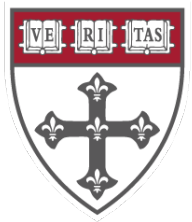

HARVARD T.H. CHAN SCHOOL OF PUBLIC HEALTH

Department of Global Health and Population

GUIDE TO THE DEGREE PROGRAMS

FOR STUDENTS ENTERING SEPTEMBER 2020

Inquiries should be addressed to:
Education Office
Department of Global Health and Population
Harvard T.H. Chan School of Public Health
665 Huntington Avenue
Boston, Massachusetts 02115
Phone: 617-432-2253
Email: aconary@hsph.harvard.edu

THE DEPARTMENT RESERVES THE RIGHT TO MAKE CHANGES TO DEGREE REQUIREMENTS, COURSES OFFERED, AND OTHER INFORMATION CONTAINED IN THIS DOCUMENT.

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MISSION STATEMENT

The Department of Global Health and Population seeks to improve global health through education, research, and service from a population-based perspective.

DEPARTMENT BACKGROUND

The Department of Global Health and Population (GHP) was established in 1962 and is one of nine academic departments at the Harvard T.H. Chan School of Public Health. We are proud to be the first department of population sciences in any school of public health with a focus on global health from the very beginning. Over the past half-century, faculty members, students, and researchers in the department have helped shape the field, and launched some of the major ideas in global public health and population sciences.

GHP currently offers the following degree programs:

- Master of Science (80-credit)
- Master of Public Health – Global Health (45-credit)
- PhD in Population Health Sciences – Global Health, offered under the aegis of the Harvard Graduate School of Arts and Sciences (GSAS).

Our faculty have extensive experience and special competence in social and economic development, health policy, and demography. Substantive areas of focus include design and financing of health care systems; women's and children's health; global nutritional epidemiology and practice; prevention and control of infectious and chronic diseases; environmental change and health; program evaluation; health and human rights; and humanitarian crisis and disaster response.

Our students come to the department with various backgrounds and with a wide range of career goals. All have an interest in the health of disadvantaged populations worldwide. More detailed information is available on the department website: http://www.hsph.harvard.edu/ghp/.

In addition to the customary research and educational activities, the department contributes to several special programs in global health, which are outlined below.

Affiliated Centers

François-Xavier Bagnoud Center for Health and Human Rights at Harvard University (Harvard FXB) envisions a world that fulfills the health and human rights of all peoples and protects them from injustices imposed by discrimination, poverty, conflict, and disaster. Harvard FXB is an interdisciplinary center that conducts rigorous investigation of the most serious threats to health and wellbeing globally. We work closely with scholars, students, the international policy community, and civil society to engage in ongoing strategic efforts to promote equity and dignity for those oppressed by grave poverty and stigma around the world.

Harvard Center for Population and Development Studies is a University-wide initiative that brings together scientists from all corners of the Harvard campus—and beyond—to make exciting advances in population research. With seven and a half billion people living on the planet and a projected nine and a half billion by 2050, our focus is on examining the most nuanced trends and important challenges in this century.

Harvard Humanitarian Initiative (HHI) is a University-wide center that brings an interdisciplinary approach to promoting understanding of humanitarian crisis as a unique contributor to global health problems and to developing evidence-based approaches to humanitarian assistance. The Humanitarian Academy at Harvard (HAH) is dedicated to educating and training current and future generations of humanitarian leaders. We aim to create a professional pathway for students and practitioners of all levels in the humanitarian space and to serve as a prototype for other academic centers of excellence in humanitarian education. More information on HHI and the Academy is available at.

Global Health Partnerships

Africa Health Partnership (AHP) has been established at the Harvard T.H. Chan School of Public Health to contribute to improving health through collaborative research, capacity building, knowledge sharing and translation. AHP strengthens Harvard's numerous and diverse engagements across sub-Saharan Africa in a wide range of important scientific and policy areas. As a collaborative, coordinating umbrella, AHP facilitates and strengthens engagements between African partners and Harvard Chan faculty, researchers and students working in the region.

Harvard China Health Partnership (HCHP) provides a platform for core faculty members at Harvard University to present their China-related work. The past several decades have been indicative of China's great potential and progress with regards to its rapid economic development. With increasing income, people enjoy better nutrition, safer drinking water, better housing conditions, and better health care. Yet China still confronts new challenges, from the rise of non-communicable diseases to workplace safety, urbanization, and environmental degradation. Moreover, without a health safety-net or health insurance, millions of individuals risk impoverishment if they develop serious illness.

India Health Partnership (IHP) facilitates exchanges between the Harvard T.H. Chan School of Public Health faculty and students working in India, Indian faculty and students interested in collaboration with the School, and other groups at Harvard interested in collaborating with partners in India on public health-related issues. This initiative, will help bring together students and faculty working in and on India for mutual benefit and greater impact.

Research Programs

International Health Systems Program (IHSP) is a multidisciplinary team of faculty, scholars, and experts working to improve health care systems in developing countries and to improve health and living standards for the poor and disadvantaged. IHSP brings together economics, clinical and public health science, politics, ethics and management to increase knowledge of how health systems work; through research; share this knowledge through teaching, training, technical dissemination and publications; and apply this knowledge by providing technical assistance improving the health status of those most in need.

Lancet Global Health Commission on High Quality Health Systems in the SDG Era (HQSS Commission) is a group of 30 academics, policymakers, and health system stakeholders from 18 countries. The focus of the HQSS Commission is health system quality in low and middle income countries. Our work is centered on people: improving their quality of care and the value they derive from the health system.

The Lown Scholars Program was established in honor of Dr. Bernard Lown, a world-renowned cardiologist and activist, whose career has advanced public health globally. The Program is designed to create an international cadre of talented health professionals who will use public health tools and strategies to prevent cardiovascular diseases and promote cardiovascular health in developing countries, as defined by the United Nations. Since its establishment in 2008, the program has supported the work of more than two dozen scholars from Asia, Latin America, Africa and the Middle East.

Program on the Global Demography of Aging at Harvard University (PGDA) is funded by the National Institute on Aging at the National Institutes of Health to carry out research on themes related to global aging and health, with an emphasis on issues in the developing world. A key overarching theme focuses the expertise available at various schools at Harvard toward one of the pressing health questions of global aging, namely understanding the changing patterns of adult morbidity and mortality, including their measurements and causes, demographic and economic implications, and policies and programs for addressing and mitigating such implications.

Program on Human Rights in Development (PHRD) is concerned with the realization of human rights in the context of poverty reduction and development strategies, with projects spanning various countries around the world. Through teaching, research and publications, PHRD seeks to deepen understanding of the economic, legal, political, and ethical issues involved in integrating human rights into policies and programs of development.

The Postpartum IUD (PPIUD) Project studies the impact and performance of institutionalizing immediate post-partum IUD services as a routine part of antenatal counseling and delivery room services in Sri Lanka, Tanzania, and Nepal. The study will encompass both the impact of the intervention on the uptake and subsequent continued use of PPIUD, the extent to which the intervention leads to the institutionalization of postpartum IUD services in the hospitals, and to what extent the service diffuses to other hospitals or providers.

Takemi Program in International Health offers midcareer fellowships for professionals and scholars from around the world for research and advanced interdisciplinary training on critical issues of global health, especially those related to Low and Middle Income Countries (LMICs). Takemi Fellows are typically mid- to senior-level and have significant postdoctoral work experience. They spend the year working on their own research topic. The program addresses problems of mobilizing, allocating, and managing scarce resources to improve health, and of designing strategies for disease control and health policy development. The program has limited internal funding to provide partial support for a few Takemi Fellows and so most applicants should identify their own source of support when applying for the fellowship.

Women and Health Initiative (W&HI) recognizes that, due to persistent social and gender inequality around the world, girls and women experience increased risk of ill-health and injustice within the health sector, where they play dual roles as both consumers and providers of health care. The W&HI was founded at

Harvard Chan in 2010 by former Dean Julio Frenk and draws on resources and expertise from across the school and the broader Harvard community to develop interdisciplinary perspectives and innovative solutions to the challenges women face in the public health arena. The Initiative also brings together global partners including governments, foundations, private industry, multi-lateral agencies, non-governmental organizations and committed individuals.

Willows Impact Evaluation (WIE) is an implementation and impact evaluation of the Willows International's Reproductive Health Programs. In collaboration with academic partners in Ghana, Pakistan, Tanzania and Turkey, the WIE is a multi-component study led by Dr. Iqbal Shah and Professor David Canning.

School-wide Interdisciplinary Concentrations

Humanitarian Studies, Ethics and Human Rights (HuSEHR) provides an organized program of study that focuses on the normative underpinnings and practice of humanitarian response and human rights. The curriculum covers a broad range of areas including civilian protection, international humanitarian law, human rights, disaster response, coordinated aid, crisis dynamics, sector-based assistance, health and human security of internally displaced people, geopolitical context, monitoring and evaluation, strategic planning, situation analysis, ethics and standards.

Maternal and Child Health/Children, Youth and Families is designed for those who aspire to future leadership in the promotion of maternal and child health. This interdisciplinary concentration is open to all residential Harvard Chan School students. Students who complete the concentration requirements will graduate with a letter stating they have concentrated in Maternal and Child Health.

Nutrition and Global Health builds upon a strong base of ongoing research, teaching, collaborative work, and training in nutrition and global health at the Harvard T.H. Chan School of Public Health. The concentration is dedicated to research that stresses integrative problem solving and evaluation approaches to global health challenges, with a focus on low- and middle-income countries.

Population Mental Health is designed to increase expertise in mental disorders among public health professionals. Students who complete this interdisciplinary concentration will be prepared to articulate the U.S. and global public health impact of mental disorders and obtain critical skills that will enable them to conduct important work, in both research and practice, aimed at understanding the causes and consequences of mental disorders as well as reducing their public health burden.

