

PH.220 (INTERNATIONAL HEALTH)

Courses

Course location and modality is found on the BSPH website (<https://publichealth.jhu.edu/courses/>).

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.

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.

PH.220.602. Global Approaches to Public Health and Society. 3 Credits.

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

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.

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.

PH.220.610. Power and Practice in Global Health: Theories, Perspectives, and Action in “Decolonization”. 2 Credits.

Provides the theoretical frameworks and tools for the decolonization of global health, a forum to engage with faculty and scholars on the history and coloniality of global health, and the opportunity to learn from the experiences of activists and practitioners in order to move toward the “decolonization” of global health. Asks participants to challenge the dominant narratives in global health through discussion of the history and practice of the field, self-reflection of individual and institutional power, and possibilities for action, as well as imagine what “decolonizing” global health could look like through the development and execution of change-making action. Recognizes that decolonization must involve actions that change longstanding practices in global health, and that a discussion series such as this may serve only as a contribution towards further action.

PH.220.611. IH Professional Seminar Series Part 1: Cross-disciplinary Connecting and Communicating with Clarity. 0.5 Credits.

Focuses on the critical need for a variety of perspectives and skill sets to develop an effective public health team. Addresses the gap in effectively communicating research into actionable messages geared towards diverse audiences. Prepares global health students to communicate research evidence to various actors, including communities, service users, providers, and policymakers. Discusses key communication strategies and modalities (written, visual, audio) with a focus on tailoring messages for different audiences and content, ensuring that the message is clear, understandable, and actionable. Equips students with practical skills that will ultimately support the uptake of research for advocacy, behavior change, evidence-informed decision-making, and development and implementation of policies and programs in various global health contexts.

PH.220.612. IH Professional Seminar Series Part 2: Putting Your Best Foot Forward on Paper. 0.5 Credits.

Provides strategies and support to optimize materials generally expected for a job or internship search and application process. Focuses class time on résumés/CVs, cover letters, and building your brand in LinkedIn. Includes numerous opportunities for feedback from both peer and expert reviewers. Introduces MSPH students to the practicum requirement for their degree program. Orients IH students to communication issues specific to International Health and ties concepts to the rest of the core course series.

PH.220.613. IH Professional Series Part 3: Interpersonal Engagement and Networking Skills. 0.5 Credits.

Provides strategies and support to optimize interpersonal connections generally related to a job or internship search and application process. Focuses on networking and interview skills. Includes numerous opportunities for feedback from both peers and experts. Ties concepts to the rest of the series.

PH.220.614. IH Professional Series Part 4: Incorporating and Negotiating Across Diverse Perspectives. 0.5 Credits.

Focuses on the critical need for a variety of perspectives and skill sets to develop an effective public health team. Covers topics that emphasize skills in the modern workplace including effective teamwork, conflict resolution, negotiating, and dealing with complexity in health systems.

PH.220.621. Public Health Advocacy and Gender: Towards a Gender Transformative Approach. 2 Credits.

Introduces the linkages of public health advocacy and gender across disciplines and contexts. Assesses the role of public health advocacy in catalyzing change within inequitable and oppressive systems of data collection and healthcare provision. Identifies how public health professionals can integrate public health advocacy into data collection and program design using a gender-transformative approach.

PH.220.622. How to Design Gender Transformative Programs. 2 Credits.

Introduces the practical knowledge and skills needed to design gender transformative programs. Presents commonly used frameworks, evidence-based programs and indicators to understand and measure how gender transformative a program is. Focuses on case studies and hands-on practice.

PH.220.623. Applying a Gender Lens to Advance Implementation Research. 2 Credits.

Are you interested in Implementation Research but unsure how it can be applied to improve gender and health equity? This course will help you generate, promote, and use new knowledge on the intersections of gender and other social variables to influence implementation strategies globally. This is an intermediate course for students with preliminary training and/or professional experience in implementation research (IR).

PH.220.624. Monitoring and Evaluation in Global Health for the Real World: Addressing Gender Inequity for Change that Counts. 3 Credits.

Presents monitoring and evaluation in global health and gender equity from an applied and practical perspective. Builds skills and learning on health and gender relevant M&E methods, indicators, data and analysis in light of resource, capacity, quality, and time constraints faced by most projects. Differentiates between gender integrated M&E approaches relevant for larger scale reform initiatives undertaken by national or provincial ministries or international agencies, versus those relevant for smaller scale programs typically implemented by NGOs. Encourages critical and innovative thinking on prioritized data and indicator options in line with realistic expectations from the planned intervention or reform.

PH.220.625. Conducting Gender Situational Analyses for Health Programs. 2 Credits.

Explores gender situational analysis and its relevance for health research, programs, and policies. Introduces tools, frameworks, and models for the conduct of gender situational analysis and provides opportunities for students to practice conducting a situational analysis, applying tools on a problem or program of interest within a specific context. Explores how findings can be used to create gender responsive health programs.

PH.220.626. Communicating Gender-Responsive Science. 3 Credits.

