

M.S. in Global Health

MSGH 5501 Intro BIST: Exp Des/Anlys 0-2 Credits

This course is designed for introductory biostatistical theory and application for students pursuing a master's degree in fields outside of the Department of Biostatistics, Bioinformatics, and Biomathematics. Students first learn the four pillars of exploring and displaying data appropriately, exploring relationships between two variables, issues of gathering sample data, and understanding randomness and probability. On these pillars, students then can develop the platform for statistical inference including proportions and means, multiple regression, and ANOVA.

Level: Graduate, Undergraduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to students with a major in Global Health, Global Health, Global Health or Global Health.

Enrollment is limited to Graduate level students.

MSGH 5503 Epidemiology Methods 2 Credits

This introductory graduate course presents the principles and methods of epidemiology, including descriptive and analytic approaches to assessing the distributions of health and disease in populations and factors that influence those distributions. The emphasis is on developing an understanding of concepts, rather than quantitative methods, although calculations are involved. The course also provides basic research skill training including literature review strategies; human subject protection strategies; research proposal writing; and report presentation. Through the combination of lectures, readings, critical review of papers, case studies, and lab on research proposal writing, students without prior coursework in epidemiology will acquire the core competencies in epidemiology research expected of all Master level Global Health graduates.

Level: Graduate, Undergraduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to students with a major in Global Health, Global Health, Global Health or Global Health.

Enrollment is limited to Graduate level students.

MSGH 5504 Intro to Quant Data Analysis 0-1 Credits

The purpose of this course is to introduce students to the definitions and practice of data management and analysis using statistical programs and the basics of survey design.

Level: Graduate, Undergraduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to students with a major in Global Health, Global Health, Global Health or Global Health.

Enrollment is limited to Graduate level students.

MSGH 5510 Disruptive Tech in Global Hlth 3 Credits

The course will explore the potential for innovative approaches and technologies to "disrupt" business as usual approaches to global health, including digital health, mobile technology, and design thinking. These opportunities are often led by the private sector, and are usually client centered rather than driven by traditional health system stakeholders. The course will feature guest lecturers by subject matter experts from academia, the private sector, government agencies, and international organizations.

Level: Graduate, Undergraduate

Grading: Main Campus (UGrad, Grad)

Equivalent to MSGH 7710

MSGH 5517 Health Economics Financing I 3 Credits

The Health Economics and Finance course aims at equipping students with tools to assess health system performance, mostly in terms of cost effectiveness and equity. After a brief review of the main concepts used in both macro and micro economics, the course will focus on assessing the allocative and technical efficiency at all levels of the health system. This will entail analyzing the major issues facing health care systems that impact their performance. The course will stress the importance of financing scheme in the performance of a health system: the main risk pooling schemes will be presented in connection with their results in health status, patient satisfaction, efficiency, equity and capacity to contain costs. The course will explore strategies for public and private financing, providers payment and delivery options, and will conclude on a few best-practices, both in developed and developing countries.

Level: Graduate, Undergraduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MSGH 5520 Health Policy Systems 3 Credits

This 3-credit course aims to provide professionals and students with essential skills to formulate evidence-based health policy and to understand, analyze, and evaluate the structure, organization, management, and performance of health systems in low and middle-income countries. Course objectives are to equip students with the knowledge and skills to analyze and evaluate the governing policies and performance of healthcare systems and health programs; to hone the ability to identify problems and suggest potential solutions; and to devise alternative evidence-based reform policies that would contribute to improve the health status of the population. The course links key health system issues to the larger political, cultural and socio-economic context and reigning ideologies in which they are embedded. The teaching and learning methodologies include: (a) Presentations by students on the session topic followed by Q and A; (b) Writing a brief paper for generating support, advocacy, and policy development to address a health problem or health threat; papers will include realistic recommendations and cost implications; (c) Preparing a term paper with an in-depth analysis of a health care policy and comparing its formulation, implementation and health outcomes across three countries; and (d) Lectures on specific policy and health system issues.

Level: Graduate, Undergraduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MSGH 5524 Emerging Infections GIBI Sec 3 Credits*Level:* Graduate, Undergraduate*Grading:* Main Campus (UGrad, Grad)*Course registration restrictions:*

Enrollment is limited to Graduate level students.