Women, Gender, and Health (WGH) is geared toward students who desire careers in research, teaching, and programs related to women, gender, and health. Addressing issues of women, gender, and health (WGH) requires the study of the health of women and girls – and men and boys – throughout the life course; gender, gender equality, and biology must be understood as important and interacting determinants of well-being and disease.

For information on other interdisciplinary concentrations, visit:
https://www.hsph.harvard.edu/admissions/degree-programs/interdisciplinary-concentrations/.

MASTER OF SCIENCE PROGRAM

THE MISSION OF THIS DEGREE PROGRAM IS TO PREPARE THE NEXT GENERATION OF RESEARCHERS FOR GLOBAL HEALTH AND POPULATION AROUND THE WORLD IN ORDER TO ADVANCE GLOBAL HEALTH RESEARCH AND REDUCE THE BURDEN OF DISEASE, ESPECIALLY IN THE WORLD'S MOST VULNERABLE POPULATIONS.

GOALS AND OBJECTIVES

SM graduates contribute to the improvement of global health and the resolution of population problems. Graduates have the analytical and technical skills to address health and population problems from a range of disciplinary perspectives. They build a set of advanced competencies covering conceptual approaches, theory and applications, problem solving and analysis, as well as a wide range of quantitative and qualitative methods. Graduates pursue careers in policy analysis, monitoring and evaluation of public health programs, and academic and programmatic research. They will engage with global health research at national and international government agencies, NGOs, the private sector and academic institutions.

The overall objectives of the two-year (80-credit) SM degree program are:

- to provide training in public health sciences to individuals whose prior training and experience prepares them to play a leadership role in generating new knowledge through public health research;

- to award the SM degree to individuals who have acquired a particular depth of knowledge in public health sciences and who have demonstrated the competencies set out below;

- to lead students to achieve these capacities in a setting that demands that they query, learn, interpret, and communicate in active interchange with their peers, with faculty, and with other researchers outside the school.

COMPETENCIES

Graduates acquire a solid and up-to-date understanding of the major issues in population and global health; the research tools to examine evidence related to program effectiveness, priority setting, and decision making; and insights into the practical aspects of undertaking research and evaluating population health interventions around the world, including a perspective on the economic, social, political, cultural, and ethical considerations that bear on these issues. Upon satisfactory completion of the SM degree, graduates will be able to:

- Identify and apply appropriate quantitative and qualitative methods to the analysis of international, national, regional, or local contemporary problems of public health;
- Synthesize and integrate specialized knowledge and research skills in one or more areas of global health and population (e.g. demography, economics, epidemiology, human rights, law, politics, policy, and statistics), based on advanced course work and independent research study;
- Demonstrate competence in research ethics.

EDUCATIONAL APPROACH

The distinctiveness of the SM degree in global health and population is the strong focus on research engagement with contemporary public health issues achieved through coursework and connections with the faculty, all of whom actively engage in global health and population research. This training combines an academic education in key disciplinary areas with problem solving, research experience and a final thesis. Throughout the program, students are encouraged to engage with faculty on their research projects, to organize and participate in seminars that promote discussion with members of the Harvard T.H. Chan School community, and to engage in research opportunities during Winter Session, which may include either independent studies or coursework. Students are also required to conduct a summer research internship which could be used to complete the thesis.

The two-year, 80-credit degree program comprises a core curriculum of courses required by the School and the Department together with electives. The coursework emphasizes the acquisition of research skills and concepts necessary to address a range of global population health issues. Of the necessary 80 credits, the required core courses make up slightly over half, allowing considerable flexibility for students to tailor their own degree program. Due to the COVID-19 pandemic and its impact on public health, students will have a pass/fail option for all courses during the fall 2020 semester. One exception is the 5 credit year-long thesis course (GHP 299) which must be taken for ordinal grade. Any updates to this policy or further guidance pertaining to Spring 2021 will be communicated at a later date.

Students are provided with a detailed course schedule for the two years (see page 9). In the first year of study, students focus on the core courses required by the School and the Department. GHP 272 *Foundations of Global Health and Population*, offered in the first semester, provides a common platform for the more advanced work that follows. There are approximately 25 required credits in the first year of study, including school-wide requirements; courses in demography, measurement, research ethics; and applied courses in politics and economics. In the summer after the first two semesters of instruction, students develop their ability to apply their skills and knowledge to contemporary problems in global health by undertaking a required research internship. Students are encouraged to use this research project and the opportunities it provides to inform their thesis. During the Winter Session (January each year) many students join one of the faculty-directed field courses, which in recent years have included research work in Brazil, Chile, Ethiopia, India, Jordan, Lebanon, Mexico, and Tanzania.

The second year involves a combination of coursework and independent research study. Faculty-directed independent study sections in the School (or the University) are encouraged in the second year, in order to further develop research skills. Some students choose to cross-register at other Harvard Schools such as the Harvard Kennedy School, Harvard Graduate School of Education, or the Harvard Business School.

CRITERIA FOR ADMISSION

On entry, applicants must hold a bachelor's degree or equivalent in a relevant discipline. Many entering students already hold advanced degrees in medicine or a social science discipline. The admissions committee looks for candidates with:

- GRE or MCAT scores **at least** in the 70th percentile (optional for 2020-21 admissions cycle).
- TOEFL test with a minimum IBT score of 100 with a minimum of 25 in the Writing Section, and no less than 23 in the remaining 3 sections.
- College Transcript must show **both a Statistics AND a Calculus** course with a **minimum grade of B+**. This does not include courses on Statistical software (e.g. SAS, SPSS, or Stata).
- Relevant global health or public health research experience is required. The review committee looks for applicants with international work experience for a minimum of 6 months or more full-time equivalent (FTE) over recent years; health work with a migrant population at the domestic level for a minimum of 6 months or more FTE over recent years; substantive policy or advocacy work on a global health issue (e.g. HIV) at the domestic or international level for a minimum of 6 months or more FTE.

STUDENT STATUS

- The GHP SM Program is offered for **full-time** student status only. Part-time status is not permitted.
- The GHP SM Program **does not** grant admission deferrals. Any individual who is admitted to the program and is unable to matriculate will need to reapply.
- Students **may not** request a leave of absence for the purpose of pursuing another degree at Harvard or another university.

ADDITIONAL INFORMATION

Procedures, application deadlines, and test requirements for admission to this program, as well as information on financial aid may be obtained from the Harvard Chan School Admissions Office.

Admissions Office
158 Longwood Avenue
Boston, MA 02115-5810
Phone: 617-432-1031
Fax: 617-432-7080
admissions@hsph.harvard.edu

80-Credit Master of Science Program in Global Health and Population
COURSE REQUIREMENTS for Students Entering Fall 2020

DEPARTMENT REQUIREMENTS	CREDITS	YEAR COURSE SHOULD BE TAKEN
GHP 272 Fall: Foundations of Global Health and Population	5.0	1
GHP 230 Fall 1: Intro to Economics with Applications to Health and Development	2.5	1 OR 2
HPM 548 Fall 1 or Spring 1: Responsible Conduct of Research	1.25*	1
GHP 220 Fall 2: Intro to Demographic Methods	2.5	1
GHP 506 Spring 2: Measuring Population Health	2.5	1
GHP 265 Spring 2: Ethics in Global Health Research	2.5	1
ID 212 Spring 2: Large Scale Effectiveness Evaluations	2.5	1 OR 2
GHP 269 Spring 2: Political Economy of Global Health	2.5	1 OR 2
Intermediate-level Biostatistics (see below for choices)	10.0	1 AND/OR 2
GHP 299 Fall & Spring: Master's Thesis	5.0	2
GHP 207 Spring 1: Risk Factors and Population Health	2.5	2

INTERMEDIATE-LEVEL BIOSTATISTICS CHOICES (10.0 credits)		
BST 210 Fall: Analysis of Rates and Proportions	5.0	YEAR 1, 2 OR COMBINATION
BST 223 Spring: Applied Survival Analysis	5.0	
BST 226 Spring: Applied Longitudinal Analysis	5.0	
BST 260 Fall: Introduction to Data Science	5.0	
GHP 525 Fall: Econometrics of Health Policy	5.0	
SBS 263 Spring: Multilevel Statistical Methods	5.0	
EDU S-052 Spring: Applied Data Analysis	5.0	
EDU S-030 Spring: Intermediate Statistics: Applied Regression & Data Analysis	5.0	

CORE REQUIREMENTS	CREDITS	YEAR COURSE SHOULD BE TAKEN
ID 100 Fall 1: Foundations for Public Health	1.0	1
BST 201 Fall: Introduction to Statistical Methods	5.0	1
EPI 201 Fall 1: Introduction to Epidemiology	2.5	1
EPI 202 Fall 2: Elements of Epidemiologic Research	2.5	1

- Total required credits (department and core) for Years 1 & 2 = **48.5** or **49.75** (depending on HPM 548).
- Students may not take more than **27.5 credits per semester**.

*****Due to the COVID-19 pandemic and its impact on public health, students will have a pass/fail option for all courses during the fall 2020 semester. One exception is the 5 credit year-long thesis course (GHP 299) which must be taken for ordinal grade. Any updates to this policy or further guidance pertaining to Spring 2021 will be communicated at a later date.

No course substitutions permitted.

SUMMER RESEARCH INTERNSHIP

The summer research internship is an opportunity for students to engage in a variety of public health research programs as a team member under the supervision of both their faculty advisor and a field preceptor. The research internship provides a public health setting in which students may integrate and apply the skills and knowledge acquired through their coursework.

GUIDELINES FOR SUMMER RESEARCH INTERNSHIP

During the summer between the first and second years, students are required to undertake a research internship for hands-on experience and to integrate the research skills that they have learned from their coursework. Many students use the summer research experience to develop their thesis. Beginning early in the first year of study, a series of meetings will be scheduled for students to meet with the Masters Committee to review and discuss internship logistics.