Illustrates the critical need for communicating gender-related science to different audiences from policy makers, to implementors, to community members. Uses a feminist approach and feminist standpoint theory to generate awareness about different origins and types of knowledge and how they are valued in science communication. Outlines key principles related to the ethics of science communication and evidence-based policy making. Introduces aims of, and strategies for, science communication, providing students opportunities to practice communicating gender-related science through applied activities.

PH.220.627. Gender, Armed Conflict, and Climate Change: Key Issues, Interventions, and Policy Solutions. 3 Credits.

Introduces the policy landscape of gender in humanitarian emergencies, discusses the integration of gender in humanitarian technical sectors, and identifies ways in which gender issues intersect with peace-building and environmental / climate issues. Focuses on skill-building and learning regarding research methods, monitoring indicators, data, and analysis of key gender issues considering complexities and constraints posed by emergencies. Explores and critiques existing interventions and programs aimed at addressing gender equality and gender-based violence in emergencies, while providing best practices for designing inclusive multisectoral humanitarian programming in fragile settings

PH.220.628. Women's Health and Gender-Responsive Budgeting. 2 Credits.

Explains how gender can be integrated into budgeting for health policies, programs, and strategies. Builds gender-responsive budgeting skills that can address various forms of gender inequity in health outcomes. Provides economic tools to analyze trends and discuss policies, tools, and strategies available.

PH.220.629. Foundational Concepts in Gender and Health Data and Application. 2 Credits.

Equips students with the fundamental knowledge needed to appreciate the importance of collecting, analyzing, and utilizing health data that is inclusive of all genders, ultimately enhancing the health and well-being of populations. Explores essential insights and tools to advance gender-appropriate approaches to health data. Focuses on the strengths of gender-inclusive health data to identify and address health inequities using a US and global perspective. Presents practical strategies for using gender-sensitive health data, making a real impact on health equity and inclusivity.

PH.220.630. Adapting Health Programs for Sexual & Gender Minorities. 2 Credits.

Explores sexual and gender minority health in global, cultural, and historical contexts. Introduces tools, frameworks, and models for adapting health programs for, or to be inclusive of, sexual and gender minorities. Provides opportunities for students to propose adaptations to a health intervention or program in a specific setting and anticipate challenges. Explores how findings can be used to create sexual and gender minority-inclusive health programs.

PH.220.631. Measuring Sexual Orientation, Gender Identity, and Gender Expression (SOGIE). 2 Credits.

Provides students with knowledge and skills to conceptualize, operationalize, and measure key concepts related to sexual orientation, gender identity, and gender expression (SOGIE). Acquaints students with the multitude of sexual and gender identities across geo-cultural contexts, and the critical importance of SOGIE inclusion in public health research and practice. Includes SOGIE-equitable approaches to practical endeavors and intervention activities, such as developing survey questions and response options and patient/participant in-take forms, applied in the context of global public health research and practice.

PH.220.632. Integrating Men into Global Health Programming. 2 Credits.

Integrates men into global health programming. Examines concepts and approaches that shape the development and implementation of programming for men for several health challenges. Prepares students to critically examine the curricula and evaluation approaches while considering the necessary safeguards that will ensure gender-equitable outcomes for men, women, boys, and girls. Explores the necessary policy elements necessary to ensure health programming for men is robust and impactful.

PH.220.633. Building Women's and Girls' Agency and Resilience Through Psycho-social Interventions. 2 Credits.

Provides definitions of personal agency from various academic traditions as well as examines the key scientific debates that exist. Explores the role that personal agency interventions can play in shaping a more equitable and healthier world, through the lens of global gender equity and health development initiatives. Analyzes the research landscape to uncover challenges related to measuring agency, implementing effective agency interventions, and understanding their integration with existing health and development efforts. Examines the complexities of personal agency and empowerment in the context of global development and gender equity efforts.

PH.220.634. Participatory System Modeling for Analysis of Gender Health Inequities. 3 Credits.

Introduces the basic concepts of this model using multiple examples related to gender health inequities. Presents how group model-building and analysis sessions are organized using scripts for model-building. Challenges students to participate in the model-building and analysis through in-class role-playing exercises.

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.

PH.220.711. Doctoral Proposal Development I: Diving into the Literature and Identifying Gaps. 1 Credit.

Creates a focused, small group environment for the entering IH PhD students and actively engages in relevant content necessary for success in the PhD program. Supports and extends beyond those topics taught in the classroom setting. Provides an opportunity to engage with peers and faculty in the development of research ideas, components of a solid research proposal, writing for different audiences, and the development of skills in presenting research ideas to technical audiences. Engages students in exploring and understanding the literature in their area of interest, creating an annotated literature review, sharing what they learn through a brief presentation, including gaps in the literature and potential areas to pursue through research.

PH.220.712. Doctoral Proposal Development II: Developing and Communicating Research Ideas. 1 Credit.

Creates a focused, small group environment for the entering IH PhD students, which actively engages them in relevant content necessary for success in the PhD program. Supports and extends beyond those topics taught in the classroom setting. Provides an opportunity to engage with peers and faculty in the development of research ideas, components of a solid research proposal, writing for different audiences, and the development of skills in presenting research ideas to technical audiences. Engages students in the development of research ideas, thinking through study designs and methods, and persuasive communication about a proposed study through a 1-2 page concept paper and a 10-minute presentation.