MSGH 5557 PubHealth Law in Global Pers. 1 Credit

This course will focus on four core issues: quarantine and criminal penalties, access to affordable medicines and intellectual property, the international and constitutional right to health, and how political institutions and race intersect and condition the effect of law on population health. By looking at these issues in both the United States and abroad, particularly in low- and middle-income countries, students will gain a comparative perspective about how law works in practice. Utilizing HIV and tuberculosis as core case studies, students will explore how law and policy tools can have a significant impact on population health. Today, state actors continue to use law to address public health issues—with examples of both great successes and significant failures. As public health law embodies both thorny ethical issues and empirical questions about the power of the state to affect health, examining the intersection of law and social science will reveal substantive issues in key health policy issues as well as the conditions under which law and legal advocacy affects wellbeing. HIV and TB, the world's biggest infectious killers, provide a lens through which to better understand central issues in public health law and policy, which will then be linked to other health concerns in infectious, non-communicable, and environmental health. This one-week class will be a blend of lectures, discussion, and small group work. Readings will include case law and legal theory as well as texts from political science, economics, and public health. At the end, students will have a better understanding of how and when the law matters for health—which will be of particular interest to students interested in litigation, lawmaking, and public health regulation.

Level: Graduate, Undergraduate*Grading:* Pass/Fail Default*Course registration restrictions:*

Enrollment is limited to students with a major in Global Health, Global Health, Global Health or Global Health.

Enrollment is limited to Graduate Masters level students.

MSGH 6601 Research Methods II 2 Credits

This course introduces students to a wide range of different types of global health research; covers foundational elements of empirical research including research design and data collection and analysis; addresses practical issues in the context of global health research such as obtaining research funding, proposal writing, human subjects protection, and communication of research; and affords students an opportunity to apply what they learn in the development of a research proposal. An in-depth examination of issues related to monitoring and evaluation in global public health are covered in the companion two hour credit course, Methods, Policy and Practice of Monitoring and Evaluation in Public Health: A Survey.

Level: Graduate, Undergraduate*Grading:* Main Campus (UGrad, Grad)*Course registration restrictions:*

Enrollment is limited to students with a program in Global Health, Global Health, Global Health or Global Health.

Enrollment is limited to Graduate level students.

MSGH 6602 Mon Eval:Pub Hlth Pol Prac 2 Credits*Level:* Graduate, Undergraduate*Grading:* Main Campus (UGrad, Grad)*Course registration restrictions:*

Enrollment is limited to students with a major in Global Health, Global Health, Global Health or Global Health.

Enrollment is limited to Graduate level students.

MSGH 6603 Implementation Science 1 Credit

The purpose of this course is to introduce students to the definitions and practice of implementation science research in international health and to ensure students have basic skills in data management and analysis using statistical programs.

Level: Graduate*Grading:* Main Campus (UGrad, Grad)*Course registration restrictions:*

Enrollment is limited to Graduate level students.

MSGH 6604 Quant Qual Research Methods 2-4 Credits

A core set of research methods courses that equip students with foundational research skills, including qualitative methods, the application of frameworks and theories of change relevant for monitoring and evaluation of health programs, and broader conceptual skills in problem definition, choice of research question, primary data collection, and research ethics.

Level: Graduate*Grading:* Main Campus (UGrad, Grad)*Course registration restrictions:*

Enrollment limited to students in the MS-GLOH program.

Enrollment is limited to Graduate level students.

MSGH 6615 Neglected Diseases 3 Credits

Neglected Diseases in Global Health:

Neglected Diseases affect populations living in poverty in LMICs. Effective control can be achieved when selected public health approaches are combined and delivered with high coverage resulting in the elimination.

