GLOBAL HEALTH ECONOMICS, MHS

Overview
Director: Dr. Antonio J. Trujillo

The Master of Health Science (MHS) in Global Health Economics is a 9-month academic program that teaches students how to use economic tools to help solve pressing global health problems.

With increasing globalization, there is a growing need for health economists who can translate research into policy and directly inform governments and organizations on the best course of action. Through this degree program, students will learn how health economic principles are used to address global issues such as migration, displaced persons, climate change and pandemics. They'll also learn how health economics can be used to promote healthy lifestyles, positive health outcomes, and equitable access to care.

Using applied health cases from around the world, students will learn how to conduct economic evaluations of health programs and how to evaluate the impact of social problems on the health of a community or population. They will also gain a solid understanding of how to influence behavior through the use of economic incentives.

The major components of the MHS in Global Health Economics include:

- Nine months of academic coursework building strengths in economics, econometrics, economic evaluation, and epidemiology
- Written comprehensive exam
- Scholarly paper
- Specialty elective courses in international health

Completion of a scholarly paper that integrates material from multiple courses applying econometric, evaluation or other research techniques to a topic of interest. Within the School this degree is classified as an academic MHS as it provides an opportunity for advanced study and research in a specific public health discipline and will prepare students for a career in global health economics or further graduate study.

An academic adviser is assigned from the list of Advising Faculty in the student's program area. The Program Coordinator provides general guidance and supervision over all students in each program area.

Requirements for Admission
Students must have a strong quantitative background with undergraduate coursework in microeconomics and calculus highly recommended. Some prior international or health systems experience is highly desirable.

Advising Faculty
While students will have a designated adviser, they are encouraged to meet and discuss their interests with a variety of faculty members.

- David Bishai
- Bryan Patenaude
- Alan Sorkin
- Cristina Garcia
- Krishna Rao
- Antonio J. Trujillo

Andres Vecino

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

A minimum of 64 credits in formal coursework must be earned over four academic quarters. Required and elective courses are described in the curriculum section. Students must be continuously registered until all requirements for the degree program have been satisfied. Failure to register for a quarter will result in automatic withdrawal. A withdrawn student must be formally readmitted before resuming a program of study. Upon readmission, a student must be registered for a minimum of two consecutive terms prior to completing degree requirements.

Ethics Requirement
Ethics – All master's students are required to take the course PH.550.860 Academic & Research Ethics at JHSPH. This is an online course for 0 credits that every student is required to take in their first term of matriculation. Failure to complete this course will prevent students from matriculating for 3rd term.

Students who are being funded by an NIH training grant must also take one of the following two courses: PH.550.600 Living Science Ethics - Responsible Conduct of Research offered first term, OR PH.306.665 Research Ethics and integrity. U.S. and International Issues, offered third term.

Core and International Health Requirements
Students in the MHS in Global Health Economics must take the required courses listed below. Schedule permitting, students can take additional electives provided they do not conflict with the required and elective courses. A list of elective courses is provided. Additional electives not included in the list need to be approved by the Program Director.

All core and elective courses must be taken for letter grade. Course substitutions are not allowed for any of the required or the elective courses. Students cannot take more than 22 credits per term.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Term</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH.140.621</td>
<td>Statistical Methods in Public Health I</td>
<td>4</td>
</tr>
<tr>
<td>PH.221.840</td>
<td>Special Studies and Research Health Systems ((IGA Sign up under adviser)</td>
<td>1</td>
</tr>
<tr>
<td>PH.221.801</td>
<td>Health Systems Program Seminar I</td>
<td>1</td>
</tr>
<tr>
<td>PH.318.603</td>
<td>Applied Microeconomics for Policymaking</td>
<td>3</td>
</tr>
<tr>
<td>PH.340.721</td>
<td>Epidemiologic Inference in Public Health I</td>
<td>5</td>
</tr>
<tr>
<td>PH.552.603</td>
<td>The Role of Qualitative Methods and Science in Describing and Assessing a Population's Health</td>
<td>0.5</td>
</tr>
<tr>
<td>PH.550.860</td>
<td>Academic &amp; Research Ethics at JHSPH</td>
<td></td>
</tr>
<tr>
<td>Second Term</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PH.140.622</td>
<td>Statistical Methods in Public Health II</td>
<td>4</td>
</tr>
<tr>
<td>PH.221.802</td>
<td>Health Systems Graduate Seminar 2</td>
<td>1</td>
</tr>
<tr>
<td>PH.313.643</td>
<td>Health Economics</td>
<td>3</td>
</tr>
<tr>
<td>PH.221.638</td>
<td>Health Systems Research and Evaluation in Developing Countries</td>
<td>4</td>
</tr>
<tr>
<td>PH.313.601</td>
<td>Economic Evaluation I</td>
<td>3</td>
</tr>
</tbody>
</table>