PH.220.770. DrPH Proposal Planning Seminar. 1 Credit.

Provides a grounding in research study design and supports students as they begin to think about their thesis topics and research. Familiarizes students with identifying research questions, developing a conceptual framework, and developing a study design. Focuses on alternative epistemologies and how epistemologies may influence study designs. Builds upon other methods classes and supports students to develop a short, draft research proposal of their own. Prepares students for their proposal work, although students can complete the course without having decided upon a dissertation topic.

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.

PH.220.810. Field Placement DRPH Program International Health. 1 - 22 Credits.**PH.220.820. Thesis Research DRPH IH. 1 - 22 Credits.****PH.220.828. Teaching in International Health. 1 - 22 Credits.**

Teaching Assistant (TA) for PhD students in International Health

PH.220.840. Special Studies and Research DRPH Program International Health. 1 - 22 Credits.**PH.220.841. International Health Masters Independent Goals Analysis. 1 Credit.**

Develops an MHS or MSPH academic plan through discussions with individual faculty advisors resulting in the development of a written document called the Individual Goals Analysis. Utilizes course tracking sheet plan based on skills and methods student plans to learn. Supports the student's successful performance in the program and prepares students for their intended future career.

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.

PH.220.861. DrPH Concentration Seminar in Global Health: Policy and Evaluation. 0.25 Credits.**PH.220.864. DrPH Concentration Seminar in Health Equity and Social Justice. 0.25 Credits.**

Provides opportunities to discuss issues and concepts related to Health Equity and Social Justice. Discusses evaluation of existing research, identification of gaps and topics, and design of research projects. Facilitates preparation for the comprehensive written exams, the design and conduct of practicum projects, preliminary oral exams, dissertation projects, and the final oral exam. Provides opportunities to present work-in-progress on overall projects and on specific research methodologies and to give and receive peer feedback. Emphasizes clear communication of ideas.

PH.220.895. MPH Practicum: International Health. 1 - 4 Credits.

PH.221.600. Gender-transformative Digital Health: An Intersectional Approach to Bridging Multiple Divides for Greater Health Equity and Impact. 2 Credits.

Explores how a gender-intersectional approach to digital health contributes to improved health equity, and how increased inequity results from not applying this approach. Provides case studies to apply a gender analysis, planning, and monitoring framework. Assesses how specific health system effects and health outcomes are generated by digital health interventions that did or did not take a gender-intentional approach.

PH.221.601. Introduction to Health Workforce Management in Low and Middle Income Settings. 2 Credits.

PH.221.602. Applications in Managing Health Organizations. 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.

PH.221.603. Research and Project Coordination in Global Health. 3 Credits.

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.

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.

PH.221.606. Training Methods and Continuing Education for Health Workers. 4 Credits.**PH.221.607. Towards Gender Transformative Leadership in Global Health: Essential Skills. 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.

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.

PH.221.609. Introduction to Financing in Global Health. 2 Credits.**PH.221.610. Pharmaceutical Systems: Advancing Access to Medicines in the Field. 3 Credits.**

Analyzes problems and develops strategies based on real world pharmaceutical systems issues, including the procurement, distribution, safety, policy and regulation, and financing of medicines, based upon both HIC and LMICs situations. Demonstrates the complexity of ensuring and expanding access to medicines. Identifies stakeholders within the regional and national health systems and current supply chain challenges for medicines. Defines strategies for improved pharmaceutical policy and service delivery between existing government ministries and donors, non-governmental and community-based organizations. Uses select pharmaceutical systems frameworks to learn how to strategically prepare and plan for the function and sustainability of such services and staff. Emphasizes a multisectoral approach with an operational understanding of factors influencing access, availability, affordability, and utilization of pharmaceuticals.

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.

PH.221.612. Confronting the Burden of Injuries: A Global Perspective. 3 Credits.

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.

PH.221.614. International Political Science for Ph Practitioners. 2 Credits.

PH.221.615. Health Emergencies in Large Populations (H.E.L.P.). 5 Credits.

PH.221.616. Ethics and Global Public Health Practice. 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.

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.

PH.221.618. Global Health Dynamics in Practice: Exploring power, colonial legacies, foreign aid, leadership accountability, and institutions. 1 Credit.
Explores the concepts and dynamic practices of power, colonial legacies, foreign aid, leadership accountability, and institutional functions in global health. Draws upon the literature and real-life examples from the Instructor's experiences in global health policy and financing, including at the World Bank, Global Fund, WHO, and UNAIDS. Case studies and guest speakers will catalyze class discussions for joint learning.

PH.221.619. Introduction to Global Health Economics. 3 Credits.
Provide a comprehensive understanding of the fundamental economic principles and concepts, with a direct application to global health issues. The primary objective is to equip students with the knowledge and analytical skills necessary to critically assess and address current challenges and opportunities in global public health from an economic perspective.

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.

PH.221.621. Gender and Health: Foundational Theories and Applications. 3 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.

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.

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.

PH.221.624. Urban Health in Developing Countries. 3 Credits.
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.