OBJECTIVES

The summer research internship is designed to enable students to:

- Integrate and apply the research skills and knowledge acquired through coursework to a public health issue in the field
- Develop the interpersonal skills necessary to be an effective team member within a research group
- Generate data that can be used to develop the Master's thesis
- Further develop oral and written communication skills
- Work on a public health issue within a research environment

PLACEMENTS

Once students have identified a potential research internship opportunity, they must provide the following information to the GHP Education Office by April 5, 2021:

- Description of research activity and how it may generate new knowledge for field of global health
- Location
- Length (at least 6 weeks @ 30 hours per week required)
- Letter/Email from the individual who will supervise/work with you during this period
- Letter/Email from faculty advisor indicating their approval of this activity (he/she may simply co-sign the letter or email from the field supervisor)
- Budget – this should include all funding sources (confirmed sources and any funding opportunities to which you are applying)

FUNDING

Once a student has submitted the required materials for an acceptable internship as outlined above, they will be eligible for consideration of funding provided by the Department and managed through the Education Office. These funds are meant to help fill in budget gaps for students. These awards will vary in amount. All sources of existing or expected funding must be included in the student's original budget.

The following would not be considered eligible for these funds:

- Students with fully funded internships covering travel, housing, and stipend
- Students remaining in Boston and receiving a stipend or salary

REPORTING

All SM2 students are required to write a 3-5 page report of their summer activity. This report must be submitted electronically via email to the Education Office (Allison Conary and Barbara Heil). This report is due September 20, 2021.

The following components should be included:

- Description of your summer research internship – activities, responsibilities, and outcomes.
- The name, title and contact information of your supervisor as well as a complete address of the organization/group with whom you are working.
- Indicate whether or not you plan to incorporate your research experience into your Master's Thesis. Explain how you plan to incorporate it, or why you are not doing so.
- Indicate whether or not you would recommend this internship to future students.

At the conclusion of the summer research internship, preceptors will be contacted by the Education Office to provide a written assessment on the student. At a minimum, the assessment will address the following points and provide a brief commentary on each:

- Was the student prepared to fulfill the tasks required? If not, what research skills were missing?
- Was the student reliable and committed?
- Did the student contribute as a team member and work well in a group setting?
- Were the expected tasks completed?
- Would you consider hiring this student in the future?
- In your opinion, does this student show overall promise as a public health researcher?

Preceptors will be asked to email their assessments to Barbara Heil in the GHP Education Office. These will be reviewed by both the student's academic advisor and the SM Committee. The advisor will also discuss the assessment with the student.

All students are required to:

- Consult with their faculty advisor and check the Office of Human Research Administration (OHRA) Guidelines http://www.hsph.harvard.edu/ohra/ to assess if OHRA approval for the field experience activity is required.
- Register their travel with the Harvard Travel Registry and complete and submit a *Travel Risk and Release Form* to the GHP Education Office.

Examples of recent internships/summer work include:

- *Costing Analysis of Breast Cancer Early Detection in Rwanda*
- *Contact Tracer for the COVID-19 Community Tracing Collaborative for Partners in Health*
- *Assessing the Cost Effectiveness of Improved Water and Sanitation Systems to Decrease Dengue Incidence in Brazil*

- *Which indicators for social vulnerability are spatially associated with environmental risk in municipalities of Brazil?*
- *Telemedicine in China: Markets and Quality of Care*
- *COVID-19 Investigation and variation in national performance*
- *Child USA Summer Internship Program*
- *How COVID-19 has impacted the provision of essential routine health services in low-income countries*
- *Tuberculosis Modeling (TB case reporting and mortality) under Brazil National TB program*
- *Mixed-methods Study that Explores Donor Aid Allocation and Country Health Outcomes/Disease Burdens through Political Economy Analysis*
- *Malaria Stratification in Latin America, with a Focus on Brazil*
- *How Aid Delivery Must Change in Order for the Health-related Sustainable Development Goal to be achieved*
- *Reviewing the Implementation Completion and Results Report (ICR) of the World Bank Group funded projects related to Primary Health Care and Mental Health.*

WINTER SESSION

The Department strongly encourages all students to participate in Winter Session activities, whether for-credit or non-credit, on-site or off-site, in accordance with their individual needs and interests. Activities may include field-based courses, independent studies, and providing research support to faculty projects.

COURSE WAIVERS

Students seeking to waive a school-wide core course should follow the procedure as outlined in the Harvard Chan Student Handbook. For Departmental requirements, waivers will be considered only if a student can demonstrate that the subject matter has been covered in a previous graduate-level course. To waive a required course or one of a choice of courses fulfilling a requirement, please proceed as follows:

1) Secure a copy of the syllabus of the course you took that you believe closely matches the course you want to waive.
2) Secure an unofficial copy of your transcript indicating the course you took and the grade you received.
3) Send the documents to Allison Conary (aconary@hsph.harvard.edu) or Barbara Heil (bheil@hsph.harvard.edu) with an email identifying which course you would like to be evaluated for in order to waive.
4) Once your documents have been received, they will be forwarded to the faculty who teach the course so they can evaluate your request. Once they make a decision, you will be informed. No course substitutions are allowed.

MASTER'S THESIS

The second year involves a mix of coursework and the Master's Thesis. The thesis is intended to allow the student to pursue a single topic in depth and demonstrate analytical and substantive research expertise in an area of global health and population.

A Master's Thesis is required of all students enrolled in our two-year SM program. Ideally, work on the thesis begins during the summer internship, while the final written version is produced during the student's second year in the program. The thesis serves several purposes:

- It provides an opportunity for the student to work on a new problem or issue of particular interest
- It allows the student to apply many of the research skills acquired in the different courses taken for the degree
- The thesis itself is proof of the student's mastery of certain skills that are important whether the student begins a research-based career or continues to a doctorate research degree
- It is a useful document that can be shown to employers and supervisors indicating a student's level of achievement in particular areas of research

The research skills and understanding that we expect to see developed through the thesis include:

- The capacity to conceptualize a problem and to identify the key research question(s) that need to be addressed
- The ability to reduce broad questions and issues to a specific research question that can be answered with the resources available to the student
- The capacity to apply the technical skills acquired in the courses taken during the two-year period of training
- The capacity to concisely summarize new conclusions based on existing evidence and on new findings obtained in the thesis
- The ability to frame the thesis in a broader context and to summarize how the findings contribute to the development of new knowledge and understanding in the domains of Global Health and Population
- The ability to write a scientific report of publishable quality

Sample List of Recent Theses Titles
Equity of Performance-Based financing in Cameroon on modern contraceptive uptake and child vaccination
Predictors of low birth weight and preterm birth in rural Uganda: findings from a birth cohort study
Comprehensive assessment of malaria preventive behaviors among caregivers of children under-five in N'Djamena, Chad
Estimating the under-detection of pediatric tuberculosis in Brazil
The Laboratory Costs of TB and TB Drug Resistance in the Republic of Moldova
Association between facility infrastructure capacity and health providers' knowledge in maternal and child health service
Anemia as a Risk Factor for Postpartum Depression: Evidence from Malawi
Measuring the Quality of Informed Consent for Caesarean Section Deliveries in Government Hospitals in Bangladesh

Program characteristics associated with health facility deliveries within the context of an mHealth-community health worker intervention: an observational cohort study in Zanzibar
Childcare subsidy receipt and housing (in)stability among mothers in US Cities
Social Determinants of Health in Rio de Janeiro, Brazil
Disparities in state-level US life expectancy: the effect of deaths of despair and violence by age, sex, and race/ethnicity, 1999-2017
Are populations of postpartum women differentially served by community health worker programs? A case study from Zanzibar, Tanzania
Investigating the impact of Ebola on risky sexual behaviour and substance use among youth in Liberia
Risk score to predict chronic kidney disease among Mexican individuals with diabetes mellitus
Exploring the Relationship Between ICE Community Arrests and the Uptake of Health Care by the Latinx Population at Federally Qualified Health Centers in California

STUDENTS ARE REQUIRED TO REGISTER FOR THE THESIS (GHP 299) IN THE FALL SEMESTER AND SPRING SEMESTER OF THEIR SECOND YEAR. A MEETING TO DISCUSS THE DETAILED GUIDELINES FOR THE THESIS WILL BE SCHEDULED DURING THE SPRING SEMESTER OF YEAR 1 [APPENDIX 2].

ACADEMIC ADVISOR

All students are assigned an Academic Advisor upon enrollment. The Advisor is responsible for providing guidance and supervision throughout the two-year program, including approval of the course selection by the student. Assignment of Advisors may be shifted by mutual consent of the student and the assigned Advisor. While solid efforts are made to match students with an appropriate advisor, there are occasions when a change is beneficial. Neither the academic advisor nor the advisee should feel uncomfortable about initiating such a change. To change an academic advisor, the student should speak with the potential new academic advisor to see if he/she is willing to accept another advisee. Once that has been established, they should speak with the current advisor and indicate who their new advisor will be. Finally, the student should prepare an email which indicates the change from one advisor to another. This email should be sent to Allison Conary (aconary@hsph.harvard.edu) or Barbara Heil (bheil@hsph.harvard.edu) in the GHP Education Office, and must be copied to both new and old advisors.

In an effort to strengthen the advising component of the Department's Master of Science degree program, the SM Committee has prepared a document to clarify the roles and responsibilities of both the academic advisor and the advisee [Appendix 1]. Through this document, the committee has endeavored to present clearly the expectations of each and allow for a better understanding and a more cohesive and productive relationship between both parties.

CAREER GUIDANCE AND INTERNSHIP OPPORTUNITIES

SM graduates find employment in a wide variety of capacities within the broad areas of population and global health research. GHP faculty have strong links with the bilateral and multi-lateral health and development agencies, academic institutions around the world, and with national and international non-governmental and private voluntary organizations. Positions are largely identified through networking, and public health is not an exception to this rule. The search should start as soon as possible after a student arrives at the School, and it needs to begin with clarity about the type of position to be sought. Informational interviews with individuals in the field, including Harvard Chan graduates, will be helpful at

this stage. Those interviews can clarify those work characteristics to be sought and avoided, as well as any academic or other requirements.