Third Term

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH.140.622</td>
<td>Statistical Methods in Public Health II</td>
<td>4</td>
</tr>
<tr>
<td>PH.221.802</td>
<td>Health Systems Graduate Seminar 2</td>
<td>1</td>
</tr>
<tr>
<td>PH.313.643</td>
<td>Health Economics</td>
<td>3</td>
</tr>
<tr>
<td>PH.221.638</td>
<td>Health Systems Research and Evaluation in Developing Countries</td>
<td>4</td>
</tr>
<tr>
<td>PH.313.601</td>
<td>Economic Evaluation I</td>
<td>3</td>
</tr>
</tbody>
</table>
PH.313.602  Economic Evaluation II  3
PH.220.601  Foundations of International Health (On campus only)  4
PH.221.651  Econometrics I  4
PH.221.803  Health Systems Graduate Seminar 3  1
PH.221.662  Globalization and Health: Economic Development  3
PH.313.644  Intermediate Health Economics  3
PH.221.652  Financing Health Systems for Universal Health Coverage  3
PH.221.840  Special Studies and Research Health Systems (Sign up under adviser for Scholarly paper)  2

Fourth Term
PH.221.620  Applying Summary Measures of Population Health to Improve Health Systems  3
PH.221.840  Special Studies and Research Health Systems (Sign up under adviser for Scholarly paper)  2
PH.221.804  Health Systems Graduate Seminar 4  1
PH.313.604  Economic Evaluation IV  3
PH.221.663  Globalization and Health: Framework for Analysis  3

NOTE: Students must choose from the elective selection given to them for each term. They cannot substitute with a course not listed.

Code  Title  Credits
Elective Courses
PH.221.627  Issues in the Reduction of Maternal and Neonatal Mortality in Low income Countries  4
PH.221.639  Health Care in Humanitarian Emergencies  3
PH.221.650  Health Policy Analysis in Low and Middle income Countries  3
PH.140.640  Statistical Methods for Sample Surveys  3
PH.223.687  Vaccine Policy Issues  3
PH.313.861  Public Health Economics Seminar  1
PH.140.632  Introduction to the SAS Statistical Package  3
PH.221.617  Behavioral Economics in Health Decisions  2
PH.223.680  Global Disease Control Programs and Policies  4
PH.340.600  Stata Programming  2
PH.380.712  Methods in Analysis of Large Population Surveys  3
PH.140.624  Statistical Methods in Public Health IV  4

Comprehensive Exam
Satisfactory performance is required on a written comprehensive examination. Students will take the exam in the 4th term date to be announced in February. The exam will cover the materials taught in the core courses, and the required courses from International Health.

A minimum overall passing grade of 75 is required. Exams will be graded by the co-instructors of the Capstone course. Those scoring below this level may re-take the entire examination on a later term decided by the co-Director of International Health (student must maintain registration if taking the comprehensive exam a second time). Only one re-examination is permitted. Students failing twice are terminated from the MHS program.

Scholarly Paper
Students are expected to write a scholarly paper during their four-term degree. Students must work with their adviser on their paper starting 1st term. Students must register for Special Studies with the Global Health Economics Program Director for 2 credits, during third and fourth terms to work solely on their scholarly paper. The paper must be completed during the Special Studies course in fourth term and due date for the paper TBA. The scholarly essay will be graded by two faculty members: the Director of the MHS program in Global Health Economics, and the student’s adviser. If a student identifies a topic that does not align with their adviser’s research area, the student must identify a new adviser and needs to seek approval of this change from the Program Director.

Time of Completion of Requirements
Students are expected to complete all requirements for the degree in one year (four terms). Delays for reason will be considered, but in no case, may the time in the program exceed four years from the time of matriculation, regardless of the residence status of the student (other than leave of absence).

BA/MHS
Johns Hopkins undergraduate students currently majoring in Public Health Studies interested in the BA/MHS program contact Audrey Lindahl alindahl@jhu.edu for more information.