PH.221.626. Household Surveys for Primary Health Care in Low- and Middle-Income Countries. 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.

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.

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 professional 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 profession.

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.

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.

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.

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.

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.

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-incident management programs, and provision of services to prevent long-term mental health consequences.

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.

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.

PH.221.637. Health Information Systems. 3 Credits.

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.

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 of 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.

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.

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.

PH.221.642. Mental Health Aspects of Disaster: Public Health Preparedness and Response. 2 Credits.**PH.221.643. Armed Conflict and Health. 2 Credits.****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.

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.

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.

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.

PH.221.648. Adaptive Management and Learning to Improve Health Programming in LMICs. 3 Credits.

Introduces students to global mental health symptoms and syndromes and the variety of strategies and interventions used to treat such symptoms. Discusses mental health services as an integral part of global health research and program development. Addresses methods of adapting and developing intervention approaches in low-resource countries, as well as research designs used to evaluate mental health interventions. Challenges students to use critical and creative thinking skills throughout to discuss the issues involved in this relatively new area. Focuses on cross-cultural challenges in conducting mental health research in low-resource settings. Topics covered include overview of mental health issues in low-resource countries; cultural issues, developing, modifying and disseminating mental illness prevention and intervention strategies, and the interplay between mental health and related topics such as HIV and violence.

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.

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.

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.

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.

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.

PH.221.655. Supply Chain Solutions for Global Health - a Survey of the Challenges, Interventions, and Innovation. 2 Credits.

Explains how all Health Systems rely on and are organized around supply chains. Introduces students to the concepts, complexities, and challenges of managing modern health supply chains in a global health context. Presents the key process steps and principle competencies required to effectively manage 21st century global health supply chains that are structured around the Resiliency Model of Readiness, Response, and Recovery.

PH.221.656. Conceptual Foundations of Health Equity and Social Justice. 3 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.

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.

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 mitigate its risks.

PH.221.659. Econometrics II. 3 Credits.

Builds upon the statistical methods introduced in Econometrics I. Expands upon linear regression and causal inference models to account for non-random treatment assignment, selection bias, structural estimation, and nonparametric estimation. Expands the econometric toolkit built in Econometrics I, which focused primarily on econometric methods for estimation, to applications involving time series data, forecasting, and econometric methods for prediction. Aims to improve students' ability to conduct economic analysis using observational data. Relies on exercises designed to provide hands-on experience in structuring, coding, and interpreting econometric models with applications to global public health. Employs tools and methods and compares the results to those obtained from initial estimations based on very restricted assumptions.

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.

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.

PH.221.662. Health, Equity, and 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.

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.

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.

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.

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

PH.221.667. An Interdisciplinary Approach to Understanding the Health of Native Americans. 3 Credits.**PH.221.668. COVID-19 & Infectious Disease Outbreaks in Native American Communities. 2 Credits.**

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.

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

PH.221.671. Introduction to Quantitative and Qualitative Research for American Indian Health. 2 Credits.**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 concerns to 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.

PH.221.673. Mental Health in American Indian Communities. 2 Credits.

Focuses on 1) the history of mental health service delivery 2) current status of mental health problems, and 3) strategies for treatment and prevention interventions in American Indian (AI) communities. Examines differences between western and traditional AI approaches to mental health. Highlights public health concepts for the development and/or replication of successful treatment and prevention interventions. Explores ideas for long-term promotion of community mental wellness among reservation communities. Includes lectures from a variety of mental health experts with direct experience in Indian communities from a wide variety of disciplines and cultural orientations. Uses lectures, followed by class discussions, to explore potential cultural, tribal-specific, regional, or universal approaches to address specific mental health disparities, mental health care delivery, and more general prevention.

PH.221.674. Donor Transition and Sustainability: Implications for the Future of International Health. 2 Credits.**PH.221.675. Medical Product Regulatory Systems Strengthening and Challenges in Low and Middle Income Countries. 2 Credits.**

Covers history, organization, funding, functions, major current forces like globalization, etc. shaping regulatory systems. Distinguishes differences between high-income and LMIC systems; major failures and public health crises; role of WHO, and other factors, such as donors in strengthening; assessing regulatory systems for improvement; working together across countries; using the work product of other agencies to do more with less; Africa Regional Economic Communities, African Medicines Agency, Caribbean Regulatory System; substandard/falsified medicines; difficulties using the work product of other agencies; regulatory system and procurement disconnects; companies sending lower tiered versions to LMIC; lack of medical device regulation; etc.

PH.221.676. Migrant Health Policy in LMICs. 2 Credits.

Discusses the experience of several low- and middle-income countries that have become recipients of migrants in the last 10 years. Addresses the challenges for health systems, the lessons learned from the processes of inclusion in the health system, and the need for articulation of politics with institutional action. Considers the particularities of low- and middle-income countries, and especially their health systems, to respond to migratory phenomena, and how their response is different from that of high-income countries. Reviews case studies from several countries and utilizes comparative policy analysis.

PH.221.677. How to Deliver Primary HealthCare Using a People-Centered Approach. 1 Credit.

