Neonatal Mortality in Low income Countries. 4 Credits.
Understands the clinical and social causes of high maternal and newborn mortality and morbidity. Exposes students to the clinical, program and policy interventions that address these issues, and evaluates the strength of the evidence supporting these interventions. Offers practical exercises for students to: 1.) understand the scope and epidemiology of both maternal and neonatal problems, and 2.) design and assess programmatic responses to address them. Upon completion, students will have the knowledge base to be able to contribute to program and policy responses with an informed perspective to avert maternal and newborn deaths in different contexts.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.628. Psychological First Aid: Principles and Practice. 2 Credits.
Examines the psychological principles and practical guidelines for the provision of PFA as a means of fostering resilience in others. Provides in-person instruction in the RAPID model of PFA to students as well as practicing professionals in a wide range of disciplines. The ability to assist people in acute distress is an essential aspect of healthcare, disaster relief, education, and leadership in all professions.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.629. Prospective policy analysis for health policy and systems research: methods and applications. 2 Credits.
Introduces learners to tools and methods to facilitate aspects of real-time policy analysis (from agenda setting, policy formulation, to policy implementation) and supports them to think through and plan to conduct a prospective policy analysis to a current public health problem, as well as to identify ways of engaging with the policy making process for the identified problem.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.630. Tackling the Intersectoral Challenge of Antimicrobial Resistance: Problem Solving Seminar. 3 Credits.
Examines antimicrobial resistance (AMR) as an intersectoral challenge, one that affects both our healthcare delivery and food systems. As a One Health issue, AMR also has an environmental dimension: up to 80% of some antimicrobials consumed by humans or food animals may be discharged into the environment. The incentives of traditional business models, where a drug company’s revenues come from volume-based sales, are at odds with efforts to ensure access, but not excess use of antimicrobials. Some have called AMR an ongoing pandemic; others have noted the opportunity to invest in shared infrastructure, from infection control and prevention to integrated disease surveillance, that might address both future pandemics and AMR. Invites students to tackle this global health challenge by applying strategic planning tools to deepen one’s appreciation and find creative solutions to AMR.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.631. Evaluation Methods for Injury Interventions. 3 Credits.
Prepares students to participate in the design/conduct of LMIC road safety program evaluations using standardized tools from the WHO, and to translate results for advocacy. Introduces the theory and use of these tools/study designs via lectures followed by case studies of how they have been used in LMICs. Students use EpiInfo to compile secondary data and do basic calculations to understand the burden of road crashes in an LMIC and then identify a plausible intervention and propose a study to evaluate its impact. Students work in groups to prepare an advocacy presentation based on a published program evaluation.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.632. Introduction to Improving Quality in Public Health Practice. 1 Credit.
Prepares students to design and implement a program of performance and assessment in public health practice. Examines the historical and theoretical background of public health practice and quality improvement. Presents strategies for developing public health practice improvement strategies that can be implemented in a high or low income setting, in a public or private sector, in a national or a sub-national organization. Includes practical tools that can be adapted for local use. Compares top-down and bottom-up approaches to public health practice quality.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).
PH.221.633. Policy Advocacy in Low and Middle-income Countries: Application for Real World Challenges. 2 Credits.
Introduces fundamentals of policy advocacy with an emphasis on low- and middle-income countries. Reviews relevant frameworks, presents lessons learned from low- and middle-income countries case studies, and explains approaches for engaging both global and local stakeholders in influencing policy adoption or change. Provides students will skills necessary for developing and presenting an advocacy plan and to strengthen stakeholder engagement.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.634. Stress Management for Relief Workers. 2 Credits.
Provides an introduction to the need for, strategic principles of, and tactics for the provision of stress management and crisis intervention to relief workers. Emphasizes on providing assistance to others as well as self-care. Provides awareness of emotional stress faced by health workers providing humanitarian assistance in emergency situations. Includes topics signs and symptoms of stress disorders (critical-incident stress), components of critical-incidence management programs, and provision of services to prevent long-term mental health consequences. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.635. Global Advances in Community-Oriented Primary Health Care. 3 Credits.
Introduces students to the origins and recent advances in community-oriented primary health care through case studies from both developing and developed countries. Like hands-on clinical bedside teaching, the course uses real cases to help students develop problem-solving skills in practical situations. Program examples all use community participatory and community-based approaches to address priority health problems. There is a strong focus on equity and empowerment in all cases discussed.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.636. High Performing Organizations in Lmic Settings. 3 Credits.
Provides an understanding of the core features, characteristics, systems and processes adopted by organizations that lead to high performance in LMIC settings. Introduces the Baldrige Performance Excellence Framework in Healthcare and utilizes a case study approach to share organizational best practices in setting standards, building robust processes and creating a culture of continuous improvement and excellence. Includes a contextual and cultural understanding of the LMIC settings that act as facilitators and/or barriers for high performance in LMIC settings.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.637. Health Information Systems. 3 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.638. Health Systems Research and Evaluation in Developing Countries. 4 Credits.
Builds an understanding of the purpose and nature of health systems research and evaluation (HSRE) as a multi-disciplinary endeavor with scope for diverse inferences. Provides a landscape of the range of research questions and associated methodological approaches and study designs available for HSRE within health system building blocks and at various levels of the health system (macro, meso, micro). In addition, explores cross-cutting issues of equity and social justice, digital health applications and scientific rigor. Fosters the ability to develop different research strategies depending on the research question at hand and to read health systems research (HSR) critically.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.639. Health Care in Humanitarian Emergencies. 3 Credits.
Introduces the provision of basic health requirements for refugees other displaced populations. This includes the health of persons displaced by conflict as well as natural and man-made disasters. Although its main concern is with the health needs or those displaced in low and middle-income countries it also touches on the issue of persons resettled to developed countries. Addresses epidemiologic assessment, control of communicable and noncommunicable diseases, nutrition, mental health needs, establishing and managing health services, reproductive health services, ethical decision making, application of International Humanitarian law, and coordinating activities among agencies in international contexts.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.640. Design and Implementation of Incident Management Systems in Low- and Middle-income Countries. 2 Credits.
Introduces students to the design and implementation of organizational structures, specifically the Incident Management Systems (IMS), established to support health emergency response efforts in low- and middle-income countries. Discusses the functions that enable governments and international agencies to effectively respond to health emergencies, including management, planning, operations, logistics, finance, and administration. Reviews effective and ineffective management components of health emergency response efforts using case studies that include the Ebola virus outbreak in West Africa and the COVID-19 epidemic in India. Focuses on the application of the IMS in the context of some management principles.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.641. Measurement Methods in Humanitarian Emergencies. 2 Credits.
Gives students an overview of selected field-based methods used in humanitarian emergencies to measure basic health indicators and demographic characteristics of affected populations. Upon completion, students can describe the assessment process in the various phases of humanitarian emergencies. Students are able to describe a variety of methods, both qualitative and quantitative, used in field-based assessments of humanitarian settings.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.642. Mental Health Aspects of Disaster: Public Health Preparedness and Response. 2 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).
PH.221.643. Armed Conflict and Health. 2 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.644. Econometric Methods for Evaluation of Health Programs. 4 Credits.
Introduces students to the application of common econometric methods available to address questions of concern to policy makers, administrators, managers, and program participants regarding evaluation of health programs in low and middle-income countries. Students learn to apply econometric methods in their research and to recognize the limitations in applying the same methods in estimating the impact of a policy intervention. Combines a theoretical development of methods and a numerical application involving continuous dependent variables. Emphasizes the correct use of data in framing relevant questions and understanding the importance as well as the limitations of data analysis in order to equip students with the quantitative skills necessary to evaluate policy alternatives.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.645. Large-scale Effectiveness Evaluations of Health Programs. 4 Credits.
Provides students with an understanding of how to apply systems thinking in public health. Trains students on the fundamentals of systems thinking theory and offers an opportunity to apply key methods and approaches to health policy and health questions. Prepares students to ask relevant research questions and apply a systems thinking lens to describe, understand, and anticipate complex behavior. Examines how systems models can be critically appraised and communicated with others so public health policy makers can exercise a greater degree of wisdom and insight.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.646. Health Systems in Low and Middle income Countries. 3 Credits.
Explores health systems in low and middle income countries (LMICs), and examines approaches to improving the performance of health systems. Focuses on frameworks, tools, skills, and strategies to understand, influence, and evaluate health systems in LMICs. Identifies key institutions, functions, and performance issues for national and local health systems. By using frameworks and tools, students gain experience in systematically analyzing health systems and methods to plan, implement, and evaluate changes in health systems in a variety of settings, including countries in various levels of demographic, epidemiologic and economic transitions. Covers key controversies in health systems, including issues in monitoring health systems performance, the role of the public sector, dealing with unregulated private health markets, linking priority health programs and health systems, raising accountability in the health system, etc.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.647. Advanced Topics in Economic Evaluation & Modeling for Global Health. 3 Credits.
Presents evaluation techniques to compare health system interventions in international health. Focuses on addressing existing constraints in health systems development, given key policy goals as quality, equity and efficiency. Presents both qualitative and quantitative approaches to evaluate interventions to better inform policy how to improve system performance and functions. Identifies policy goals, actor groups, system functions and ways to assess improvement strategies related to policy goals using existing systems frameworks. Covers key constraints in systems performance such as: effective prevention and treatment programs, patient compliance, health worker performance, inequitable access, collective financing, choosing priorities, and community-level interventions. Comparative methods draw on a mix of epidemiology, health economics, disease modeling, services research, and qualitative techniques.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.650. Health Policy Analysis in Low and Middle income Countries. 3 Credits.