Advisors should be helpful during this initial process, as students' career goals and academic paths are mapped out. Their relative utility during the more specific searches for research internships and jobs will depend upon a number of factors including their (faculty members) own educational background, experience and interests. Students are encouraged to complement discussions with advisors by holding additional conversations with other GHP and Harvard Chan School faculty, especially those with matching research interests and connections.

Students should also make use of the Career Advancement Office, which is supported by the School especially for this purpose. Staff in this office can help with overall planning of the job or interview search process, CV development, and interview preparation.

Students should be aware, from the outset of graduate study that responsibility for a successful search result rests with them. This is an active, rather than a passive endeavor. The Harvard Chan School and the Department of Global Health and Population cannot and will not provide or guarantee a suitable position upon graduation. School faculty and staff can be extremely helpful, as indicated above but their roles are limited. Successful students will take ownership for their job and internship searches and act upon the guidance provided.

CAREERS AND POSITIONS OF RECENT GRADUATES

Recent graduates have chosen a variety of career paths. Some students continue into a doctoral program at Harvard or elsewhere on completion of the masters; their eventual aim is usually to work as researchers in varied types of institutions. Others have begun research careers with foundations such as The Population Council or the Bill & Melinda Gates Foundation, whilst others have worked directly for international health and development agencies such as USAID, UN bodies including the World Bank, and companies and non-profit and non-governmental organizations in the US and worldwide such as John Snow, Inc., BRAC, and R4D. Career advice and opportunities are offered in a number of ways through job postings, alumni talks, School-wide career fairs and networking through the faculty.

Next, is a sample list of positions taken by some of our *recent* graduates.

EMPLOYER	POSITION
Brigham and Women's Hospital and Harvard University	Senior Research Analyst
Clinton Health Access Initiative (CHAI), Uganda	Malaria Research Analyst
Duke University, University of California, (among others)	MD Student
Global Health Education and Learning Incubator at Harvard University	Instructional Design Specialist
Johns Hopkins University, Harvard Chan School, (among others)	Research Assistant
John Snow, Inc.	Technical Research Advisor
National Institutes of Health and Boston Medical Center	Research Associate
National Institutes of Health, Department of Health and Human Services (Presidential Management Fellowship)	International Public Health Analyst
Nouna Health Research Center, Burkina Faso Ministry of Health/University of Heidelberg	Health Systems Researcher
State of Alaska, Division of Public Health	Research Analyst

Population Sciences International (PSI), Washington D.C.	Research Analyst
The World Bank	Impact Evaluation Specialist
World Health Organization (WHO)	Consultant
United States Agency for International Development (USAID)	Health Officer
Harvard University, Johns Hopkins University, University of Pennsylvania, UC Berkley and UC San Francisco, Princeton University, (among others)	PhD student

STUDENT GUIDANCE

The Master's Committee holds a series of meetings with first and second year students aimed at clarifying requirements and at providing guidance in varied activities. The meetings are often scheduled during lunch time, in order to avoid conflict with scheduled classes, and guarantee maximum attendance.

Topics discussed with 1st year students include:

- Summer research internship – suggestions on how to search for opportunities (e.g., consultation of past summer internship reports, available through the GHP Education Office), guidance on available funding, clarification on how to take advantage of the research internship for thesis development, and discussion on human subjects. A series of meetings are scheduled throughout the fall and spring semesters to monitor progress and address any issues or concerns.
- Human subjects – depending on demand, a thorough discussion on human subjects with guidelines on how to secure ethical approval prior to embarking on a summer project.

Topics discussed with 2nd year students include:

- Summer research internship – feedback on the research conducted during the summer and discussion regarding the possibility of using this experience as a basis for their thesis; students are required to submit their summer research internship reports to the department's Education Office (one meeting early Fall).
- Thesis – discussion regarding the selection of topic, data, advisor, and second reader; advice on how to establish clear agreements with advisors regarding the frequency of meetings to discuss thesis progress; and advice on how to establish clear agreements with second reader on how much effort he/she is willing to invest in meetings and draft reviews. These topics and others are covered in the required year-long SM2 thesis course, GHP 299.

PLEASE NOTE: REGULAR EMAIL COMMUNICATIONS ARE ROUTINELY SENT TO BOTH COHORTS OF STUDENTS BY THE DEPARTMENT'S EDUCATION OFFICE. THESE COMMUNICATIONS INCLUDE REMINDERS OF UPCOMING DEADLINES, COURSE ENROLLMENT INFORMATION, INTERNSHIP AND JOB OPPORTUNITIES, AND RESPONSES TO QUESTIONS CONCERNING PROCEDURES WITHIN THE DEPARTMENT.

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DOCTORAL PROGRAM

This section presents the Global Health and Population field of study for the Doctorate of Philosophy (PhD) in Population Health Sciences (PHS), a joint collaboration between the Harvard T.H. Chan School of Public Health and the Harvard Graduate School of Arts and Sciences (GSAS).

This program offers advanced doctoral-level research training that builds on multiple disciplinary perspectives to understanding origins and determinants of health and disease across populations. The degree is intended for those holding a bachelor's or master's degree in physical, natural, or social sciences. A distinguished undergraduate record, as well as excellent performance in any graduate work undertaken, is required for admission to this program.

Students from the two-year SM degree in Global Heath and Population are encouraged to apply to the PhD PHS program. Courses taken during the two-year SM degree may count towards the requirements for the doctoral program and by taking appropriate courses students can reduce the time required to complete the doctoral program once they enter.

Specific requirements for each Area of Specialization are outlined in this document. Adaptations and alterations of departmental requirements are not encouraged and are possible only with written support of the academic advisor in consultation with the head of the area of specialization, and approval of the Doctoral Committee Chair, Dr. Winnie Yip.

GENERAL INFORMATION

This program is intended for students likely to pursue careers in academic departments related to global health and population studies, or in research-related positions outside of academia. In addition to nurturing the development of the next generation of population health researchers and scientists, the program will provide opportunities for students to build scientific communication, and mentoring and teaching skills, thereby becoming educators in their field.

Within Global Health and Population, students must demonstrate, through coursework and examination, detailed knowledge and understanding of their area of specialization and additional tracks of their choosing (please refer to requirement listings for each Area of Specialization). Only letter grades of B or better may be counted towards a student's final program.

The student must also prepare and defend a doctoral dissertation representing original research. Some students arrive with considerable research experience and may move rapidly to completion of the degree, while others must design, collect, analyze, and write-up entirely new dissertation work. The pace of progress depends largely on the student's individual plan, which is designed in collaboration with the academic advisor and dissertation committee, and follows the PhD timetable.

Throughout each student's program, the Department will monitor performance in courses and in meeting degree requirements for completion. Upon request by the student, leave of absences during the program may be granted on a case-by-case basis in accordance with GSAS guidelines. Under such approved circumstances, the leave period would not be counted against the four-year time limit. In cases of

unacceptable performance, the student may be required to withdraw. Students may not request a leave of absence for the purpose of pursuing another degree.

ADDITIONAL RESOURCES

GSAS Policies

PHD PHS GLOBAL HEALTH AND POPULATION
STUDENT TIMETABLE

DATE	PROGRESS DUE
END OF 2ND SEMESTER (MAY)	Submission of Prospective Program Sit Paper I of the Written Qualifying Examination
END OF 4TH SEMESTER	Submit Paper II of the Written Qualifying Exam
PRIOR TO 5TH SEMESTER	Submission of Final Program – including nominations for Preliminary Qualifying Exam (PQE) Committee
4 WEEKS PRIOR TO SCHEDULED PQE EXAM	Preliminary Qualifying Exam Scheduling Form Due
END OF 5TH SEMESTER	Satisfactory Completion of Preliminary Qualifying Examination Submission of Nominations for Dissertation Advisory Committee (two weeks post completion of PQE)
DISSERTATION RESEARCH	Progress Report due every three months until thesis is completed
THESIS SUBMISSION TO OUTSIDE READER	Eight weeks prior to intended date of defense
DEGREE COMPLETION	Thesis presentation and public defense; End of year 4

FIELD OF STUDY REQUIREMENTS

To provide more focus and depth in the key areas of Global Health and Population, the department has identified two areas from which students may specialize their doctoral training. Students must select from one of the following Areas of Specialization:

- Health Systems
- Population and Family Health

In addition to GHP210 *Concepts and Methods in Global Health and Population Studies*, the Department's Doctoral Committee hosts a Doctoral Research Seminar. The goals of this seminar are: (1) to help students meet important milestones for advancing their dissertation research; (2) to give students an opportunity to gain practical experience in presenting their research, and to receive constructive feedback on works in progress; (3) to encourage interactions between students and faculty in different tracks and cross-fertilization of ideas, concepts and methods; (4) to provide a forum for students to learn more about the work of their peers; and (5) to contribute to the community of scholarship in the Department by promoting lively discussions among students and faculty around a broad range of topics in global health and population.

Attendance and participation by all GHP doctoral students at the Doctoral Research Seminar is expected. Its content will be beneficial to students in all stages of the program. Specific information about the format of the research seminar as well as the schedule will be provided at the beginning of the academic year. Course requirements for each Area of Specialization are listed in the corresponding section. These requirements may involve courses offered through other Fields of Study or Academic Departments, and through other Harvard Graduate Schools. They are designed to prepare candidates with doctoral-level knowledge in theory, analysis and research methods in a particular area as well as providing candidates with a broad-based education in global health.

COURSE WAIVERS

For Field of Study requirements, waivers will be considered only if a student can demonstrate that the subject matter has been covered in a previous graduate-level course. To waive a required course or one of a choice of courses fulfilling a requirement, please proceed as follows:

1) Secure a copy of the syllabus of the course you took that you believe closely matches the course you want to waive.
2) Secure an unofficial copy of your transcript indicating the course you took and the grade you received.
3) Send the documents to Allison Conary (aconary@hsph.harvard.edu) or Barbara Heil (bheil@hsph.harvard.edu) with an email identifying which course you would like to be evaluated for in order to waive.
4) Once your documents have been received, they will be forwarded to the faculty who teach the course and your Academic Advisor so they can both evaluate your request. Once they make a decision, you will be informed. No course substitutions are allowed.