Exposes students to the history of integrated people-centered health services, possible interventions to achieve integration, and considerations for planning at the sub-national level. Looks at how low and middle-income countries are undergoing epidemiologic, demographic, and economic transitions, at the same time as their health systems are facing an increase in the burden of disease, with the emerging prevalence of chronic conditions. Covers the COVID-19 pandemic which has exposed the weaknesses and fragmentation in primary healthcare systems across the world. Reimagines primary health care requiring a shift from fragmented health services toward people-centered integration. Answers the question: "How do we change health services to be more integrated?"

PH.221.678. Introduction to Social Accountability in the Health Sector. 2 Credits.

Provides a robust understanding of social accountability strategies used in health systems, their theoretical underpinnings, and major critiques. Looks at social accountability strategies in health systems involving a wide range of interventions to build citizen power and hold health systems to account (e.g., citizen monitoring through health committees, public information systems, and community scorecards). Engages with practitioners on real-world examples and applies learnings to current health system issues.

PH.221.679. Introduction to Design and Implementation of Digital Health Programs in LMIC Settings. 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.

PH.221.681. Global Health Entrepreneurship: Foundations of Launching a Global Health Non-Profit. 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.

PH.221.682. The Role of the Private Sector for Sustainable Development in Global Health. 3 Credits.

Unpacks the role of the private sector in achieving health goals. Addresses the question of whether or not the private sector is helping achieve SDGs through social enterprises, impact investors, and commercial health providers. Provides a practical understanding of private sector engagement in the health sector and will review market-based approaches and investments, which are meant to accelerate the progress of LMICs towards their 'Journey to Self-Reliance'. Uses case studies, in keeping USAID's private sector engagement policy at the heart of the course, to expand on the concept and provides pragmatic insights into the interests of development donors, banks, impact investors, corporations, foundations, and entrepreneurs in this space. Uses a cross-cutting theme of learning exchange and debate on success stories and failures from across LMICs.

PH.221.683. Global Health Entrepreneurship: For-Profit Entrepreneurial Management. 3 Credits.

Provides intellectual frameworks for the special issues associated with healthcare startups in resource-challenged settings. Offers methods for self-assessment and development of business models and plans, techniques for technology assessment and strategy, develops a foundation for capitalization and partnering strategies, and creates a basis for best practices in company launch and plan execution. Provides an intellectual and practical framework for those students interested in exercising their entrepreneurial energy to solve problems in global health with a particular focus on establishing for-profit enterprises in resource-poor environments or Low- to Middle-Income Countries (LMICs).

PH.221.684. Transforming Health Systems Research through Artificial Intelligence. 3 Credits.

Equips students with a basic understanding of AI models, from fundamental machine learning algorithms to the latest advancements in large language models and generative AI. Applies AI models to various health research questions via case studies. Designs hands-on sessions to foster theoretical knowledge and practical skills and experience using AI models. Prepares students to leverage AI in addressing the challenges and opportunities in health systems.

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.

PH.221.686. Health Interventions in Humanitarian Emergencies. 2 Credits.

Focuses on providing essential public health and healthcare interventions in humanitarian emergencies, specifically for persons affected by conflict and natural disasters, including forcibly displaced populations (e.g. refugees, and internally displaced persons). Focuses primarily on the health needs of populations in low and middle-income countries, where health systems are often fragile. Builds upon concepts from the Introduction to Humanitarian Emergencies course (221.613) and covers the following areas: epidemiological assessment; control of communicable diseases, including epidemics; control of non-communicable diseases; mental health; reproductive, maternal, neonatal and child health (RMNCH); nutrition; and surveillance/health information systems.

PH.221.688. Social and Behavioral Foundations of Primary Health Care. 4 Credits.**PH.221.689. Communicating Research in Global Health: From Evidence to Practice. 2 Credits.**

Addresses the critical gap in effectively communicating research into actionable messages geared towards a diverse audience. Prepares global health students to communicate research evidence to various actors, including communities, service users, providers, and policymakers. Discusses key communication strategies and modalities (written, visual, audio) with a focus on tailoring messages for different audiences and content, ensuring that the message is clear, understandable, and actionable. Gains practical skills in creating and disseminating research evidence on diverse global health topics for their target audiences, ultimately supporting the uptake of research for advocacy, behavior change, evidence-informed decision-making, and development and implementation of policies and programs in various global health contexts

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.

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.

PH.221.692. Reforms in Primary Health Care Across Low-and Middle-Income Countries. 2 Credits.

Looks at primary health care (PHC) reforms that are key to achieving health systems resilience. Teaches how to implement PHC reform, tackle bottlenecks in the reform process, learn strategies to evaluate and course correct during the reform process, and sequence and scale up effective PHC reforms in your context. Explores priority actions in strengthening primary health care including PHC financing, models of service delivery, and health systems integration with a focus on the reforms process. Walks through and critiques practical strategies to reform primary health care by focusing on country experiences.

PH.221.693. Leadership for Impact in Global Health: Change Management in Low- and Middle- Income Settings. 3 Credits.

Introduces tools and frameworks necessary for leading, navigating, and managing change and change science. Trains public health leaders and managers to systematically mobilize resources, engage stakeholders, and create adaptive systems that can respond to evolving health challenges. Contributes to the strengthening of health systems in LMICs, fostering a generation of leaders who can drive meaningful and lasting change.