Provides an overview of political frameworks and theories related to policy development and offers practical perspectives on their application to health policy in low and middle income countries (LMICs). Analyzes the political economy of health policy, (ie. how the political environment and country institutions policy development). Introduces the main actors, processes and contextual features that are typical of policy development and implementation in LMICs. Topics encompass national policy and planning frameworks; aid harmonization and alignment; the role of policy networks (particularly civil society actors); policy implementers and their role in shaping policy; and mechanisms for global health policy development. Final sessions focus on practical strategies to strengthen policy processes. Teaching draws upon examples from different diseases, services and health systems.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.651. Econometrics I. 4 Credits.
Introduces students to the application of basic statistical methods to economic analyses. They use econometrics to support or reject theories from economics using empirical observation. Students cover the basic concepts behind linear regression models by studying cases where the dependent variable is continuous and is a linear function of the parameters of interest. Improves students' ability to conduct economic analysis using observational data, as economic studies rarely benefit from the availability of controlled experiments. Exercises provide hands-on experience in implementing well-crafted empirical analysis. Students learn to employ tools and methods and compare the results with respect to those obtained from initial estimations based on very restricted assumptions.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).
PH.221.652. Financing Health Systems for Universal Health Coverage. 3 Credits.
Teaches the financing of health care in low and middle-income countries with the goal of achieving universal health coverage. The course is built around four themes of financing health systems: revenue sources, pooling, purchasing and provision of healthcare. Using this framework students will learn how to evaluate country health financing systems. Progressing through these themes students will learn to use metrics related to health financing, use household surveys to estimate some of these metrics, and also have an in-depth understanding of health financing systems of select countries. At the end of this course students will have a good understanding of health financing for a career in global health.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.653. Hospital-Based Injury/Trauma Surveillance in Low- and Middle-income Countries. 3 Credits.
Examines the high, and growing, global injury burden with a focus on low- and middle-income countries. Establishes the need for and complexities of establishing and maintaining reliable injury surveillance systems in LMIC. Focuses on training students on the fundamentals of an injury surveillance system in LMIC settings—data needs, collection, coding, processing and use, as well as on evaluation of such systems, and how to sustain them. Prepares students to participate in designing and sustaining hospital-based injury/trauma surveillance systems in LMIC to inform health program planning at the local and national level. Uses case studies to compare and contrast injury surveillance systems in different LMIC settings.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.654. Systems Thinking in Public Health: Applications of Key Methods and Approaches. 3 Credits.
Provides students with an understanding of how to apply systems thinking in public health. Trains students on the fundamentals of systems thinking theory and offers an opportunity to apply key methods and approaches to health policy and health questions. Prepares students to ask relevant research questions and apply a systems thinking lens to describe, understand, and anticipate complex behavior. Examines how systems models can be critically appraised and communicated with others so public health policy makers can exercise a greater degree of wisdom and insight.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.655. Surgical Care Needs in Low and Middle Income Countries. 2 Credits.
Explores the components of health systems related to surgical care. Focuses on the global burden of surgical disease and trauma, and deficiencies in surgical capacity in LMICs. Case studies from the US, Sierra Leone and Rwanda illustrate common surgical conditions and needed components for a comprehensive health system. Specific topics include surgical care for Women's Health, obstetrical or gynecological injury, and trauma care. Discusses the importance of planning for surgical interventions in disaster management and conflict, including the difference between war surgery and military surgery. Also addresses the economic cost and benefit of surgery and surgical care in LMICs.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.656. Conceptual and Evidential Foundations of Health Equity and Social Justice. 4 Credits.
Explores the conceptual bases of health equity and the underlying social justice, human rights, and disparity models for defining health equity. Examines strategies for promoting health equity and the strength of evidence supporting these strategies. Translates various causal models for defining health equity into research and practice frameworks. Presents integrative examples applying relevant concepts to identify causes, consequences, and solutions of health inequities in various contexts.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.657. Disease and Program Costing in Global Health Programs. 3 Credits.
Provides a solid foundation in the key concepts and methods used for costing in global contexts with a focus on practice and policy. Focuses on defining costs and rationales for costing, quantifying the cost, defining the disease case, and identifying cost components that vary by country and settings. Discusses the challenges of costing in low- and middle-income settings and prepares students to design and execute a cost analysis on a global health program and on a disease. Helps students frame cost data and economic evidence for policymaking and advocacy. Includes topics such as taxonomy of costs, perspectives, epidemiological considerations, evaluating data sources, patient/caregiver economic survey design, analysis methods, and dissemination techniques.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.658. Globalization: Challenges and Opportunities for Future Health Systems. 2 Credits.
Everything in life has positive and negative effects, and globalization is just one example of this reality. This course evaluates how globalization creates challenges and opportunities for health systems and health outcomes in general. Students discuss evidence on globalization and health, and propose strategies to leverage its opportunities and mitigates its risks.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.659. Introduction to Health Systems Modeling. 2 Credits.
Introduces students to mathematical and computational modeling and simulation methods to better understand, evaluate, and improve health systems. Addresses the basic concepts of mathematical and computational modeling and simulation and how they may apply to health systems. Covers the basics of economic and operational modeling and simulation, and introduces advanced Microsoft Excel features and the VenSim software.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).
PH.221.660. Systems Science in Public Health: Basic Modeling and Simulation Methods. 3 Credits.
Introduces students to mathematical and computational modeling and simulation methods that can help public health decision makers better understand and improve various systems in public health. Addresses the basic concepts of mathematical and computational modeling and simulation. Covers probability theory, decision analysis, Markov models, compartment models, and systems dynamics models, as well as basics of economic and operational modeling. Introduces TreeAge, and VenSim software. Offers examples of public health systems including both communicable and non-communicable disease control programs (e.g., vaccines, medications, and non-pharmaceutical interventions), dietary and physical activity behaviors and interventions, and healthcare systems and healthcare policy.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.661. Project Development for Primary Health Care in Developing Countries. 4 Credits.
Allows participants to design a Primary Health Care (PHC) project in a low or middle-income country. Students learn how to navigate needs and limitations, and utilize resources available. Focuses on project design, project implementation and evaluation. Students select one of several Request for Proposals (RFA) for a specific situation, conduct a needs assessment, create a problem statement, set goals and objectives, and a theory of change for this proposed project. Students learn how to address community participation, human resources and their training and supervision, project information, approaches to sustainability, logistics of service delivery, project budgeting and financial management, monitoring, and evaluation, and finally close out of a project. At the conclusion, students develop a proposal ready for submission to a donor that embodies their PHC project design responsive to the RFA.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.662. Globalization and Health: Economic Development. 3 Credits.
Explores how economic development affects global burden of disease and human capital. Focuses on the relationship between economic growth, health, human capital achievement, and socioeconomic inequalities in health. Divided into three parts; the first part examines the effect of wealth on health, as well as, how better health influences human capital and income. The second part examines socioeconomic inequalities in health, primarily focusing on theories of how income inequalities affect health, and the measurement of socioeconomic inequalities in health. Finally, the third and last part examines policy strategies to improve investments in human capital and reduce income inequalities.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.663. Globalization and Health: Framework for Analysis. 3 Credits.
Evaluates in depth the influence of globalization on population health across the four main dimensions of globalization (economic, political, cultural and environmental). Teaches the use of analytical tools to observe the impact of globalization on population health using Global Burden of Disease data.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.664. Prevention of Unintentional Injuries in American Indian Communities. 2 Credits.
Introduces the basic skills and knowledge required to address the injury burden in the Native American Community. Based upon the nine Core Competencies for Injury and Violence Prevention, provides students with opportunities to practice these skills through application sessions. Prepares students to enter a network of injury prevention colleagues with a specific interest in the prevention of injuries in the Native American community.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.665. Early Childhood Intervention in Tribal Communities. 2 Credits.
Examines a constellation of economic, social, historical and cultural challenges to American Indian families that potentially compromise optimal early child development. Reviews opportunities for tribal grantees to assess needs and develop early childhood intervention strategies funded through the Affordable Health Care Act. Explores methods and theoretical approaches to early childhood development and intervention research in tribal contexts. Considers optimal systems of early childhood care in low resource settings. Examines unique aspects of tribal research and culture, emphasizing the importance of community-based and community-engaged approaches.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.666. Introduction to American Indian Health Research Ethics. 2 Credits.
Introduces students to the ethics of human subject research specific to working with American Indian communities. Also introduces ethical theory and principles, followed by a brief history of research ethics in Indian Country. Topics covered in lectures and moderated discussions include the importance of health research in Indian Country, informed consent for research participation, role and function of institutional and ethic review.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.667. An Interdisciplinary Approach to Understanding the Health of Native Americans. 3 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.668. COVID-19 & Infectious Disease Outbreaks in Native American Communities. 2 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.669. American Indian Health Policy. 2 Credits.
Examines the historical, social, political, legal and economic factors and values that have influenced the development and implementation of health policy pertaining to American Indian and Alaska Natives. Focuses on the four substantive areas that form the analytic basis for many of the issues in health policy and management: economics and financing; need and demand; politics/ethics/law; and quality/effectiveness. Discusses the unique relationship between the U.S. federal government and American Indian tribes. Addresses key policy and advocacy issues impacting Tribal communities.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).
PH.221.670. Collecting, Analyzing and Using Public Health Data in Native American Communities. 3 Credits.
Introduces Native American tribal health leaders, health professionals, health paraprofessionals and others interested in Native American health concerns to the basic concepts of epidemiology and biostatistics. Designed for persons who may not have previous formal training in epidemiology or biostatistics, but may be working to determine or to address tribal priorities for health care, or working in, or interested in clinical research or public health within tribal communities. Prepares students for the core epidemiology and biostatistics courses offered by the School of Public Health. Teaches participants how to collect, analyze and use community data to address public health problems. Participants are asked to work on datasets from tribal communities to apply the principles taught during the course. Individuals do not have to be Native American nor work with Native American communities to participate in the course since the concepts can be translated to many public health settings; howe
Course location and modality is found on the JHSPH website (https://www.jhsphs.edu/courses/).