This elective examines the broad epidemiology and health consequences that are common traits for these diseases. There will be a strong focus on the role of the global health architecture in their control to help draft country a plan.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MSGH 6620 Economic Eval Modeling in Hlth 3 Credits

This course addresses the application of the techniques of cost-effectiveness and cost-benefit analysis to evaluate a variety of health programs, both in the US and in developing countries. Both theoretical foundations and applications of these techniques in economic appraisal are presented. These techniques are critical for researchers and policymakers in many sectors. For example, health policymakers in both industrialized and developing countries use it to help plan health services, evaluate new technologies, programs, and procedures, or design health insurance benefits. The course uses interactive discussions and computer exercises where students will learn to perform cost-benefit and cost-effectiveness analyses and apply the techniques to a problem of their choice.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MSGH 6640 Reproductive Maternal Hlth 3 Credits

In this course, we focus on understanding women's reproductive health and well-being around the world. This includes exploring women's reproductive health status as well as the multiple determinants of their health. We will explore major causes of morbidity and mortality for women and their newborns, current and emerging health issues, effective policies, strategies, and programmatic approaches, as well

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MSGH 6650 Combating Non-Comm Diseases 3 Credits

This course focuses on the rising burden and increasing challenges associated with the shift from infectious and communicable diseases (ICDs) to non-communicable diseases (NCDs) as the major causes of mortality, morbidity, and lost years of healthy life. In September 2011, the United Nations held a high-level meeting on non-communicable disease (NCD) prevention and control that culminated in a political declaration to address the prevention and control of non-communicable diseases worldwide. The last time any disease received such high-level political attention was in 2001 at the high-level UN General Assembly Special Session on HIV/AIDS. The Global Fund was created after a G8 meeting that supported efforts to reduce HIV/AIDS, tuberculosis, and malaria. In comparison, subsequent attention and action after the NCD Summit last year has been paltry. For high-income countries NCDs and injuries account for 95 percent of the burden of disease; that share is 65 percent for low- and middle-income countries as the more successful middle-income countries move ever closer to the high-income norm. NCDs are 'the' major health burden worldwide. They include cardiovascular disease, most cancers, diabetes and chronic respiratory disease. NCDs kill about 57 million people globally each year, 80 percent of whom live in low and middle-income countries. This course will provide the students with an in-depth understanding of the challenges of NCDs and the policies and strategies to curb them in low- and middle-income countries. The first half of the course will cover the rising global burden of NCDs in terms of total and premature deaths and the leading causes of morbidity. The students will also learn about the environmental, metabolic and behavioral NCD risk factors such as air pollution, high blood pressure, high glucose level, alcohol, smoking, and obesity. In addition, there will be an overview of the rising costs and the macro- and micro-economic impact of NCDs at the state and household levels as well as the principles of behavioral economics and its relationship to NCDs. The second half of the course will present a comprehensive framework for the prevention and treatment of NCDs. This framework will cover the interventions for behavior change and prevention of NCDs, the integrated service delivery model for the effective management of NCD. At the end of the course, there will be a discussion on the role of the government and different sectors in adopting policies to respond to NCDs as well the different financing models to cover them.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MSGH 6657 Policy Analysis for GLOH 3 Credits

This course introduces students to the fundamental skills of policy analysis and policy advocacy along with the political complexities involved in identifying, addressing, and resolving policy problems in global health. Starting from the understanding of policymaking as a process involving actors, ideas, interests, and power, we will use the tools of political science and policy studies to unpack how policy is made in global health contexts. We will explore the role of governments at multiple levels, international organizations like the WHO, civil society and social movements, international financing agencies, and others to seek a broader understanding of policymaking. Case studies in global health will analyze the various stages of the policy process to explore the aims of public policy, how problems get framed, and how alternative solutions are crafted. By the end of the course participants will have increased their analytical capacity to evaluate evidence, identify policy options, assess political prospects, and build coalitions toward health-enhancing policies in global health.

Level: Graduate, Undergraduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment limited to students in the MS-GLOH program.

Enrollment is limited to Graduate level students.

MSGH 7706 Intl Partnrshps Disease Ctrl 3 Credits

The seminar will review major International Health Initiatives, particularly large scale international disease control partnerships such as Malaria, TB, or Immunization programs. The initiatives will be analyzed focusing on intervention strategies, institutional framework, political stakeholders and financing mechanisms. A typology of partnerships developed and conclusions about the essential elements for effective large scale partnerships will be discussed. The seminar will also convey a thorough understanding of the complex governance arrangements guiding these programs, involving multilateral agencies, bilateral donors, NGOs and sometimes private sector entities.