PH.221.694. Applied Implementation Science for Health Systems Research. 3 Credits.

Offers an in-depth exploration of key implementation science (IS) frameworks and their application across health system building blocks to boost evidence-based intervention uptake. Uses real-world case studies from low- and middle-income countries, demonstrating IS frameworks in action to address health system challenges. Covers essential tools for engaging stakeholders, assessing current systems, and identifying pathways for change.

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.

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.

PH.221.701. Applications to Gender Analysis Within Health Research and Interventions. 3 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.

PH.221.702. Fundamentals of Primary Health Care in Low- and Middle-Income Countries. 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.

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.

PH.221.710. Designing Innovation and Access for Technologies in Global Health. 3 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.

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.

PH.221.712. Leadership & Management in Humanitarian Health. 2 Credits.

Examines an array of leadership & management models. Applies theories and models to multiple humanitarian contexts. Assesses students' leadership & management styles, and how they may affect humanitarian work. Discusses organizational structures and design as well as culture, and how they can affect humanitarian response.

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.

PH.221.725. Commercial Determinants of Health. 3 Credits.**PH.221.801. Health Systems Graduate Seminar I. 0.5 Credits.**

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.

PH.221.802. Health Systems Graduate Seminar 2. 0.5 Credits.

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

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.

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.

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

PH.221.820. Thesis Research Health Systems. 1 - 22 Credits.**PH.221.830. Postdoctoral Research Health Systems. 1 - 22 Credits.****PH.221.840. Special Studies and Research Health Systems. 1 - 22 Credits.****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.

PH.221.851. MHS Global Health Economics Scholarly Paper. 2 Credits.

Requires students to integrate and apply economic theories and empirical methods to a topic of global health relevance. Fosters students' ability to produce a scholarly paper that provides a meaningful contribution of knowledge of the health of underserved populations. Students develop tangible evidence of expertise that addresses specific applied economic topics relevant to global health.

PH.221.861. Doctoral Seminar in Health Systems. 1 Credit.**PH.221.862. Doctoral Seminar in Health Systems II. 1 Credit.**

Prepares first-year PhD students in the Health Systems program area to develop and defend their research proposal. Practices formulating a research question, conducting a systematic literature review, and drafting, presenting, and critiquing research proposals.

PH.221.863. Doctoral Seminar in Health Systems III. 1 Credit.

Prepare second-year PhD students in the Health Systems program area to develop and defend their research proposal. Practices drafting a research proposal, presenting and critiquing research proposals.

PH.221.864. Doctoral Seminar in Health Systems IV. 1 Credit.

Prepares second-year PhD students in the Health Systems program area to develop and defend their research proposal. Practices drafting a research proposal, presenting and critiquing research proposals.

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.

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.

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.

PH.222.642. Assessment of Nutritional Status. 3 Credits.**PH.222.644. Nutrient Metabolism. 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.

PH.222.647. Nutrition Epidemiology. 3 Credits.**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.

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.

PH.222.652. Nutrition in Disease Treatment and Prevention. 3 Credits.

Reviews the underlying nutritional components and pathophysiology of common human diseases/disorders. Focuses on the metabolic disturbances occurring with these diseases. Emphasizes evidence-based nutrition therapy approaches for the prevention and care of these diseases. Includes topics: nutritional aspects of diabetes, GI diseases, obesity, renal diseases, hepatobiliary diseases, and cardiovascular disease.

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.

PH.222.654. Food, Culture, and Nutrition. 4 Credits.**PH.222.655. Nutrition and Life Stages. 3 Credits.****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.

PH.222.658. Critical Thinking in Nutrition. 1 Credit.**PH.222.659. Critical Thinking in Nutrition II. 1 Credit.****PH.222.660. ADVANCED NUTRITIONAL EPIDEMIOLOGY. 3 Credits.****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.

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

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.

PH.222.665. Designing Health Equity: The Intersection of Food Systems, Urban Planning, and Policy. 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.

PH.222.671. Developing Skills in Clinical Nutrition I: Medical Terminology & Laboratory Value Assessment. 0.5 Credits.

Strengthens clinical nutrition knowledge and competencies in order to streamline the transition to the clinical practicum at JHBMC. Focuses on gaining fluency in medical terminology and strengthening knowledge in the area of medical testing relevant for assessing and addressing nutrition problems.

PH.222.672. Developing Skills in Clinical Nutrition II: The Nutrition Care Process (NCP) and Nutrition Focused Physical Exam (NFPE). 0.5 Credits.

Introduces the nutrition care process (NCP) and the nutrition-focused physical exam (NFPE). Teaches the different components of the exam and applies them in the Johns Hopkins Simulation Lab through activities.

PH.222.673. Developing Skills in Clinical Nutrition III: Nutritional Counseling Across the Life Span. 1 Credit.

Introduces the topic of nutritional counseling (considering behavior change theories, communication theory, motivational interviewing) and provide exposure to experiences and best practices through lecture and discussion with practitioners working in different contexts and with different patients/clients. Follows the sequence of Nutrition and Life Stages to the extent possible in order to integrate the physiological, social, and behavioral transitions of life stages with nutrition and health concerns and the role of nutrition counseling in prevention and/or treatment.