PH.221.671. Introduction to Quantitative and Qualitative Research for American Indian Health. 2 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsphs.edu/courses/).

PH.221.672. Introduction to Data Management Using American Indian Health Data. 2 Credits.
Introduces Native American tribal health leaders, health professionals, health paraprofessionals, and others interested in Native American health concerning the basic concepts of data management. Designed for persons who may not have previous formal training in data management but may be working to determine or to address tribal priorities for health care, or working or interested in clinical research or public health within tribal communities. Designed to prepare students for the core courses on data management methods offered by the School of Public Health. Introduces students to basic principles and methods of data management using examples pertinent to American Indian health. Individuals do not have to be Native American, nor work with Native American communities, to participate in the course since the concepts can be translated to many public health settings; however, the examples and assignments will be drawn from Native American settings.
Course location and modality is found on the JHSPH website (https://www.jhsphs.edu/courses/).

PH.221.673. Mental Health in American Indian Communities. 2 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsphs.edu/courses/).

PH.221.679. Introduction to Design and Implementation of Digital Health Programs in Lmic Settings. 2 Credits.
Provides an understanding of different types of digital interventions in healthcare. Reviews existing "global goods" and tools that are helpful in planning digital programs. Examines effective implementation strategies to make digital programs effective using case studies. Reviews critical team skills needed for implementation and scale. Explores emerging analytic methodologies to monitor digital programs. Prepares students to become effective decision-makers and digital health leaders.
Course location and modality is found on the JHSPH website (https://www.jhsphs.edu/courses/).

PH.221.681. Global Health Entrepreneurship: from Ideas to innovations. 3 Credits.
Teaches how to think about possibilities to make a difference in the global health community. Looks at how organizations like Medicine Sans Frontiers, Gates Foundation, and other smaller but impactful NGOs and Foundations had their roots in a team of public health-minded individuals who learned the business of global health and created organizations that fit their vision of how to make a difference in the world. Guides students through the process of idea conception, team and partner building, global health ethics, marketing/branding, finance and other fundamental pieces of creating, building and maintaining a successful global health start-up. Prepares students to conceptualize, design, build and manage sustainable and innovative global public health initiatives specifically focusing on critical and often missed topics such as marketing, budgeting / financial management, fundraising, legal and governance issues.
Course location and modality is found on the JHSPH website (https://www.jhsphs.edu/courses/).

PH.221.685. Modeling and Simulation for Health Workforce Analysis. 2 Credits.
Introduces modeling tools and statistical techniques to simulate health workforce scenarios. Equips students to analyze the impact of health workforce policies and programs on population health. Focuses on the production, training, distribution, and retention of health workers for primary care in low- and middle-income countries.
Course location and modality is found on the JHSPH website (https://www.jhsphs.edu/courses/).

PH.221.688. Social and Behavioral Foundations of Primary Health Care. 4 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsphs.edu/courses/).