Level: Graduate, Undergraduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MSGH 7708 Access to Pharmaceuticals 3 Credits

Despite the much-vaunted promise of globalization, relatively little medical research has been devoted to diseases that overwhelmingly affect people living in low-and middle income countries, leading to the so-called "neglected tropical diseases" for which appropriate treatment is lacking or inadequate. At the same time, developing countries are increasingly experiencing the disease profile of high-income countries, but new pharmaceutical inventions for these diseases are commercialized at prices that are beyond the reach of most people in developing countries and beyond their governments' health care budgets.

It is important to understand how this has come about and what the international community is doing to alleviate the resulting global health inequity. As it turns out, it is doing quite a lot. This course critically reviews the actors, institutions, and international arrangements that bear responsibility for the current state of affairs and the actions that are being taken to improve access to pharmaceutical products in developing countries.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MSGH 7710 Disruptive Tech Global Health 3 Credits

The course will explore the potential for innovative approaches and technologies to "disrupt" business as usual approaches to global health, including digital health, mobile technology, and design thinking. These opportunities are often led by the private sector, and are usually client centered rather than driven by traditional health system stakeholders. The course will feature guest lecturers by subject matter experts from academia, the private sector, government agencies, and international organizations.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MSGH 7712 Politics of Global Hlth Dev 3 Credits

This course looks at the political dynamics shaping global health, climate change, and development. Specifically we explore the ways global politics, power, and institutions shape the well-being of people around the world. We analyze and critically assess the global governance structure for health and its intersection with climate change and international development. We look at how policy and financing decisions are made. And we examine the different roles that multilateral, bilateral, private sector, foundation and civil society actors play in shaping the global health agenda. The course features a multi-day simulation of a UN negotiation and seeks to help prepare students to navigate a shifting global order with multiple challenges of economic instability, climate crisis, and conflict facing future leaders.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment limited to students in the MS-GLOH program.

Enrollment is limited to Graduate level students.

MSGH 7725 Health Insurance Risk Mgmt 1.5 Credits

The health financing scheme adopted by a country to fund its health system is key to its performance. It will not only impact its accessibility, affordability and equity, it will also impact its quality, cost-effectiveness and sustainability. For example, it is now widely acknowledged that there is no other way to reach universal health coverage than to establish a risk pooling scheme that includes all the members of a society (Universal Health Coverage being defined by WHO as ensuring that all people can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship). It is clear that some schemes are more successful than others. And if there are still many debates about which risk pooling scheme is the most effective, cost-effectiveness or cost-benefit analyses clearly demonstrate that some schemes cost more (in GDP percent term) than others, for lesser results (health indicators of life expectancy, mortality and morbidity). However, in this course, the measure of success for a health financing system will not be limited to its degree of cost effectiveness/cost benefit. Success will essentially be measured by the degree of achievement of universal health coverage. This course will present a detailed analysis of the three main risk pooling schemes that are implemented in the world: • The first model is general tax-based, managed by a National Health Service (NHS) or a Ministry of Health (about 100 countries in the world) such as in United Kingdom, Canada and most African countries; • The second is payroll tax-based, managed by a quasi-public entity (about 60 countries in the world) such as in Germany and France; • The third is private sector-based health insurance financed by voluntary contributions, managed by private insurers (less than 10 countries in the world) such as in the USA. From their generic principles to the versions that are currently implemented in countries all over the world, both developed and developing, the course will study: (i) their history and especially the enabling conditions that made possible the launching of these schemes; (ii) the numerous changes that were made for the schemes to survive and/or become more efficient, and especially the measures that aims at alleviating the population fast aging as in Asia; (iii) the controls and regulations, so essential for a scheme's sustainability, which were developed and implemented to compensate the scheme's flaws and ultimately contain costs; (iv) the logistics (such as patients' reimbursement modalities, health providers' payment modalities, documents processing and information system) because they are key in the level of administrative costs spent for a scheme's functioning; and (v) the scheme's performance, which will be assessed through different sets of indicators (such as: accessibility, coverage, quality, affordability, equity, cost-effectiveness, sustainability and population health status) and through its universal coverage achievement.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MSGH 7728 Financing Global Health 1.5 Credits