PH.222.674. Developing Skills in Clinical Nutrition IV: Expanded Studies. 1 Credit.

Expands and enhances the case study learning in 222.652.81 "Nutrition in the Prevention and Treatment of Disease" taken concurrently, as a learning opportunity in medical nutrition therapy (MNT) in preparation for the Dietitian practicum. Prepares students for the transition to clinical decision-making and MNT. Includes cases chosen by the dietetic leadership at JHBMC with that goal in mind. Builds on and integrates information learned in the earlier classes in this series as well as material learned in other core nutrition coursework.

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.

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

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).

PH.222.820. Thesis Research Human Nutrition. 1 - 22 Credits.**PH.222.830. Postdoctoral Research Human Nutrition. 1 - 22 Credits.****PH.222.840. Special Studies and Research Human Nutrition. 1 - 22 Credits.****PH.222.850. MspH 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.

PH.222.860. Graduate Nutrition Seminar. 1 Credit.**PH.222.861. Doctoral Seminar in Proposal Development. 1 Credit.**

Facilitates doctoral students in the development of research ideas and their dissertation proposals. Includes the following topics that will vary by term: 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.

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.

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.

PH.223.610. Antimicrobial Resistance: Biology, Cause, Global Impact, and Strategies to Control. 2 Credits.

Provides a comprehensive understanding of the growing health concerns and economic burden that Antimicrobial-resistant (AMR) infections pose in the U.S. and global healthcare systems. Examines the escalating public health crisis that is threatening modern medicine, animal health, and food security. Discusses the key drivers of AMR including the misuse of antimicrobials in human, animal, and environmental sectors, and the spread of resistant bacteria across these sectors worldwide. Prepares students to explore international, cross-sector responses to combating antibiotic resistance given AMR's global scope.

PH.223.615. Digital Health Strategies to Control COVID19. 2 Credits.**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.

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.

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.

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 the global digital health context, covering scientific, social, economic, political, and ethical dimensions of the context.

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.

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.

PH.223.640. Identifying and Mitigating Misinformation to Improve Trust in Public Health. 2 Credits.

Examines misinformation and its role in influencing behaviors generally, and health behaviors specifically. Relies on literature from a wide range of disciplines and perspectives, such as communication, political science, and sociology. Exposes individuals to the harms of misinformation on health outcomes, and uncover key approaches used in mitigating misinformation efforts.

PH.223.660. Improving Tropical Health in the Context of Climate Change. 2 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 enteritides, 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.

PH.223.662. Vaccine Development and Application. 4 Credits.**PH.223.663. Infectious Diseases and Child Survival. 3 Credits.****PH.223.664. Design and Conduct of Community Trials. 4 Credits.****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.

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.

PH.223.680. Global Disease Control Programs and Policies. 4 Credits.

Presents 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.

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.

PH.223.683. Global Health and Development Interventions Applied to TB. 4 Credits.

Covers global health and development interventions and how they can be applied towards ending the global tuberculosis (TB) pandemic. Includes the history, clinical presentation, epidemiological factors, new diagnostic techniques, treatment, and control of tuberculosis (TB) in the context of important comorbidities including HIV/AIDS, poverty and undernutrition. Focuses on resource-constrained settings including developing countries, their populations, and resource utilization, and the scope of the course is global. Emphasizes integrating policies addressing TB, HIV/AIDS, other infections and poverty in resource-poor settings and how these interactions influence control strategies.

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, Rickettsial, plague and toxoplasmosis.

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.

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).

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.

PH.223.688. Clinical, Epidemiologic, and Climate Change factors of Enteric 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.

PH.223.689. Biologic Basis of Vaccine Development. 3 Credits.

Provides an overview of the biologic basis for development and evaluation of new viral, bacteriologic, parasitic, and cancer vaccines. Address the fundamental immunologic concepts of correlates of protective immunity underlying current and new strategies for immunization. Emphasizes the use of new technologies for expression of vaccine antigens, including recombinant DNA techniques and use of novel adjuvants and antigen-carrier systems to enhance the delivery/presentation of specific immunogens to effector sites.

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.

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.

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.

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.

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.

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.

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

PH.223.820. Thesis Research Disease Control. 1 - 22 Credits.**PH.223.830. Postdoctoral Research Disease Control. 1 - 22 Credits.****PH.223.840. Special Studies and Research Disease Control. 1 - 22 Credits.****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.

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.

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.

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.

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.

PH.224.600. Applied Artificial Intelligence for the Social, Behavioral and Mental Health Sciences. 3 Credits.

Delves into the opportunities and challenges that accompany the application of AI technologies for the social, behavioral, and mental health sciences. Highlights critical considerations and rigorous research that demonstrates applicable, ethical, and transparent research and practice. Equips students with the background knowledge and critical thinking that will help to advance the field of AI in public health. Fosters a deeper appreciation of the role of AI in the social, behavioral, and mental health sciences and inspires continued innovation in the field going forward.