WRITTEN QUALIFYING EXAM, PRELIMINARY QUALIFYING EXAM, AND DISSERTATION ADVISORY COMMITTEE

WRITTEN QUALIFYING EXAMINATION

Upon completion of the requisite course work, the Department requires that all doctoral students sit a Written Qualifying Examination (WQE) consisting of two papers before advancing to the Preliminary Qualifying Examination (PQE). The first paper consists of a written examination while the second involves the submission of a research paper. The intention is that students complete both parts of the WQE by their fourth semester of study. Students will take the first exam at the end of their first year and submit Paper II at the end of their second year. Students with a prior Master of Science degree from the Department may take both parts of the examination by their second semester of study for the doctoral degree. Paper I of the WQE is offered once per year in May. Any re-sits for Paper I will be taken the following May. Paper II will have a deadline, in most cases, at the end of the fourth semester. The deadline for resubmission in the case of failure is November 1st of the same year.

AIMS OF WRITTEN QUALIFYING EXAMINATION

The principal aim of the WQE is to ensure that the student is adequately prepared for a period of independent research. The examination is intended to test the candidate's general knowledge in Global Health and Population and the capacity to deal with the kinds of questions that are likely to occur in the course of writing the doctoral dissertation. Passing the examination indicates that the department judges that the student is ready to embark on a course of independent research culminating in the submission of a doctoral thesis. Introduction of the WQE should allow the PQE Committee to focus more sharply on the student's research program. The WQE seeks to:

- Test a student's overall capacity to put together separate topics learned in the core course;
- Provide questions designed to solicit responses requiring the combination of different bodies of knowledge;
- Design questions that are of the type one is faced with when beginning research (larger questions);
- To solicit answers to these questions that indicate that the student is at a level of comprehension where they are ready to both manage independent research and demonstrate training and mind-set of independence;
- Provides the student with the opportunity to show ability to process information rather than simply repeating what was learned in a particular lecture and apply it to a larger question in which they may articulate their opinion or view;
- Give the student the opportunity to show they are capable of carrying out a piece of independent research.

STRUCTURE OF THE EXAMINATION

The examination consists of two papers. Each is described below. The WQE is pass-fail only. If the student fails a paper there will be an opportunity for a re-sit but each paper can be attempted twice at most.

Paper I shall be a four-hour closed book examination and shall consist of two sections. Section A shall consist of two compulsory questions which will be general in nature, both of which the student must answer. Section B shall consist of four questions from which the student must select two. All of the

questions on Paper I shall reflect general knowledge acquired through the departmental core course required of all GHP doctoral students regardless of their area of specialization.

ORGANIZATION AND GRADING OF PAPER I

The subject matter in Paper I will reflect the syllabus and extended reading list of GHP 210 *Concepts and Methods in Global Health and Population Studies*. The course instructor shall write the questions in consultation with the doctoral committee.

Each student will be issued an anonymous code. Each exam script will bear this anonymous code. The code key will be kept solely in the GHP Education Office.

Each question in the examination will be graded by two faculty. For Paper I, the doctoral committee will identify graders and at least one of the graders must be a member of the doctoral committee. The Education Office will be responsible for sending a series of reminders to the graders prior to the date of the examination. One of the two faculty graders may be a member of another department.

Once the examination has been taken, answers will be circulated to all the graders through the Education Office. Graders will have one month from the day of the examination to grade the exam and return the students' answers, grade sheets, and comments to the Education Office. The Education Office will record the grades.

When a grade difference of three grades or more exists on a question between two graders (A- to B- for example), the graders will be asked to consult with each other and reconsider their marks and comments. Each grader may revise their grade in light of this consultation or decide the original grade stands.

Examination answers, grades and comments are then considered by the doctoral committee. No conflict of interest will arise from normal academic links between committee members and the students under consideration (e.g. advising and instructing). The committee reviews the overall standard of answers to all questions and the marks and comments given by the examiners. The committee ensures that graders comments are sufficiently detailed to provide assistance to students. The committee computes an agreed mark for each question by averaging the graders' marks.

The agreed marks for each question are averaged for each paper. The pass mark for the examination is B+ (3.3). Average marks of 3.25 and above are rounded up to 3.3 (B+). The committee confirms the pass or fail of each of the two papers of the WQE separately by a vote of a majority of the committee. The students receive only the pass or fail decision, and not the actual average grade.

If any pass or fail is not confirmed by the doctoral committee, the committee may either:

a) Return the examination to the graders for reconsideration. Revised grades and comments are then considered again by the doctoral committee.
b) Appoint one or more additional graders for each question. These graders will mark the questions and provide comments independently of the original graders. The doctoral committee will then reconsider all of the grades and comments, weighting them equally to recalculate agreed marks for each question.

After the result has been confirmed by the doctoral committee, the anonymous code will be un-blinded. Students will be informed by the doctoral committee of the result of the examination. Students and their advisors will also be given the written comments on each question, but not the grade or the identity of the grader.

The advisor will then meet with the student to discuss the results of the examination. At this point, if a student has failed either or both papers of the examination, the advisor and the student must outline a plan through tutorials and any additional course work to prepare the student to re-sit the paper failed. This plan must be in writing and a copy provided to both the Doctoral Committee and the Education Office for the student's file. All re-sits are taken in May of the following year.

Paper II is a research paper. It is intended to help students better prepare for the development of their PQE/Oral proposal and may, in some instances, be further developed as part of their actual proposal. At the start of the academic year, a detailed timeline, along with collaboration guidelines for Paper II, will be provided to those students scheduled to take the exam. Any faculty who will be directly advising the student on the paper should be named along with the proposed title.

WORK ON PAPER II

It may be that work on the paper takes place as part of a larger project involving other people. In this case the student should attach an explanation of authorship making clear their contribution to the work. The contribution of the student in this case should be consistent with being the first author. The student should write the first draft of the paper. A detailed timeline, including conduct of research information and deadlines will be distributed separately.

CONTENT OF PAPER II

The paper should be in a format that makes it ready for submission for a journal. The paper is limited to a maximum of 6,000 words. Papers may be shorter if a journal with a more strict word limit is being targeted. An appendix (no word limit) may be attached setting out details not included in the actual paper. There are no rules on the structure of the paper but most will have the following sections:

- Introduction – Pose an interesting question
- Literature Review – Survey literature on your topic and describe how research adds to it
- Methods/Data – Formulate your hypothesis and describe your data
- Results – Present your results with the help of tables and graphs
- Discussion – Critique your method and discuss policy implications
- Conclusion – Summarize what you have done and pose questions for further research

NOTE: *With papers that involve statistical analysis, the student must electronically submit a file containing the computer code that was used to perform the analysis.*

GRADING

Based on the proposed title, the doctoral committee will assign two graders, neither of whom will have been involved in advising the student on the paper. The graders will independently grade the paper. Graders will have 2 months to grade the exams. An average mark of B+ is required to pass. A passing grade will indicate that in the opinion of the examiners the papers shows that the student has acquired the skills necessary to successfully undertake research in the field. When a grade difference of three grades or more exists on a question between two graders, the graders will be asked to consult with each other and reconsider their marks and comments. Each grader may revise their grade in the light of this consultation or keep it as is.

The doctoral committee confirms the pass or fail of Paper II. If any pass or fail is not confirmed by the doctoral committee, the committee may either:

a) Return the paper to the graders for reconsideration. Revised grades and comments are then considered again by the doctoral committee.
b) Appoint one or more additional graders to review the paper. These graders will mark the paper independently of the original graders. The doctoral committee will then consider all of the grades and comments, weighting them equally to recalculate the marks for each question.

After the results have been confirmed by the doctoral committee, students and their advisors will be informed. The graders' comments will be provided to both the student and their advisor, but not the identity of the graders. They will schedule a meeting to discuss these.

RESUBMISSION OF PAPER II

Students who have deemed to fail Paper II of the WQE may resubmit. The resubmission date is November 1st for each year. The resubmission should be submitted electronically to Barbara Heil by 5:00 PM (Boston time) on November 1st. No paper will be submitted after that time and the student will be deemed to have failed the examination for a second and final time.

OUTCOME

A maximum of **two attempts** are allowed for each part of the examination. Upon successfully passing the Written Qualifying Exam, the student should immediately meet with their academic advisor to establish their final program, nominate their PQE committee and begin preparing their proposal in anticipation of the Preliminary Qualifying Exam.

PLEASE NOTE: NO STUDENT MAY HAVE NON-RESIDENT STATUS TO BEGIN DISSERATION RESEARCH UNTIL THEY HAVE PASSED BOTH THE WRITTEN QUALIFYING EXAM AND THE PRELIMINARY QUALIFYING (ORAL) EXAM, HAVE AN APPROVED DISSERTATION ADVISORY COMMITTEE (DAC) IN PLACE, HAVE A MEETING WITH THEIR DAC AND SUBMIT A PROGRESS REPORT.

APPROVAL OF PQE/ORAL COMMITTEE AND DAC

The signature of the academic advisor and field of study academic administrator are required for both the PQE/Oral Committee and the DAC forms. These forms will only be signed upon the recommendation of the Doctoral Committee. This procedure has been established as a safeguard to ensure that the proposed committee membership will satisfactorily support the research planned by the student. Please be sure to consult with the GHP Education Office.

Along with the forms, students should submit a 2-3 page proposal/abstract of their planned work, a bibliography, and briefly indicate how the expertise of the individuals nominated for membership will contribute and support the proposed research. These materials should be e-mailed to Barbara Heil (bheil@hsph.harvvard.edu) in the Education Office for circulation to the doctoral committee. Any changes in membership to these committees should follow the same process. A sample proposal is available through the GHP Education Office.