PH.221.690. Strengthening Primary Health Care Across the World: Problem Solving Seminar. 3 Credits.
Uses interactive case-based and problem-based strategies to provide a 360 degree perspective on the challenges that typically undermine PHC strengthening, from articulating the relationship between PHC and the rest of the health system to measuring the impact of PHC. Equips students to develop pragmatic strategies that can address inequity in health systems, and promotes inclusion within public health programs through the use of primary health care strategies. Addresses multiple aspects of PHC strengthening from building coalitions to support primary health care, to engaging communities in the delivery of PHC services, to the use of implementation research to fine tune PHC strategies. Focuses on genuine country experiences and problems this seminar draws upon relevant bodies of theory from health systems, social and behavioral theory, social epidemiology, social justice and political science to craft practical strategies to strengthen PHC across the world.
Course location and modality is found on the JHSPH website (https://www.jhsphs.edu/courses/).
PH.221.691. Human Resilience: Public Health Perspectives. 2 Credits.
Examines the nature of human resilience while focusing on how it may be fostered within organizations, communities, and individuals. Focuses upon building resilience systems while touching upon fostering individual resilience. Builds "cultures of resilience" by discussing building organizational and community cultures of resilience drawing not only upon social and community psychology, but also management and leadership tactics that may be employed to foster such cultures in healthcare, public safety, international aid organizations, and communities in general. Fosters resilience in others, developing essential leadership skills.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.695. Seminar in Humanitarian Health. 0.5 Credits.
Introduces important and evolving issues in global humanitarian health from various perspectives including experts, practitioner, policymakers and academics. Examines trending issues such as new emergencies, politics, human rights, humanitarian architecture, leadership, cash transfers, innovative financing among others. Prepares students to explore practicums, internships, develop capstone projects, and apply to careers in the humanitarian health field.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.700. Public Engagement Practices for Scientists (Peps) in International Settings. 2 Credits.
Introduces the fundamentals of PEPS and its importance for public health professionals. Explores applications of quantitative and qualitative methods from other public health disciplines to assess and improve PEPS. Analyzes different frameworks to plan, implement, and assess PEPS, with a focus on low income, global settings. Provides opportunities to practice designing and evaluating PEPS within five engagement goal areas: (1) increasing scientist to scientist engagement, (2) increasing uptake of interventions, (3) increasing evidence-informed public health policy, (4) increasing minority populations into public health science workforce, and (5) increasing capacity of public health science workforce.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.701. Applications to Gender Analysis Within Health Research and Interventions. 2 Credits.
Introduces gender analysis as an integral part of health research and interventions. Focuses on teaching students on how to incorporate gender analysis into health research and interventions. Explores: (1) theoretical approaches to gender and health, including intersectionality, masculinities, and non-binary approaches; (2) how gender and gender relations affects health needs, risks, experiences, and outcomes; and (3) ways in which gender analysis can be incorporated into health research and interventions, including the use of gender frameworks and questions, gender assessments, and transformative approaches. Examples will cover a range of international settings, with a focus on low-and-middle income country settings.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.702. Introduction to Gender Analysis Within Health Systems Research in Lmic Settings. 2 Credits.
Introduces gender analysis as an integral part of health systems research (HSR). Focuses on training students on how to incorporate gender analysis into HSR in LMIC settings. Explores how gender analysis can be incorporated into: (1) HSR content, i.e. the substantive focus of HSR – through the use of sex disaggregated data, gender frameworks and gender analysis questions; (2) HSR process – how HSR itself is imbued by power relations during data collection and analysis; and (3) HSR outcomes – how gender inequities in health systems can be transformed progressively or at least not exacerbated.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.705. Monitoring and Evaluation of Health Systems Strengthening in Low and Middle Income Countries. 3 Credits.
Covers the essentials of monitoring and evaluating health systems strengthening in LMICs. The class analyzes the development of theories of change, and their application to the design of monitoring and evaluation systems, as well as alternative approaches to evaluating equity impacts. The development of monitoring indicators, use of quantitative techniques and the integration of M&E into health systems decision making will all be addressed.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.710. Designing Transformative innovation for Global Health. 2 Credits.
Familiarizes students with policy analysis tools to help position innovation of technologies or institutions for transformative potential. Demonstrates the application of principles of design guided by public policy and public health concerns to adapt such innovation in resource-limited settings. Considers technologies that are potentially transformative for improving health and narrowing disparities—making water potable, cook stoves more efficient and less polluting, and point-of-care diagnostics more available in local clinics. Examines the context of what makes innovation potentially transformative. Enables students to apply key policy tools such as stakeholder, value chain and market analyses as well as systems thinking, and consider how to structure and critique prize competitions, innovative financing approaches, and public-private partnerships.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.711. Managing District Health Systems in Low and Middle Income Countries. 3 Credits.
Provides a broad understanding of the application of basic principles of health management and leadership at the sub-national level. Focuses on strengthening of district health systems by managing health services through planning and program development and generation and management of resources. Acquaints strategic approaches in effective service delivery with emphasis on forecasting, problem analysis, managing change, supportive supervision and skills development. Discusses issues in implementing and evaluating national health programs, translating national health priorities into action.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.712. Leadership & Management in Humanitarian Health. 2 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).
PH.221.722. Quality Assurance Management Methods for Developing Countries. 4 Credits.

Presents the principles and practice of total quality management methods for health systems in developing countries. Emphasizes integrated district-level health systems management; fostering a genuine team approach in the face of an authoritarian tradition; central importance of community governance; interventions performed according to standards and in an equitable fashion; introducing a measurement-based approach to problem solving, emphasizing analysis of service delivery process and outcome; and developing operational research as an integral component of the management system. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.801. Health Systems Program Seminar I. 1 Credit.

Familiarizes Health Systems students with ongoing faculty research and activities, professionals and organizations in the field of international health, and provides a forum for discussion for current topics in health systems and international health. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.802. Health Systems Graduate Seminar 2. 1 Credit.

Familiarizes Health Systems students with ongoing faculty research and their areas of research, professionals and organizations in the field of international health, and provides a forum for discussion for current topics in health systems and international health. Focuses on topics like injuries, evaluation of health programs, health systems strengthening, universal health coverage, among other topics. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.803. Health Systems Graduate Seminar 3. 1 Credit.

Familiarizes Health Systems students with ongoing faculty research and their areas of research, professionals and organizations in the field of international health, and provides a forum for discussion for current topics in health systems and international health. Focuses on topics like globalization and health, social determinants of health, primary health care, health security, among others. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.804. Health Systems Graduate Seminar 4. 1 Credit.

Familiarizes Health Systems students with ongoing faculty research and their areas of research, professionals and organizations in the field of international health, and provides a forum for discussion for current topics in health systems and international health. Discusses topics on evidence and public health knowledge, connection between animal and human health, humanitarian health, health financing, among others. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.810. Health Systems Practicum. 1 - 22 Credits.

Complements and reinforces the didactic portion of the MSPH program. Provides students with an opportunity to apply the knowledge gained during the first year, to develop skills in management of health programs in low- and middle-income countries according to individually designed learning objectives, and to work as part of a team in an applied research or practice project. Students are placed in a variety of professional settings, which may include: government, non-government organizations (NGOs), multi-lateral, private, and/or for-profit sector. Provide opportunity for feedback for student performance and placement experience. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.820. Thesis Research Health Systems. 1 - 22 Credits.

Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.830. Postdoctoral Research Health Systems. 1 - 22 Credits.

Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.840. Special Studies and Research Health Systems. 1 - 22 Credits.

Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.850. Msph Capstone Health Systems. 2 - 16 Credits.

Offers students an opportunity to integrate and apply program skills and competencies to a public health problem in a format that approximates a professional practice experience. Fosters students’ ability to produce scholarly papers that provide a meaningful contribution to knowledge of the health of underserved populations. Guides students’ development of tangible evidence of expertise that addresses specific applied topics relevant to international health. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.861. Doctoral Seminar in Health Systems. 1 Credit.

Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.221.945. Large-scale Effectiveness Evaluations of Health Programs Lab.

A complimentary lab course to 221.645.01 LARGE-SCALE EFFECTIVENESS EVALUATIONS OF HEALTH PROGRAMS. This lab will be used to have in-depth discussions and also have students apply some of what they have learned in lectures through structured exercises. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.630. Nutrition, Infection and Immunity. 3 Credits.