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.

PH.224.612. Indigenous Perspectives on Environmental Health. 2 Credits.

Examines real-world examples and approaches to environmental health issues in Indigenous communities and presents challenges for implementing Indigenous-centered approaches to address current issues. Discusses the role and influence of Tribal and federal policy on Indigenous environmental challenges. Identifies appropriate frameworks and approaches used by Indigenous communities to address environmental challenges. Analyzes the current understanding of the relationship between the environment and Indigenous health approaches. Applies Indigenous-based frameworks from this course to address environmental health challenges facing Indigenous communities.

PH.224.620. Grant Writing for Public Health Practice. 2 Credits.

Addresses a critical component of public health research and practice: locating and applying to opportunities for funding to support our work. Explores diverse mechanisms for funding public health-related research and programming. Prepares masters and doctoral students to interact with funding officials, respond to calls for proposals, and write effective proposals.

PH.224.630. Food Systems for Health Problem Solving Seminar: Lessons from American Indian 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.

PH.224.631. Indigenous Harm Reduction. 2 Credits.

Explores the roots of addiction in Indigenous communities, and the strengths-based approaches that support positive change and honor community-based approaches to addressing the issue of increased substance use and overdose in Indigenous communities. Allows hearing from Indigenous leaders in this field, including frontline workers, people with lived/living experience, youth, Elders and academics. Evaluates perspectives on addiction and how they apply to Indigenous experiences. Articulates the impacts of colonization on addiction, increased substance use and overdose in Indigenous communities. Examines the system of prohibition and it's role in creating an increased risk of overdose. Explores Indigenous harm reduction perspectives, approaches and programming.

PH.224.640. Indigenous Evaluation Frameworks. 2 Credits.

Builds upon the CDC Public Health Program Evaluation model, which allows Indigenous communities to take ownership of the evaluation process and be cognizant of and responsive to traditional values and culture. Focuses primarily on Indigenous public health evaluation principles utilizing the American Indian Higher Education Consortium's Indigenous Evaluation Framework. Utilizes both qualitative and quantitative methods, measuring experiences over time, and looking at the multiple perspectives of Indigenous communities, including individual and communal experiences.

PH.224.641. Legal and Historical Basis for American Indian Healthcare and Policy. 2 Credits.

Provides a detailed overview of the unique policy issues that form the legal basis for the provision of public health and healthcare services to American Indians and Alaska Natives (AI/AN). Explores the legal and historical basis for the provision of health services by examining laws, policies, and rights that impact AI/AN healthcare and develops policy solutions to improve outcomes.

PH.224.642. Indigenous Health Leadership & Ethics. 2 Credits.

Introduces students to historic and evolving relationships among diversity, culture, and leadership through an Indigenous lens. Explores real cases and solutions. Provides students with lectures, media, and readings from Indigenous leaders working in the field with access to experts in healthcare administration, health policy, and other spaces. Interacts with literature, tools, and frameworks that provide practical skills and knowledge for ethical leadership in Indigenous and mainstream arenas.

PH.224.643. Case Studies in Indigenous Health. 2 Credits.

Reviews case examples from Indigenous communities that are working effectively to overcome health inequities. Demonstrates unique approaches to exercising Tribal sovereignty and promotion of cultural strengths-based solutions by and for Indigenous Peoples. Focuses on analysis of how and why programs or interventions are working, and examples of how this knowledge has been shared to empower other communities. Cover topics such as model programs to address mental and behavioral health, infectious and chronic disease, economic empowerment, environmental advocacy, and tribal self-determination in health systems. Gains critical perspective and case model analysis skills that can transfer to similar community contexts.

PH.224.689. Health Behavior Change At the Individual, Household and Community Levels. 4 Credits.**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.

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).

Corequisite(s): Must also enroll for PH.224.991

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.

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.

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).

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.

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.

PH.224.705. Indigenous Health II. 3 Credits.

Applies epistemologies introduced in Indigenous Health I toward solving current public health challenges. Provides opportunities to practice critical thinking about interdisciplinary Indigenous models relating the social, economic, and environmental determinants of health. Develops skills in writing, literature analysis of the contemporary Indigenous health landscape, presenting context-specific solutions (wise practices), and a planetary health perspective. Prepares students to lead in public health spaces with Indigenous approaches to resolving and improving health outcomes globally.

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

PH.224.814. SBI Program Seminar IV: Professional Skills Development. 1 Credit.

Discusses professional skills that SBI MSPH students will need in their future public health careers, starting with their second year practicum and capstone experiences, and continuing throughout their careers.

PH.224.820. Thesis Res Soc & Beh Interv. 1 - 22 Credits.**PH.224.830. Postdoctoral Research Social and Behavioral Interventions. 1 - 22 Credits.****PH.224.840. Special Studies and Research Social and Behavioral Interventions. 1 - 22 Credits.****PH.224.850. MspH 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.

PH.224.860. Social and Behavioral Interventions Program Seminar I: Applied Social Science & Global Health. 1 Credit.

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.

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.

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.

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.

PH.224.864. Doctoral Seminar in Research Methods in Applied Medical Anthropology II. 4 Credits.**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.

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