PREREQUISITE COURSES
Undergraduate students applying must have completed the following coursework and have received a B or higher on each of the following:

• AS 280.380 Global Health Principles and Practice
• AS 280.345 Public Health Biostatistics
• AS 280.350 Fundamentals of Epidemiology
• AS 180.101 Elements of Microeconomics
• AS 180.301 Intermediate Microeconomics

BENEFITS OF PROGRAM
• Johns Hopkins undergraduate graduates (only) to take JHSPH courses during their undergraduate program, re-use up to 16 credits accumulated as undergraduates in the Master's program.
• Apply by July 1, before senior year, without submitting GRE's as long as their cumulative and SPH undergraduate grade point average remains above 3.3.
• Students who complete the BA/BS at JHU, become MHS candidates and follow the MHS program.
• Receive International Health advisor during your senior year
• This 9-month MHS program allows students to apply to PhD programs faster

BA/MHS ADMISSION REQUIREMENTS
• Online SOPHAS Express application
• Unofficial JHU transcripts when applying. Official transcript required before starting the MHS degree.
• GRE score if GPA less than 3.3
• Three letters of recommendation
• Resume or curriculum vitae
• Statement of purpose
• Completion of all prerequisite courses (B or higher)

INDIVIDUALIZED GOALS ANALYSIS (IGA)
The IGA is a process of discussion with your advisor resulting in a written document.
Part 1: Briefly explain what knowledge, skills, and experiences you bring to the program.

Part 2: Identify your goals for your education by explaining what you hope to gain in terms of knowledge, skills, personal and professional contacts, and other experiences while a student in the program. Describe one or more topics for your scholarly paper and indicate how these will be used to build your competencies and achieve your goals.

Part 3: Identify what courses and electives you intend to take and when you plan to complete your courses. Course descriptions in the catalog indicate when courses are generally offered. Your tracking sheet should include a tentative list of electives you plan to complete and the total credit hours. Carefully review your paper and tracking sheet with your advisor to ensure the proposed curriculum is not only feasible, but that it meets program requirements. Explain how your curriculum plan is aligned with the goals you identified in Part 2. A spreadsheet is often the best way to do this part.

1. Use statistics and econometric methods (including statistical inferences, regression methods, and applied econometric methods) to solve public health problems.
2. Understand the burden of disease; measure and calculate health outcomes; differentiate between methods of economic evaluation; and practice use of economic evaluation
3. Apply economic theory and mathematical microeconomic modeling within the field of health economics
4. Evaluate and apply methods in health economics and economic evaluation in public health research
5. Use economic theory and economic modeling to interpret, analyze, and evaluate health policy in the context of low- and middle-income countries (LMIC)
6. Describe the health status and demographic profile of LMIC populations including incidence and prevalence of disease morbidity and mortality, and life expectancy in LMIC’s.
7. Interpret and understand the link of economic development and health, macroeconomics and health and the connection between poverty, growth and health investment.

Standards of Academic Performance

Letter grades must be earned in all courses used to satisfy requirements. Please note that courses may be counted only once to fulfill requirements. Students must receive satisfactory grades of C or higher in all required courses and continuously maintain a cumulative Grade Point Average (GPA) of at least 2.75 in order to remain a degree candidate in good standing. Any student who receives a D or F in a required course must repeat the course and achieve at least a C. Anyone not meeting these standards will be placed on probationary status. The Committee will establish the minimum conditions to be fulfilled in order to return to the ‘good standing’ status and avoid termination. Typical cases with no conditions require that students improve their academic standing within 2 academic terms. In cases where conditions are imposed, the Committee will specify the maximum time allowed for satisfaction of the conditions. Failure to satisfy these conditions may result in termination from the program.

If students receive Federal Loans administered through the Financial Aid Office (http://www.jhsphs.edu/offices-and-services/student-affairs/financial-aid/) there are other academic standards that students must abide by in order to comply with Federal Loan requirements. Please check with the Financial Aid office or email them at JHSPH.finaid@jhu.edu to request more information.

Registration

MHS students must register for a minimum of 16 credits of courses each term to be a full-time student in the IH department. Students do not register for summer term or winter intersession classes. Registration below 16 credits is not allowed and violates the terms of a student’s full-time requirements and good academic standing. Any student registering below 16 credits during any term could be in violation of their requirements. Audit courses do not count toward the 16-credit per term requirement.