Provides an overview of the relationships between nutrition and immune function, with a focus on established and emerging public health problems. Reviews assessment methods for immune function in the context of public health nutrition research. Discusses the impact of the immune response on nutrient metabolism, nutritional status, and interpretation of biomarkers. Examines the deleterious effects of malnutrition on host barrier defenses and innate, humoral, cell-mediated immunity, and mucosal immunity. Presents case studies on the synergistic and antagonistic interactions between the immune response and malnutrition. Provides self-study materials covering the basic tenets of immunology and nutritional status assessment, for students with limited background in immunology or nutrition. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).
PH.222.641. Principles of Human Nutrition in Public Health. 4 Credits.
Prepares students for integrating the biology of nutrition in solving public health problems globally, with application to public health research, policy and practice. It summarizes the history of nutritional sciences as related to public health and provides an integrated overview of the physiological functions of energy, macronutrients and micronutrients that influence health, and risk for disease. Topics include dietary sources and nutrient requirements, absorption, metabolism, and function. The course covers advances in the use of novel assessment techniques and biomarkers in the diagnoses of deficiency and nutritional status, and describes the dynamics of the nutrition transition occurring globally and dietary underpinnings of overweight and non-communicable disease risks. Also covers emerging topics linking nutrition, immunity, gut health and the microbiome.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.642. Assessment of Nutritional Status. 3 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.644. Cellular Biochemistry of Nutrients. 3 Credits.
Students learn biochemical processes of cellular macromolecules, such as DNA, RNA and protein synthesis, with particular emphasis on the function of essential nutrients in these processes. Covers biochemical aspects of carbohydrate, protein, and fat metabolism, and introduces essential concepts of molecular biology, such as structure and function of intracellular organelles and fundamental cellular processes. Topics also include nutritional and hormonal regulation of gene expression and concepts of detoxification to give the nutrition student a full appreciation of the relevance of nutritional biochemistry studies and cells to population perspectives. The course structure consists of core lectures led by faculty.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.647. Nutrition Epidemiology. 3 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.649. International Nutrition. 3 Credits.
Presents major nutritional problems that influence the health, survival, and developmental capacity of populations in low and middle-income settings. Covers approaches implemented at the household, community, national, and international levels to improve nutritional status. Explores the degree to which malnutrition can be prevented or reduced prior to achieving high-income populations or certain economic development, through targeted public and private sector interventions that address the causes of malnutrition.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.651. Nutrients in Biological Systems. 2 Credits.
Provides in-depth review of the metabolism of major macro- or micronutrients and their functional roles in a variety of biological systems. Focuses on biochemical or molecular mechanisms of how nutrients influence health and disease at the cell, tissue, organ, and regulatory network levels. Discusses emerging nutritional -omics studies and biomarkers to provide a global view of complex interactions between nutrients and genes, proteins, metabolites, and gut microbiota.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.652. Nutrition in Disease Treatment and Prevention. 3 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.653. Food Technology and Health. 3 Credits.
Discusses nutritional, chemical, physical, and technological perspectives of food, food ingredients, food quality, food safety, and the regulation thereof. Focuses on the core constituents of foods, and examines the non-nutritional (phytochemical, flavor, pigment, texture and fragrance) constituents of whole foods and food products and their impact on health. Evaluates food delivery and production systems, and specific eating patterns. Students evaluate dietary patterns and develop dietary strategies for specific individual, family, and community dietary needs based upon knowledge of ingredient nutrient composition and ethnic food consumption issues and trends.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.654. Food, Culture, and Nutrition. 4 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.655. Nutrition and Life Stages. 3 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.657. Food and Nutrition Policy. 2 Credits.
Examines the policy making process underlying large-scale governmental, bilateral, and multilateral agency policies and initiatives that directly or indirectly affect 1) the availability and quality of food and 2) the health and nutrition status of populations. Draws examples from the United States as well as low and middle income countries. Includes discussions led by faculty and guest lecturers with diverse experience in developing and implementing food and nutrition policies.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.658. Critical Thinking in Nutrition. 1 Credit.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.659. Critical Thinking in Nutrition II. 1 Credit.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.660. ADVANCED NUTRITIONAL EPIDEMIOLOGY. 3 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.661. Designing Healthy Diets. 2 Credits.
Examines the factors influencing dietary patterns and food choices in the U.S. and internationally. Focuses on modifying recipes, calculation of nutritional information for foods and recipes, and on planning, analyzing and evaluating dietary choices and patterns using the Nutrition Data System for Research (NDSR) software program and food composition tables, so that they meet guidelines for overall health and wellbeing.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).
PH.222.662. Obesity in Public Health. 3 Credits.
Examines obesity as a public health problem, (including prevalence, trends and disparities as well as the health, psychosocial, and economic consequences of obesity and its associated co-morbidities). Explores physiologic, psychological, economic, and cultural drivers of food consumption. Identifies key issues and approaches for current and future public health and environmental approaches to obesity
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.664. Food insecurity and nutrition: Partnering with community organizations to make change. 2 Credits.
Provides the opportunity to learn about community-based public health efforts to improve food security and diet quality and factors that influence food choices across the socio-ecological framework. Works with a community organization that provides community outreach services aimed at addressing food insecurity, improving diet quality, or addressing other nutritional needs of the population(s) they serve. Assesses the food environment and food access landscape for the population the organization they work with serves, and familiarize themselves with other organizations also serving that population. Gains practical experience developing innovative program elements to advance food access and nutrition services while accounting for real world considerations organizations face.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.665. Planning for Food Systems and Public Health. 3 Credits.
Introduces urban and regional planning as an integral part of addressing structural determinants of food and nutrition disparities. Examines the network of actors, infrastructure, resources, power relationships, and local government policies that influence health inequalities in food systems in communities of the US and globally. Includes topics related to food security such as land use, food production, gentrification, environmental sustainability, conflict and trauma, and mobility and transportation. Encourages students’ critical thinking in how to reimagine and reshape food and community systems for social, economic, and health equity.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.679. Food Insecurity and Nutrition: Partnering with Community Organizations to make change. 2 Credits.
Provides students the opportunity to learn about community-based public health efforts to improve food security and diet quality and factors that influence food choices across the socio-ecological framework. Works with a community organization that provides community outreach services aimed at addressing food insecurity, improving diet quality, or addressing other nutritional needs of the population(s) they serve. Assesses the food environment and food access landscape for the population the organization they work with serves, and familiarize themselves with other organizations also serving that population. Gains practical experience developing innovative program elements to advance food access and nutrition services while accounting for real world considerations organizations face.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.810. Human Nutrition Practicum. 1 - 22 Credits.
Complements and reinforces the didactic portion of the MSPH program. Provides students with an opportunity to apply the knowledge gained during the first year, to develop field, laboratory, or clinical skills related to nutrition research or programs according to individually designed learning objectives, and to work as part of a team in an applied research or practice project. Students are placed in a variety of professional settings, which may include: government, non-government organizations (NGOs), university projects, and multi-lateral, private, and/or for-profit sector. Practicum locations exist in the US and typically most regions of the world. Provide opportunity for feedback for student performance and placement experience
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.815. Human Nutrition - Registered Dietitian (RD) Program Practicum. 1 - 16 Credits.
Provides a combination of didactic instruction, competency-based learning activities and supervised experiential learning at clinical facilities, community and public health organizations. Learning experiences include lectures/presentations, group discussions, peer learning and case-based scenarios in preparation for applying knowledge in the practice of dietetics. The practicum engages the student, the practicum site, and the faculty/preceptors in shared responsibility for the provision and acquisition of competencies across a broad spectrum of dietetic practice settings including clinical, food service and community nutrition, culminating in an 8-week public health nutrition experience. Led by the Johns Hopkins Health System Clinical Nutrition Department, the practicum extends from June (following the first 4 terms of coursework) to March of the next calendar year (3rd term of the subsequent academic year).
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.820. Thesis Research Human Nutrition. 1 - 22 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.830. Postdoctoral Research Human Nutrition. 1 - 22 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.840. Special Studies and Research Human Nutrition. 1 - 22 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.850. Mspf Capstone Human Nutrition. 2 - 16 Credits.
Offers students an opportunity to integrate and apply program skills and competencies to a public health problem in a format that approximates a professional practice experience. Fosters students’ ability to produce scholarly papers that provide a meaningful contribution to knowledge of the health of underserved populations. Guides students’ development of tangible evidence of expertise that addresses specific applied topics relevant to international health.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.222.860. Graduate Nutrition Seminar. 1 Credit.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).
PH.222.861. Doctoral Seminar in Proposal Development. 1 Credit.
Facilitates doctoral students in the development of research ideas and their dissertation proposals. Incudes the following topics that will vary by terme: how to develop a research idea, and components of a solid research proposal – background, design, methods, sample size, analysis, writing to different audiences, research designs in nutrition, ethical review, funding sources and requirements, budgeting, staff management, thesis and manuscript preparation, and professional development.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.600. Application of Spatial Analysis Tools to Inform Decision-Making in Lmics. 4 Credits.
Applies spatial analysis tools relevant for policy decision-making in resource-poor settings. Analyzes the concepts and techniques of Geographic Information Systems (GIS) and Exploratory Spatial Data Analysis (ESDA) with a global health focus. Introduces both descriptive and analytical functions of GIS along with additional spatial and geographic concepts including: cartographic communication, automated mapping, characteristics map projections, geocoding, coordinate systems, the nature of spatial public health data, and spatial statistical methods. Provides students with an opportunity to gain hands-on experience in the use of ArcGIS QGIS, Geoda SatScan and Geographically Weighted Regression for spatial data analysis and mapping.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.603. Controlling Infectious Disease-1851 to the Present. 3 Credits.
Discusses advanced topics in the field of global health exploring the development of the first international sanitary conferences to responses to present day public health emergencies of international concern. Acquaints students with the colonial roots of international health, the rise of disease eradication strategies and contemporary responses to global epidemics. Introduces students with the histories and roles of several global health institutions such as the World Health Organization, the Pan-American Health Bureau, the World Bank and others.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.615. Digital Health Strategies to Control COVID19. 2 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.620. Domestic Immigrant Health Issues and Emerging Diseases. 2 Credits.
Focuses on diseases prominent in domestic immigrant populations. Areas of emphasis are epidemiology, diagnosis, clinical presentations, pathophysiology, strategies for treatment and control, and effects on immigrant populations. Principal diseases covered include: diarrheal diseases, tuberculosis, HIV/AIDS, Cysticercosis, Chagas, and Malaria. Covers how the U.S. handles emerging diseases such as Ebola, Nipah, and Zika (e.g., Ebola in volunteers, etc.). Examines special topics such as the effects of climate change on infectious disease.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.621. Design and Implementation of Global Digital Health Interventions. 3 Credits.
Provides an understanding of different types of digital interventions in healthcare. Reviews existing “global goods” and tools that are helpful in planning digital programs. Examines effective implementation strategies to make digital programs effective using case studies. Reviews critical team skills needed for implementation and scale. Explores emerging analytic methodologies to monitor digital programs. Prepares students to become effective decision-makers and digital health leaders.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.622. Design and Implementation of Global Digital Health Interventions II. 3 Credits.
Reviews necessary components of the digital health ecosystem that need to be addressed in order to develop and implement a successful digital health intervention. Provides an understanding of the different methods used to develop digital health interventions, including user-centered design. Explains the frameworks for the monitoring, evaluating, and reporting evaluation of digital health programs and interventions. Provides hands-on experience in developing digital data collection tools. Reviews components of successfully scaled digital health programs using both case studies and established guidelines.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.626. Special Topics in Global Digital Health. 1 Credit.
Offers a series of seminars on global digital health-related topics - including ethical, legal, and social issues of global digital health, behavioral economics and digital applications, innovative methods in digital health, among others. Includes leading digital health experts at JHU, from other institutions, organizations, government agencies, and industry. Provides the student with an understanding of the global digital health context, covering scientific, social, economic, political, and ethical dimensions of the context.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.630. The Practice of Public Health Through Vaccine Case Studies: Problem Solving Seminar. 3 Credits.
Presents several historic vaccine case studies highlighting challenges in emerging science, program design and evaluation, management, policy and communication. Examines decision-making surrounded by scientific uncertainty, controversy and competing public health priorities. Explores the challenges of developing policy and practice decisions within the constraints of emerging and uncertain science. Challenges students to make policy decisions and develop programmatic and communication strategies in real world settings.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).
PH.223.632. Methods for Planning and Implementing Evaluations of Large-Scale Health Programs in Low and Middle income Countries. 4 Credits.