PRELIMINARY QUALIFYING EXAM (PQE)

The Preliminary Qualifying Examination (formerly known as the Oral Examination) should be taken NO LATER THAN the end of the 5th semester.

Upon successful completion of the WQE (Paper I and Paper II), a student should submit their final program, which includes the nomination of their PQE/Oral Committee. The student should immediately begin writing a PQE/Oral proposal which should continually be reviewed and revised in consultation with committee members. The final proposal is then given to the PQE/Oral Committee prior to scheduling the exam.

The proposal is basically a work plan, or calendar of activities for the next 1.5 year period. In this proposal, a student should:

a. present a question;
b. defend why this question is worthy of scholarly research and of public health relevance;
c. demonstrate an understanding of existing related research;
d. establish that the proposed research is methodologically sound and explain the methods and data you will be using (survey, secondary data, etc.); and
e. present some preliminary analysis to demonstrate these methods.

The above points are presented in a proposal to the PQE/Oral Committee.

The committee's role in the examination is to give their approval for a program of independent research and writing. Their responsibility is to check the feasibility of the proposal by asking the following questions:

a. is it the right question – is this something worth looking into;
b. is there a clear and feasible plan of activities that will answer this question;
c. is the proposal route correct and appropriate;
d. as a whole, is the work plan manageable in terms of time, money and other resources.

Finally, this exam demonstrates the capacity to produce something. Specifically, it seeks to answer the question, will this plan produce a thesis.

DISSERTATION ADVISORY COMMITTEE (DAC)

Within two weeks of successful completion of the Preliminary Qualifying Examination, a student must submit the nominations for membership of their Dissertation Advisory Committee (formerly known as the Research Committee).

Students should first obtain departmental approval of the DAC following the same process as the PQE/Oral proposal process.

If there are no changes in membership from the PQE Committee to the DAC, **simply email this information to Barbara Heil in the Education Office**. While the Research Advisor/DAC Chair must be a member of GHP, the others may be from other departments and/or outside of Harvard Chan School. The role of the DAC is to oversee the student's progress towards completion of their thesis. Students are required to meet with their committee every three months and then submit a progress report to the Education Office. Nominations for the DAC must be submitted and approved by the GHP Doctoral Committee and the student must convene a meeting with the committee before they may begin any overseas research on a non-residency status.

OUTSIDE READERS

Beginning in September 1997, the Department implemented a system of Outside Readers for all doctoral theses within the Department. The principal reasons for this decision were to improve the quality of our doctoral dissertations and to ensure that our theses were on a par with theses presented in other major universities.

All students in the Global Health are ***required*** to have an Outside Reader for their thesis. **[Appendix 3]** outlines the necessary steps to be followed when a doctoral student is nearing their thesis defense and is ready to identify an Outside Reader. The Department agreed that the Outside Reader would not be an external *examiner* able to referee the thesis as in some universities but an external *advisor* to the DAC and the student.

NON-RESIDENT STATUS

When dissertation research is to be performed away from the Boston area, students must apply for non-resident status. Students must first pass the Preliminary Qualifying Examination prior to requesting non-resident doctoral status**.** They must also establish their DAC, and this Committee must meet with the student to appraise the dissertation plan. Agreement must be reached and the GHP Doctoral Committee must provide written approval before the departure of the student. **No student may be Non-resident until all these conditions have been met**.

After the completion of the above steps, the DAC will use the following criteria for approving non-resident status:

1) Acceptability and feasibility of the proposed research plan
2) Timing and scope of periodic written reports required (including at least one Progress Report every three months)
3) Adequate arrangements for direct supervision of the student
4) The minimum time the student will spend back at the School prior to the defense

Non-resident status is customarily granted one year at a time. Extensions beyond one year require the submission of acceptable and timely Progress Reports.

The Department expects candidates to be in residence during the semester preceding their defense; many advisors and committees will insist on their presence during the semester before submission.

DEPARTMENTAL DOCTORAL COMMITTEE, 2020-2021

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HEALTH SYSTEMS
AREA OF SPECIALIZATION

Head, Prof. Winnie Yip (wyip@hsph.harvard.edu)

Well-designed and functioning health systems are central to improving population health equitably. At the same time, health systems must provide financial protection to avert impoverishment due to medical costs and gain patient and citizen satisfaction. Now more than ever, globally policymakers want to know how to reform health systems to achieve these goals. Many international organizations (including the World Health Organization, World Bank, and the Global Fund to Fight AIDS, Tuberculosis and Malaria) have identified health systems strengthening as a key priority in their strategies to improve population health. The Health Systems doctoral program at the Harvard T.H. Chan School of Public Health aims to train researchers who want to pursue a professional career in research, for example in academia, international organizations, or think tanks.

The study of health systems begins with understanding of an analytical framework. A health system is a means to a set of ends represented by ultimate performance outcomes. The results involve trade-offs between equity, efficiency, effectiveness and choice, which are shaped by a society's ethical values and by political processes and actors. The Health Systems Area of Specialization aims to train scholars who can answer questions raised by top policymakers such as how to address equity considerations in health care, how policy components influence performance outcomes, and how political strategies can be designed to improve the political feasibility of policy reforms. This requires a clear understanding of what constitutes a health system, how the broader context and political economy influences health systems reforms, and how the complex interactions of different components—namely financing, payments, organizational structures and processes, regulations, and persuasion to change behavior—determine system performance and outcomes.

DESCRIPTION

The Health Systems Area of Specialization recognizes that professionals in health systems must be capable of doing advanced research and evaluating the quality and approach of research performed by others. To achieve this, students are exposed to the frontier of knowledge about health systems, potential areas of new research, and methods appropriate for advancing knowledge and conducting significant research. In particular, students in the Health System Area Specialization are required to take advanced courses in theories and methodologies in relevant social science, such as economics, political economy and organizational behavior.

Students are trained to apply knowledge that addresses major health system questions such as:

- How do changes in health system functions influence health system performance and achievement of goals?
- What financing approaches are appropriate for achieving goals shaped by different ethical values and under varied economic and social conditions?
- Which payment mechanisms are effective in controlling healthcare costs and improving quality of healthcare services?
- How can regulation make the private sector more responsive to societal needs?

- How do political structures and processes affect opportunities for adoption and implementation of health system reforms?

A multidisciplinary approach is the foundation of the Health Systems major. While economics can provide insights into financing and payment issues, political science can help explain policy choices and consequences as well as assess the feasibility of proposed reforms. In organizational design, organizational behavior and economics interact to understand how institutions can be organized and how such organizations respond to incentives. To become experts in policy analysis and evidence-based policymaking, health systems doctoral students learn an advanced level of quantitative skills and methods in evaluation science, epidemiology and biostatistics, and their application to real-world health system problems.

Building knowledge about interdisciplinary approaches to health systems research is a demanding pursuit, requiring both a deep understanding of disciplinary expertise as well as contextual knowledge of health systems in different national settings. The Health Systems major provides a solid disciplinary base for students, while developing skills in crossing disciplinary boundaries in order to analyze health system problems. Through coursework and applied research, students learn to integrate theories and methods from various disciplines and apply them to analyze critical health system issues.

The Health Systems Area of Specialization is based in the Department of Global Health and Population, and draws on faculty and courses throughout Harvard University. Program faculty, who work globally with many countries and international agencies, are recognized leaders in the field of health systems analysis and have published widely on the subject. Past collaborative work culminated in the book *Getting Health Reform Right*[1] which is used for teaching at Harvard Chan School as well as at a joint World Bank course entitled the "Flagship Course on Health Sector Reform and Sustainable Financing." Faculty members have contributed to major research projects evaluating health systems, including financing and payment systems, burden of disease and cost benefit analysis, National Health Accounts, decentralization of health systems, human resources, benchmarks of fairness for health system reform, and political analysis. Faculty members are involved in many international projects supporting health system reform in low- and middle-income countries as well as more advanced economies.

Opportunities for doctoral research include topics such as: how changes in health systems influence national health spending and outcomes, the impact of performance-based payment on quality of health care services delivery, competition between public and private providers and the impact on cost, quality and efficiency, the organization and management of human resources to improve health system outcomes, the design and performance of health systems, regulation of health care and pharmaceutical products, equity determinants in health and in health systems, the political economy of health reforms, innovative financing methods to improve equity and efficiency of the health system, adoption of diffusion of complex health innovations in health systems, and consumer responses to characteristics of public and private health care providers.

[1] Roberts M, Hsiao W, Berman P, Reich M. Getting Health Reform Right: A Guide to Improving Performance and Equity, Oxford (2003).

REQUIREMENTS

The study of health systems includes theories and methods from economics, political economy and organizational behavior to understand and investigate systemic issues. Moreover, it is grounded in evidence that requires mastery of quantitative and qualitative evaluation methods.

At the end of this section, the core coursework, Field of Study, and Area of Specialization requirements are outlined. The first year courses cover several disciplines and prepare students for advanced doctoral level courses during the second year. Required courses not offered by GHP may be modified yearly by the Health Systems Core Faculty depending on changes in offerings by other schools and departments. Students with prior courses that cover topics and material found in Area of Specialization courses may petition for a waiver with the approval of the faculty offering the required course and the student's advisor.

Students in GHP are required to take a two part Written Qualifying Examination at the end of their first and second years. They must pass both parts independently to proceed in the doctoral program. After passing the Written Qualifying Exam, students will be expected to prepare a dissertation proposal and defend the proposal in a Preliminary Qualifying Exam.