With the need for more funds to finance Global Health, funding sources, institutions, and mechanisms were drastically diversified. The objective of this course is to provide a current picture of the landscape of global health financing, both at the domestic and international level, and to explain how the financing tools being used work.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MSGH 7730 Plan, Cost, Budgeting, Health 1.5 Credits

This block seminar will look at both the broad context and the practical issues related to planning, costing, and budgeting in the health sector. Specifically, the course will examine how governments: • mobilize sufficient financial resources by: (i) estimating program and project costs for given outputs of services; and (ii) identifying the sources and characteristics of funding to provide these services; • allocate these resources consistent with: (i) priorities established in health sector policies, plans, and operational directives; and (ii) management of the budgetary process in a strategic and skillful manner; and • disburse the authorized amounts effectively and efficiently, that is: (i) on the budgeted activities/items; (ii) in accordance with the approved plan to achieve the planned objectives; and (iii) within the proposed time period. The seminar will address the context for planning and budgeting in developing countries, the sources and characteristics of health sector financing, planning, costing considerations and techniques, management of the budgetary process, as well as budget performance and accountability.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MSGH 7740 Urbanization, Health, Environment 3 Credits

According to the projections of the United Nations Population Division, by 2030, more people in the developing world will live in urban than rural areas, and by 2050, two-thirds of the population in developing countries is likely to live in cities. This course focuses on the aspects of urban development and life that impact on the health and well-being of city residents in developing countries and particularly the urban poor.

It explores the social and economic diversity of urban populations and the complex public health issues and health disparities associated with this rapidly growing urbanization. The course addresses urban demography, epidemiology, changes in the physical and social environment and their consequences for health, nutritional and lifestyle issues, the state of urban health services, as well as public policy approaches for addressing the unique health issues of urban areas in developing countries.

The goal of this course is to prepare students to analyze the urban health problems in developing countries and to identify viable solutions to address them.

Level: Graduate, Undergraduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MSGH 7750 Climate Change Global Health 3 Credits

This course will explore the history and the science of climate change, public health challenges, global response, and solutions for mitigation and adaptation. It will examine relevant conceptual models such as planetary health, the 2030 Agenda for Sustainable Development and its SDGs, and the Rio Conventions on Biodiversity, Climate Change, and Desertification. In a dynamic interaction, the students will participate in exercises that resemble the scientific panels' work, the political discussions around the climate crisis, and the global health actions.

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MSGH 7949 Tutorial: GLOH 0.25-3 Credits

According to the projections of the United Nations Population Division, by 2030, more people in the developing world will live in urban than rural areas and by 2050, two-thirds of the population in developing countries is likely to live in cities. This course focuses on the aspects of urban development and life that impact on the health and well-being of city residents in developing countries and particularly the urban poor.

It explores the social and economic diversity of urban populations and the complex public health issues and health disparities associated with this rapidly growing urbanization. The course addresses urban demography, epidemiology, changes in the physical and social environment and their consequences for health, nutritional and lifestyle issues, the state of urban health services, as well as public policy approaches for addressing the unique health issues of urban areas in developing countries.

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Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MSGH 7990 Field Research Mod Sch Prjct 8 Credits

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to students with a major in Global Health, Global Health, Global Health or Global Health.

Enrollment is limited to Graduate level students.

MSGH 7991 Global Health Thesis 5 Credits

Thesis Course for Global Health Graduate Students

Level: Graduate

Grading: Main Campus (UGrad, Grad)

Course registration restrictions:

Enrollment is limited to Graduate level students.

MSGH 9991 Continuous Registration

Level: Graduate, Undergraduate

Grading: No Grade

Course registration restrictions:

Enrollment is limited to Graduate level students.

MSGH 9992 Continuous Registration

Level: Graduate

Grading: No Grade

Course registration restrictions:

Enrollment is limited to Graduate level students.

MSGH 9993 Continuous Registration

Level: Graduate, Undergraduate

Grading: No Grade

Course registration restrictions:

Enrollment is limited to Graduate level students.

MSGH 9994 Continuous Registration

Level: Graduate

Grading: No Grade

Course registration restrictions:

Enrollment is limited to Graduate level students.

MSGH 9999 Thesis Research

Level: Graduate, Undergraduate

Grading: No Grade

Course registration restrictions:

Enrollment is limited to Graduate level students.