Prepares students to design, implement, and analyze large-scale evaluations of health programs, focusing on low and middle income settings. Provides students with the skills to conduct household surveys, assessments of provider readiness and quality of care, and documentation of contextual factors, as well as overall planning, design, and analysis of program evaluations. Focuses on adaptation, development, and refinement of project-specific tools; sampling and sample size calculations; and various analytical methods appropriate for program evaluations.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.660. Tropical Medicine and Parasitology. 4 Credits.
Provides a broad overview of select tropical medicine and public health issues. Highlights specific tropical diseases and case studies stressing diagnosis, treatment, and implementation of preventive and control measures. Introduces students to clinical tropical medicine and travel medicine. Includes specific topics: the etiology, biology, epidemiology, and clinical presentation of entericile diseases, intestinal protozoa and helminths, cysticercosis and hydatid disease, hepatitis, viral and arboviral infections, and malaria. Includes practical lab experience in parasitology and diagnosis. Prepares students working with current and emerging health problems in developing countries.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.662. Vaccine Development and Application. 4 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.663. Infectious Diseases and Child Survival. 3 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.664. Design and Conduct of Community Trials. 4 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.667. Chronic Diseases in Low and Middle income Countries: Prevalence and Epidemiology. 4 Credits.
Introduces students to the major transitional diseases in low and middle income countries. Lectures detail specific chronic diseases, stressing such areas as significance, prevention, diagnosis and management. Includes both traditional lectures as well as case studies. Gains basic foundation of the epidemiology and challenges in the management of chronic diseases in low and middle income countries, which prepares them to work with research programs and international organizations.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.668. Chronic Diseases in Low and Middle income Countries: Study Design and Metrics. 4 Credits.
Provides public health students and medical researchers with the necessary skills to engage in study design and conduct, analytic methods, and use of metrics to help conduct research on chronic diseases in low and middle income countries.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.672. Data Mgmt Methods in Health Research Studies. 5 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.680. Global Disease Control Programs and Policies. 4 Credits.
Prepresents the history, social and political context, organization, technical content, funding and evaluation of current, major, global initiatives for disease control. Emphasizes programs focused on health problems of the developing world and includes, initiatives for vaccines and immunization, non-communicable diseases, safe motherhood and reproductive health, malaria, Neglected Tropical Diseases, HIV, emerging infectious diseases, TB, tobacco control, nutritional interventions and injury control. Also examines the process of policy formulation and resource allocation to international health and disease control.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.682. Clinical and Epidemiologic Aspects of Tropical Diseases. 4 Credits.
Focuses on infectious diseases that disproportionately affect those in developing countries. Some of these are major killers, others are neglected tropical diseases not covered in other courses. Discusses the epidemiological and clinical aspects of each disease, including diagnosis and treatment. Introduces students to the major infectious diseases that are prevalent and of public health importance in tropical and developing countries.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.684. Vector-Borne Diseases in the Tropics. 4 Credits.
Focuses on vector-borne diseases prominent in tropical infections. Emphasizes global epidemiology, diagnosis, clinical presentations, pathophysiology, and treatment of microorganisms as well as characterization and control of vectors. Integrates clinical cases and pathology through laboratory sessions. Covers principal diseases including malaria, African and American trypanosomiasis, leishmaniasis, filariasis, yellow fever, dengue, hemorrhagic fevers, Bartonella, Lyme, Rickettsia, plague and toxoplasmosis.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.685. Tuberculosis, HIV and Other Chronic Infections in the Tropics. 4 Credits.
Covers the history, clinical presentation, epidemiological factors, new diagnostic techniques, treatment, and control of tuberculosis. Addresses pathophysiology, clinical presentation, ecology, and effects of HIV/AIDS on developing countries, their populations, and resource utilization. Includes additional topics such as other chronic infections that have global public health importance. Emphasizes integrating policies addressing TB, HIV/AIDS, other infections and poverty in resource-poor settings and how these interactions influence control strategies.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).
PH.223.686. Child and Public Health in the Tropics. 4 Credits.
Introduces students to the major global causes of child mortality and the strategies and interventions to reduce child mortality. Includes specific topics: malaria, HIV, measles, pneumonia, diarrhea, neonatal disorders and nutritional deficiencies. Additional topics may include maternal mortality, eye diseases, demography and anthropometry.
Focuses on and emphasizes a theme through the different lectures, with the tension and balance between horizontal approaches to child survival, such as Integrated Management of Childhood Illness (IMCI), and vertical programs such as disease eradication programs. Discusses several papers published as part of the Lancet Child Survival and Lancet Neonatal Survival series, and gain hands-on experience applying different child survival strategies using the Lives Saved Tool (LiST).
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.687. Vaccine Policy Issues. 3 Credits.
Examines current domestic and international policy issues in vaccine research, development, manufacturing, supply, licensure, delivery, and utilization. Includes topics: priorities for funding vaccine research and development, ensuring an adequate supply of safe and effective vaccines, vaccine financing and new vaccine introduction decision-making, ethics, and compulsory vaccination. Emphasizes the identification of important vaccine policy issues and the formulation and evaluation of policies to address these issues. Presents the roles, responsibilities, and policy positions of key immunization stakeholders via guest lectures by a wide array of experts who have worked for/with important vaccine stakeholders (e.g., UNICEF, The Bill and Melinda Gates Foundation, US Government, and GAVI Alliance). Learns skills including developing a Policy Paper. Includes readings relevant scientific papers and publications of U.S. and international agencies.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.688. Intestinal Infections in the Tropics. 4 Credits.
Provides an overview of the epidemiology, presentation, and effects of microbial, protozoan, and viral intestinal infections, including Salmonella, Shigella, cholera, typhoid, rotavirus, amebiasis, dysentery. H. pylori, Campylobacter, Cryptosporidium, Cyclospora, and Giardia. Addresses clinical presentation, life cycle, distribution, prevention, and treatment of intestinal helminthes, including Ascaris, Trichuris, Strongyloides, and hookworm. Addresses interactions between parasites, diarrhea, and malnutrition along with treatment, prevention and control strategies, and oral rehydration therapy. Covers Cysticercosis and hydatid disease. Includes laboratory sessions and practical lab experience.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.689. Biologic Basis of Vaccine Development. 3 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.690. The Design and Analysis of Cluster Randomized Trials. 2 Credits.
Covers the major concepts and methods in the design and analysis of trial in which the unit of randomization is a group of participants. Focuses on design: discusses unmatched, matched, stepped wedge, and other approaches, with particular attention paid to randomization and sample size considerations. Presents a variety of methods for the analysis of these correlated-outcomes studies. Includes special aspects of infectious disease interventions.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.705. Good Clinical Practice: A Vaccine Trials Perspective. 4 Credits.
Acquaints students with the regulatory and ethical standards of conducting trials in accordance with FDA Code of Federal Regulations and ICH GCP Guidelines. Provides students with background and resources needed to conduct clinical trials in healthy populations. Students complete a project based on a real-world vaccine trial focusing on logistical and operational components of protocol design, informed consent process, recruitment considerations, human subjects protection including adverse event assessments and reporting. Additional concepts include the responsibilities of ethical review committees, principal investigators, and sponsors; investigational product management and preparation; data collection methods; quality assurance and quality control (QA/QC). Contributors to the course have experience conducting clinical trials research in various settings.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.801. Global Disease Epidemiology and Control Program Seminar 1. 1 Credit.
Introduces students to the diverse projects and research activities led by faculty in the Global Disease Epidemiology and Control (GDEC) program. Presents key institutes and centers working to improve international health and introduces faculty-led case studies to identify challenges in ongoing research and practice initiatives. Examines and reflects on the history of prevention and control activities using the book, “A History of Global Health,” by Randall M. Packard as a framework.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.802. Global Disease Epidemiology and Control Program Seminar 2. 1 Credit.
Introduces students to skills and resources for career development within the field of international health. Provides an opportunity for students to focus in on these skills such as giving presentations, tailoring their resume to a public health audience and developing their publication profile. Prepares students for the practicum application process.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.803. Global Disease Epidemiology and Control Program Seminar 3. 1 Credit.
Explores a variety of tools and methods applied by GDEC faculty to conduct public health research with a focus on hands-on skills building. Specific sessions address: data sources, including datasets that are publicly available; development of a basic statistical plan; use and interpretation of modeling tools; field data collection; data visualization strategies, and data management considerations.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.804. Global Disease Epidemiology and Control Program Seminar 4. 1 Credit.
Prepares students for the activities and requirements of the second year of the MSPH program including the practicum and beyond. Presents best practices and workshop for conducting a strategic literature search. Explains the role and resources of the Institutional review Board (IRB) Explores the continuum of qualitative to quantitative research and programs. Explores practicum and capstone requirements and documentation. Establishes second year MSPH milestones within CoursePlus Portfolio.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).
PH.223.810.  Global Disease Epidemiology and Control Practicum.  1 - 22 Credits.
Complements and reinforces the didactic portion of the MSPH program. Provides students with an opportunity to apply the knowledge gained during the first year, to develop skills in epidemiologic and data analysis skills applied to diseases of importance in low and middle income countries according to individually designed learning objectives, and to work as part of a team in an applied research or practice project. Students are placed in a variety of professional settings, which may include: government, non-government organizations (NGOs), multi-lateral, private, and/or for-profit sector. Provide opportunity for feedback for student performance and placement experience. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.820.  Thesis Research Disease Control.  1 - 22 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.830.  Postdoctoral Research Disease Control.  1 - 22 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.840.  Special Studies and Research Disease Control.  1 - 22 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.850.  Msph Capstone Global Disease Epidemiology and Control.  2 - 16 Credits.
This course is offered so that MSPH students who are working on their capstone (formerly MSPH essay) can register for credits with their academic advisors. This allows the Department and academic advisors to better track 2nd year MSPH students on their progress towards completing degree requirements. This also allow 2nd year students to more formally block time off in their academic terms to complete their capstone. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.860.  Global Disease Epidemiology and Control Program Seminar 2.  1 Credit.
Introduces students to skills and resources for career development within the field of international health. Provides an opportunity for students to focus in on these skills such as giving presentations, tailoring their resume to a public health audience and developing their publication profile. Prepares students for the practicum application process. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.861.  Global Disease Epidemiology and Control Program Doctoral Seminar.  1 Credit.
Creates a focused, small group environment for the entering PhD students, which actively engages them in relevant, challenging content necessary for success in the PhD program. Seminar supports and extends beyond those topics taught in the classroom setting. The doctoral student education does not merely consist of successful completion of required courses--each student is expected to become a leading scientific expert during the years spent at JHU. It provides an opportunity to engage with senior faculty and move meaningfully toward selection of a dissertation topic and the skills necessary to successfully complete the PhD. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.866.  Special Topics in Program Evaluation in International Health.  1 Credit.
Acquaints students with current or on-going examples of large scale evaluations, and the practitioners or organizations that are the key players in implementation and evaluations of maternal and child health programs in low and middle income countries. Provides students with the skills to articulate current methodological issues around program planning, implementation and evaluation. Discusses key publications related to program implementation and evaluation. Introduces student to the various roles and responsibilities of a public health expert in the field of program evaluation. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.223.867.  Special Topics in Vaccine Science.  1 Credit.
Offers a series of seminars (4 per term) on research and access of vaccine against infectious diseases of global importance including COVID-19, emerging infections, childhood illnesses, and other important vaccine-preventable illnesses. Covers scientific, social, economic, political, and ethical dimensions of vaccine research, development and access. Includes leading vaccine experts at JHU, and from other institutions, organizations, government agencies and industry present seminars. Provides the student with an understanding of the pathways leading to development and utilization of vaccines with public health impact. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.605.  Indigenous Health.  2 Credits.
Examines Indigenous Health through a public health lens. Critically evaluates the historical, social, cultural, and political determinants of Indigenous health utilizing various Indigenous theoretical frameworks. Provide students with an understanding of Indigenous research methodologies and prevention/interventions programs employed to promote and strengthen the overall health status of Indigenous populations globally. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.630.  The Obesity Epidemic Problem Solving Seminar: What We Can Learn from Native American Communities.  3 Credits.
Provides an overview of trends in obesity in the US, examines use/limitations of data from national surveys and describes how the epidemic varies geographically, by race/ethnicity and socio-economic status. Lectures and activities survey the complex, multi-faceted set of factors that contribute to the obesity epidemic and propagate disparities. Case studies in Native American communities, where some of the highest obesity rates exist, illustrate the importance of community collaboration and inclusion of culture in developing public health programs and policies. This class analyzes how the integration of knowledge, cultural norms and values, and engagement of multiple stakeholders is critical to shaping effective programs and policies. Course prepares students to identify and assess communities with obesity risk factors and propose culturally sensitive strategies to decrease obesity and eliminate underlying health disparities. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.689.  Health Behavior Change At the Individual, Household and Community Levels.  4 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).
PH.220 (International Health)