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PAST THESES TITLES

Isabelle Feldhaus (2020), "Identifying Health System Priorities for Equitable Access to Health Services in Low and Middle-Income Countries"

Annie Haakenstad (2020), "Out-of-pocket Payments for Noncommunicable Disease Care: A Threat and Opportunity for Universal Health Coverage"

Ece Ozcelik (2020), "With or without: An assessment of Brazil's More Doctors Program on population health"

David Sando (2020), "Health System Quality and Improvement Strategies in Caring for People with HIV and Cardiovascular Diseases: Studies from Tanzania, Uganda, and China"

Zeina Siam (2020), ""Essays on Patient and Provider Behaviors for Maternal and Child Health"

Radhika Jain (2019), "The Effectiveness of Public Health Insurance: Evidence from Rajasthan, India"

Erin Kinsella James (2019), "Sin taxes and public health: political process and distributional consequences in Mexico and Colombia"

Zhihui Li (2019), "Determinants of Child Health in Developing Countries – Social, Environmental, and Policy Perspectives"

Lingrui Liu (2018), "Three Studies on Improving Health System Performance"

Ellen Moscoe (2018), "Health behaviors and behavioral economics: Essays on HIV, malaria, and exercise"

Osondu Ogbuoji (2018), "Factors affecting patient perceptions of quality and health seeking behavior"

Angela Chang (2017), "Falling short of expectations: Improving healthcare delivery gaps for HIV, non-communicable diseases, and childhood vaccination"

Adanna Chukwuma (2017), "The Politics and Impact of Perinatal Health Interventions in Nigeria"

Jan-Walter De Neve (2017), "Essays on Schooling and Health in sub-Saharan Africa"

Karima Ladhani (2017), "Healthy Workforce, Healthy Baby? Quantitative and Political Analyses of Health Workers in Mexico"

Iryna Postolovska (2017), "Health Financing and Delivery in Low- and Middle-Income Countries in the SDG Era"

Chantelle Boudreaux (2016), "Essays on Maternal Health Services: Utilization & Quality"

Heather Lanthorn (2016), "Achieving Access to Antimalarials views from Ghana on the Political-Economy of Adopting and Implementing the Affordable Medicines Facility – Malaria (AMFM)"

Mingqiang Li (2016), "Physician Agency, Patients' Trust and Institutions within Physician Groups"

Indrani Saran (2016), “Health Behaviors in the Context of Malaria Treatment in Uganda”

Julia Goldberg Raifman (2015), “Essays on HIV & Malaria Treatment in sub-Saharan Africa”

Dian Kusuma (2015), “Essays on Health Financing for the Poor”

Corrina Moucheraud (2015), “Evaluation of Strategies and Outcomes in Maternal and Child Health”

Susan Powers Sparkes (2015), “The Political Economy of Health Reform: Turkey’s Health Transformation Program, 2003-2012”

POSITIONS OF RECENT GRADUATES

Assistant Director for Program Research & Development – Harvard Ministerial Leadership Program
Postdoctoral Fellowship, University of Pennsylvania
Research Scholar, Duke Global Health Institute (DGHI)
Young Professional, Health, Nutrition, & Population Global Practice – World Bank Group, Washington D.C.
Assistant Professor – Heidelberg Institute of Public Health, Heidelberg, Germany
Postdoctoral Research Fellow – Institute for Health Metrics and Evaluation (IHME), University of Washington
Assistant Professor – Texas A&M Health Science Center
Assistant Professor – University of California Los Angeles (UCLA)
Assistant Professor of Global Health – Boston University
Manager, Market Strategy for Special Programs – Kaiser Permanente
Research Officer – Alliance for Health Policy and Systems Research, Geneva
Senior Research Associate, Applied Analytics Team – Clinton Health Access Initiative
Senior Program Officer – Results for Development Institute
Post-Doctoral Fellow – Brown University and University of Southern California
Junior Economist – Health Division, OECD
Nutrition Specialist – UNICEF (Knowledge Management Focal Point)
Chair of Non-Communicable Diseases Research Center – Tehran University Medical Sciences
Research Fellow – Center for Global Health, Washington, D.C.
Lecturer – London School of Hygiene and Tropical Medicine
Assistant Professor of Medicine (Research) – Brown University
Pharmaceutical Specialist – World Bank, Washington, D.C.
Director – Center for Health Policy Research, Sri Lanka
Health Systems Strengthening Program Officer – PATH
Postdoctoral Research Fellow – Harvard T.H. Chan School of Public Health
Health Systems Specialist on Planning – San Francisco VA Medical Center

PHD-PHS GLOBAL HEALTH AND POPULATION

COURSE REQUIREMENTS FOR
HEALTH SYSTEMS AREA OF SPECIALIZATION

CORE REQUIREMENTS	CREDITS (17.5)	YEAR WHEN COURSE SHOULD BE TAKEN
PHS 2000 A/B (Fall & Spring) Quantitative Research Methods in PHS	10.0	1
SBS 506 (Fall 1) Introduction to History, Politics, & Public Health: Theories of Disease Distribution & Health Inequities	2.5	1
EPI 201 (Fall 1) Introduction to Epidemiology: Methods I	2.5	1
EPI 202 (Fall 2) Epidemiologic Methods 2: Elements of Epidemiologic Research	2.5	1
HPM 548 (option of Fall 1 or Spring 1) Responsible Conduct of Research	1.25*	1

*Auditing grade mode available for HPM 548.

DEPARTMENT REQUIREMENTS	CREDITS	YEAR WHEN COURSE SHOULD BE TAKEN
GHP 210 (Fall) Concepts and Methods in Global Health and Population	5.0	1

HEALTH SYSTEMS REQUIREMENTS	CREDITS (42.5)	YEAR WHEN COURSE SHOULD BE TAKEN
Domain I: Measurement of Health System Performance • GHP 501 (Spring 1) Modeling for HS Analysis & Priority Setting (2.5) • GHP 201 (Spring 2) Advanced Modeling for HS Analysis & PS (2.5) • GHP 506 (Spring 2) Measuring Population Health (2.5) *note: GHP 220 prerequisite, subject to instructor approval*	7.5	1 1 1
Domain II: Explanation of Health Systems Performance with Social Science Theories • GHP 202 (Spring 1) Comparative Health Systems I (2.5) • GHP 203 (Spring 2) Comparative Health Systems II (2.5) • 20.0 credits from any combination of the below fields 1. ECONOMICS • GHP 237 (Spring 2) Behavioral Economics and Global Health (2.5) • ECON 2020a (Fall) Microeconomic Theory I (5.0) (*note: this course serves as a prerequisite for most courses in economics across Harvard and MIT*) • ECON 2020b (Spring) Microeconomic Theory II (5.0) (*note: this course serves as a prerequisite for most courses in economics across Harvard and MIT*) • ECON 2035 (Fall) Psychology and Economic Theory (5.0) • ECON 2326 (Fall) Economic Development: Theory, & Evidence (5.0) • ECON 2390 (Fall) Development Economics (5.0) • ECON 2390D (Fall) Research in Development Econ (5.0) *Not offered 20-21* • ECON 2395 (Fall) Health, Inequality and Development (5.0) *Not offered 20-21* • ECON 2465 (Spring) Health Economics (5.0) • ECON 3460c (Fall) Research in Health Economics (5.0) • MIT 14.271 (Fall) Industrial Organization (5.0) • MIT 14.272 (Spring) Industrial Organization (5.0)	25	1 and 2

• MIT 14.273 (Spring) Advanced Topics in Industrial Organization (5.0) • MIT 14.771 (Fall) Development Econ: Microeconomic Issues and Policy Models (5.0) 2. POLITICAL ECONOMY • GHP 212 (Fall 2) Political Economy of Health Sector Reform (2.5) • MIT 14.770 (Fall) Introduction to Collective Choice and Political Econ (5.0) • MIT 14.773 (Spring) Political Economy: Institutions and Development (5.0) • MIT 17.100J (Spring) Political Econ I: Theories of the State and the Econ (5.0) • GOV 1759 (Spring) Behav Insights & Public Policy: Nudging for Good (5.0) • GOV 2176 (Fall) Varieties of Capitalism and Social Inequality (5.0) • DEV-102 (Spring) Economic Development: Using Analytical Frameworks for Smart Policy Design (5.0) • DEV-308 (Spring) Social Institutions and Economic Development (5.0) • DEV-309 (Fall) Development Policy Strategy (5.0) • HKS IGA 112 (Fall) The Politics and Ethics of Statecraft (5.0) 3. ORGANIZATIONAL BEHAVIOR • HBS 4880 (Fall) Macro Topics in Org Behavior: Org and Mgmt Theory (5.0) • HBS 4882 (Spring) Micro Topics in Organizational Behavior (5.0) • MIT 14.282 (Fall) Intro to Organizational Economics (5.0) • MIT 14.283 (Spring 1) Advanced Topics in Org Economics I (3.3) • MIT 14.284 (Spring 2) Advanced Topics in Org Economics II (3.3) • MIT 15.341 (Spring) Individuals, Groups, and Organizations (5.0) • MLD 277/EDU A612 (Spring) Organizing: People, Power, Change (5.0)		
Domain III: Evaluation of Interventions to Improve Health Systems Performance • GHP 228 (Spring) Econometric Methods in Impact Evaluation (5.0) AND CHOOSE 5.0 CREDITS FROM THE FOLLOWING: o API 222 A/B (Fall) Machine Learning and Big Data Analytics (5.0) o BST 223 (Spring) Applied Survival Analysis (5.0) o GOV 2001 (Spring) Advanced Quantitative Research Methods (5.0) o GOV 2798 (Spring) Field Experiments for Policy & Program Eval (5.0) o GHP 525 (Fall) Econometrics for Health Policy (5.0) o GHP 270 (Fall) Knowledge and Research Design in Global Health (2.5) o GHP 292 (Spring) Research Methods for Health System Analysis (2.5) o ECON 2110 (Fall) Econometric Methods for Applied Research (5.0) o ECON 2115 (Spring) Econometric Methods II (5.0) o ECON 2120 (Fall) Intro to Applied Econometrics (5.0) o MIT 14.380 (Fall) Statistical Methods in Econometrics (5.0) o MIT 14.381 (Fall) Applied Econometrics (5.0) o MIT 14.382 (Spring) Econometrics (5.0) o MIT 14.385 (Fall) Nonlinear Econometric Analysis (5.0) o MIT 14.386 (Spring) New Econometric Methods (5.0) o SBS 263 (Spring) Multilevel Stat Methods (5.0) o EPI 501 (Spring) Dynamics of Infectious Diseases (2.5) o EPI 530 (Spring) Introduction to Infectious Disease Modeling (2.5)	10.0	2

Total Credits Required: 65

NOTE: All courses taken to fulfill a requirement must be taken for a letter grade (ordinal). No Audits or Pass/Fail grades are permitted with the exception of HPM 548. Optional courses may not be available every year. Students are advised to check early in the year and plan accordingly with advisor.