PH.224.690. Qualitative Research Theory and Methods. 3 Credits.
Introduces practical skills for conducting qualitative research in domestic and international settings. Provides an overview of theoretical foundations of qualitative research and different methodologies for qualitative inquiry, including programmatic qualitative research, grounded theory, ethnography, phenomenology, narrative analysis, and case studies. Enables students to develop, interpret, and evaluate three common qualitative data collection methods: in-depth interviews, focus groups, and observation. Emphasizes understanding the basic principles and techniques critical for conduct, including question formation, tool design, sampling, data generation, ethics, and quality. Critically assesses the use of qualitative methods in the published health literature. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.691. Qualitative Data Analysis. 3 Credits.
Combines lecture, hands-on exercises, and work with individual datasets to guide students through several approaches to managing and analyzing qualitative data in the context of both international and domestic public health research. Offers instruction in how to create efficient and accessible qualitative databases, apply different coding and other analytic strategies to different types of qualitative data, write analytical memos, and present qualitative results in forms appropriate for different target audiences, both academic and programmatic. Provides a brief introduction to the use of computer-aided qualitative data analysis software (CAQDAS).
Prerequisite(s): Must also enroll for PH.224.991
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.692. Methods in Formative Research and Human Centered Design for Intervention Development. 4 Credits.
Examines how to conduct formative research and human-centered design and apply its findings in the design, implementation, and evaluation of public health interventions. Prepares students with conceptual and methodological understanding that can be applied across a diverse range of public health traditions from social science to clinical research including implementation science, program evaluation, community diagnosis, and translational research. Presents and explores method case studies and the use of the data collected to develop tailored, more effective behavioral and community interventions, implementation models, and valid and reliable measurements. Discusses cross-cutting issues in study design, community entry and involvement, data sharing and use, as well as staff development and supervision. Examples presented and analyzed include HIV and malaria prevention and control, Aedes aegypti control, and global maternal and child health care-seeking programs and services. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.693. Methods in Formative Research and Human Centered Design for Intervention Development. 4 Credits.
Examines how to conduct formative research and human-centered design and apply its findings in the design, implementation, and evaluation of public health interventions. Prepares students with conceptual and methodological understanding that can be applied across a diverse range of public health traditions from social science to clinical research including implementation science, program evaluation, community diagnosis, and translational research. Presents and explores method case studies and the use of the data collected to develop tailored, more effective behavioral and community interventions, implementation models, and valid and reliable measurements. Discusses cross-cutting issues in study design, community entry and involvement, data sharing and use, as well as staff development and supervision. Examples presented and analyzed include HIV and malaria prevention and control, Aedes aegypti control, and global maternal and child health care-seeking programs and services. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.694. Mental Health Intervention Programming in Low and Middle-Income Countries. 3 Credits.
Introduces students to mental illness symptoms and syndromes found across contexts and the variety of strategies used to treat such symptoms. Discusses mental health services as an integral part of global health program development. Addresses methods of adapting and developing interventions in low-resource countries and humanitarian contexts, as well as research designs used to evaluate these interventions. Challenges students to use critical and creative thinking skills throughout to discuss the issues involved in this relatively new field. Focuses on cross-cultural challenges in conducting mental health research in these settings. Topics covered include an overview of mental health issues in low-resource countries and humanitarian contexts; cross-cultural challenges; developing, modifying and disseminating prevention and intervention strategies; and the interplay between mental health and related topics such as nutrition, fitness and diabetes; HIV; substance abuse; and violence. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.697. Qualitative Research Practicum I: Partnerships and Protocol Development. 2 Credits.
Places students in teams collaborating with a local community-based organization or JHU faculty member to develop a qualitative research project. Introduces key topics in qualitative research including conducting field research, developing study protocols and data collection instruments, and interacting with qualitative research participants and collaborators. Addresses the practical aspects of qualitative study design (e.g. choosing between data collection methods, resolving logistical challenges, and operationalizing an iterative research design) as well as the practical aspects of ethical review (including the JHSPH IRB and school ethical review processes). Prepares students to develop the components needed to begin the qualitative research project conducted in 224.698.01: Qualitative Research Practicum II: Collecting Qualitative Data and 224.699.01: Qualitative Research Practicum III: Analyzing and Writing Qualitative Findings (NOTE: concurrent or prior enrollment required). Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.698. Qualitative Research Practicum II: Collecting Qualitative Data. 2 Credits.
Enables students to begin data collection and analysis for a qualitative research project in collaboration with a local community-based organization or JHU faculty. Discusses the informed consent process, common problems in qualitative data collection (interviews, focus groups, observation) and strategies for addressing them, how to make iterative changes to data collection methods, and different approaches to transcription and translation. Includes a debriefing with qualitative data collectors. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.699. Qualitative Research Practicum III: Analyzing and Writing Qualitative Findings. 2 Credits.
Enables students to complete data collection, analysis and write-up of results from a qualitative research project in collaboration with a local community-based organization or JHU faculty. Discusses common challenges in qualitative research including analysis of qualitative data, writing qualitative papers and reports, presenting qualitative findings, and ethical issues related to fieldwork and authorship. Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).
Draws content from positive psychology, neuroscience, and mindfulness to teach the science and practice of building positive mental habits and fostering personal agency. Through a series of interactive sessions that review the scientific basis for these concepts as well as self-reflective exercises, students experience a personal journey to understand where they are now, where they would like to be and the mental tools to get there. Exposes students to several cognitive strategies and practical tools that can help navigate daily challenges, increase positive emotions, decrease stress and plan for the future.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.810. Social and Behavioral Interventions Practicum. 1 - 22 Credits.
Complements and reinforces the didactic portion of the MSPH program. Provides students with an opportunity to apply the knowledge gained during the first year, to develop skills in the development, implementation, and evaluation of social and behavioral global health interventions, according to individually designed learning objectives, and to work as part of a team in an applied research or practice project. Students are placed in a variety of professional settings, which may include: government, non-government organizations (NGOs), multi-lateral, private, and/or for-profit sector. Provide opportunity for feedback for student performance and placement experience.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.830. Postdoctoral Research Social and Behavioral Interventions. 1 - 22 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.840. Special Studies and Research Social and Behavioral Interventions. 1 - 22 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.850. Msp Capstone Social and Behavioral Interventions. 2 - 16 Credits.
Offers students an opportunity to integrate and apply program skills and competencies to a public health problem in a format that approximates a professional practice experience. Fosters students' ability to produce scholarly papers that provide a meaningful contribution to knowledge of the health of underserved populations. Guides students' development of tangible evidence of expertise that addresses specific applied topics relevant to international health.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

Discusses the history and philosophy of social sciences in public health. Students read the book "Global Health: Why Cultural Perceptions, Social Representations, and Biopolitics Matter" by Mark Nichter. This book serves as a starting point for a series of discussions on why a thorough understanding of the historical, cultural, social and economic context is important in global public health practice; how globalization affects global burden of disease, health equity, and relationship with the social and physical environment; and the role of applied social science theory and methods in shaping and evaluating social and behavioral interventions.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.861. Social and Behavioral Interventions Program Seminar II: Participatory Approaches and the Role of Community. 1 Credit.
Provides an overview of participatory methods as they apply in international health, and discusses the role of community in social and behavioral international health interventions.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.862. Social and Behavioral Interventions Program Seminar III: Intervention Case Studies. 1 Credit.
Discusses intervention case studies examining formative research, implementation process, or monitoring and evaluation aspects. Relevant readings illustrating one or more of these aspects are provided by the SBI faculty, advanced students or other guests who will be leading each of the sessions.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.863. Doctoral Seminar in Research Methods in Applied Medical Anthropology I. 4 Credits.
Discusses and explores advanced topics in qualitative methods, including participant observation, interviews and focus groups, content analysis, discourse analysis, and online ethnography. Discusses theories in medical anthropology that are particularly useful in the design and analysis of international health interventions.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.864. Doctoral Seminar in Research Methods in Applied Medical Anthropology II. 4 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.865. Doctoral Seminar in Behavior, Change and Health. 3 Credits.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).
PH.224.866. Social and Behavioral Interventions Doctoral Proposal Development Seminar. 2 Credits.
Guides students through the process of developing a dissertation proposal for the doctoral degree in SBI. Introduces the proposal requirements and provides information about the oral defense, including forming committees. Sessions include discussions of students’ projects to help define the scope of a dissertation, understand how to use conceptual frameworks, approach the literature review, research methods, and analytic plan. Also discusses research ethics. Students work with the faculty instructor and in pairs and/or small groups to critique each others’ proposals during the process of developing their own proposals.
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.990. LAB for IH 224.690.
lab for PH.224.690
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).

PH.224.991. LAB FOR IH PH.224.691.
Lab for PH.224.691
Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses/).