POPULATION AND FAMILY HEALTH
AREA OF SPECIALIZATION

Head, Prof. Goodarz Danaei, (gdanaei@hsph.harvard.edu)

Assessments of levels, patterns and trends in population health are essential for identifying priorities, monitoring progress, and planning, executing and evaluating health policies. One key component in these assessments is an understanding of the growth, structure and change of human populations (demography), including measurement of mortality and causes of death, along with broader assessments of health and functioning, informed by analyses rooted in the disciplines of epidemiology and biostatistics. Global, regional, national and subnational analyses, attempting to partition the factors determining population health, require competence in several cognate areas including the capacity to translate census, survey and routine health statistics into summary assessments for priority-setting and action. Another key component is the use of population- based demographic and health data to investigate the causal impacts of health interventions (such as strategies to fight HIV, tuberculosis, malaria, or non-communicable diseases) and of primary healthcare and universal coverage reforms on population composition and health. Such analyses require skills in the use of individual-, household-, and community-level data, and an understanding of causal inference and evaluation methods.

This area of specialization is designed to provide the foundation for work on population and family health around the world. The required coursework illustrates the way in which quantitative methods from demography, epidemiology, statistics and other disciplines can be applied to new challenges in burden of disease assessments. Since much of the work requires analysis of large-scale survey, surveillance systems, census and routinely collected health data, some recommended courses explain the major methods in data collection and analysis. Examination of causes of death and morbidity are based on combinations of demographic and epidemiological principles. Although the training is primarily quantitative, an understanding of the value of qualitative, ethnographic and mixed-methods approaches is encouraged. These methods are valuable in understanding culturally specific norms and values relating to health and health behaviors, including those related to sex and reproduction.

On completion of this area of specialization, students are expected to have the skills and conceptual understanding to develop their own research plans in a number of areas, mainly focusing on population and family health issues in low-income countries. Prior students in this field have written dissertations on HIV/AIDS and infertility in Tanzania; religion and its role in determining the sexual behavior of Ghanaian adolescents, infertility in China and Chad, male and female fertility in The Gambia; longitudinal studies of child growth, development, and mortality in rural Africa; the causes and consequences of induced abortion in Mexico and Ghana; family planning promotion and its effect on rural fertility in The Gambia; domestic violence as a public health issue in Jordan; abortion in Accra, Ghana; evaluation of malaria control interventions in Africa; proposal of new methods for correcting underreporting in vital events; and the contribution of primary health care to child survival in Africa; among other topics.

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PAST THESES TITLES

Alexander Kintu (2020), “The Impact of HIV and Antiretroviral Therapy on Cardiovascular Diseases in sub-Saharan Africa”

MK Quinn (2020), “Perinatal Nutrition & Infection Interventions in Sub-Saharan Africa: Timing & Mechanisms of Action”

Allison Portnoy (2020), “Costing and Evaluating Human Papillomavirus (HPV) Vaccine Delivery Strategies in Low- and Middle-income Countries (LMICs) Utilizing Modeling and Economic Analyses”

Alexander Radunsky (2020), “HIV Risk, Prevention and Testing in sub-Saharan Africa: Mixed Methods Analysis”

Sarah McGough (2019), “Anticipating Outbreaks: Predictive Modeling to Improve Infectious Disease Surveillance”

Danielle Poole (2019), “Minding the gap in forced migrant health: spatial, social, and structural determinants of morbidity and mortality in transit”

Leigh G. Senderowicz (2019), “Conceptions and Measurement of Contraceptive Autonomy”

Jigyasa Sharma (2019), “From counting contacts to making contacts count: Empirical analyses of facility-based maternal and newborn care quality”

Kathryn Andrews (2018), “Risks, interventions, and costs in early life health and development”

Simiao Chen (2018), “Economics of HIV Vaccine and HIV Vaccine Research and Development”

Yvette Efevbera (2018), “Girl Child Marriage, Health, and Well-Being in Sub-Saharan Africa: A Mixed Methods Investigation”

Pascal Geldsetzer (2018), “The socio-demographic characteristics of diabetes, hypertension, and cardiovascular disease risk in India”

Joshua Jeong (2018), “Fathers' Parenting and Early Child Development”

Elysia Larson (2018), “Measurement and evaluation in maternal and child healthcare: diagnosing poor quality and testing solutions”

Katrina Ortblad (2018), “HIV self-testing and female sex workers: An exploration of delivery models, test performance, and behavioral change in sub-Saharan Africa”

Akshar Saxena (2018), “Effect of Retirement on Health and Mortality”

Maria Steenland (2018), “Examining the effect of supply and demand-side interventions to increase health service use”

Noah Haber (2017), “Essays on HIV in Rural KwaZulu-Natal, South Africa: Inference from Measurement to Policy”

Mahesh Karra (2017), “Essays on Maternal and Child Health, Fertility, and Economic Well-Being in Low- and Middle-Income Countries”

Brian Patenaude (2017), “Health, Behavior & Economic Analysis: Preference Elicitation Biases and the Welfare Consequences of Health Interventions in Sub-Saharan Africa”

Elina Pradhan (2017), “Beyond Health Technology Assessments: Evaluating the Impact of Scaling up Technology Interventions in Maternal and Child Health”

Carlos Riumallo-Herl (2017), “Essays on well-being, old age pensions, and health”

Emily Smith (2017), “Maternal and Child Health, HIV, and Nutrition”

Jesse Heitner (2016), “Influencing Health Behaviors via Short Message Service (SMS): Evidence for Best Practices from Dar es Salaam, Tanzania and Xi’an China”

Ashkan Afshin (2015), “Diet, Cardiometabolic Health, and Policy”

Andrea Feigl (2015), “Managing Non-communicable Disease Risk Factors in Developing Countries: Tobacco Control, Cardiovascular Disease Risk Surveillance, and Diabetes Prevention”

Mathieu Maheau-Giroux (2015), “Malaria Vector Control in sub-Saharan Africa”

Yuan Lu (2015), “The Impact of Multiple Risk Factors and Preventive Interventions on Cardiovascular Diseases and Disparities”

POSITIONS OF RECENT GRADUATES

Postdoctoral Fellowship, Population Studies and Training Center, Brown University

Postdoctoral Fellowship, International Clinical Research Center (ICRC), University of Washington

Postdoctoral Fellowship, Harvard T.H. Chan School of Public Health

Assistant Professor of Global Development Policy, Pardee School of Global Studies at Boston University

Young Professional, Health, Nutrition, and Population Global Practice – World Bank Group

Postdoctoral Research Fellow, Carolina Population Center, University of North Carolina

Research Fellow – Department of Global Health and Population, Harvard T.H. Chan School of Public Health and Postdoctoral Research Fellow – Center for Nutrition, Boston Children's Hospital, Division of Gastroenterology, Hepatology and Nutrition

Assistant Professor of Epidemiology, McGill University

Research Fellow, Development Economics Group, Wageningen University, Bukavu, DRC

Assistant Professor, Harvard School of Public Health

Senior Technical Officer, Measurement, Learning and Evaluation, Urban Reproductive Health Initiative, Carolina Population Center, UNC-CH

Research Scientist, Environmental Protection Agency

Assistant Professor, Boston University, Department of International Health

Associate Professor, Johns Hopkins University School of Public Health

Senior Monitoring and Evaluation Advisor, Pathfinder International

Assistant Professor, Arnold School of Public Health, University of South Carolina

PHD-PHS GLOBAL HEALTH AND POPULATION

COURSE REQUIREMENTS FOR
POPULATION AND FAMILY HEALTH AREA OF SPECIALIZATION

CORE REQUIREMENTS	CREDITS (17.5)	YEAR COURSE SHOULD BE TAKEN
PHS 2000 A/B (Fall & Spring) Quantitative Research Methods in PHS	10.0	1
SBS 506 (Fall 1) Introduction to History, Politics, & Public Health: Theories of Disease Distribution & Health Inequities	2.5	1
EPI 201 (Fall 1) Introduction to Epidemiology: Methods I	2.5	1
EPI 202 (Fall 2) Epidemiologic Methods 2: Elements of Epidemiologic Research	2.5	1
HPM 548 (option of Fall 1 or Spring 1) Responsible Conduct of Research	1.25*	1

*Auditing grade mode available for HPM 548.

DEPARTMENT REQUIREMENTS	CREDITS (5.0)	YEAR COURSE SHOULD BE TAKEN
GHP 210 Concepts and Methods in Global Health and Population (Fall)	5.0	1

POPULATION AND FAMILY HEALTH REQUIREMENTS	CREDITS (17.5)	YEAR COURSE SHOULD BE TAKEN
GHP 220 Introduction to Demographic Methods (Fall 2)	2.5	1
GHP 506 Measuring Population Health (Spring 2)	2.5	1
GHP 265 Ethics of Global Health Research (Spring 2)	2.5	1 or 2
Methods (students must select 10.0 credits from the options in the list below)	10.0	Varies

Rationale: These courses provide in-depth analytical skills that were briefly introduced in PHS 2000. Choices should be based on the research the student plans to undertake for his/her dissertation.

- BST 222 (Fall) Basics of Statistical Inference (5.0) *BST 210 or BST 213 or PHS 2000A&B*
- BST 223 (Spring) Applied Survival Analysis (5.0) *choice of BST 210; 213; 232; 260; PHS 2000A*
- BST 226 (Spring) Applied Longitudinal Analysis (5.0) *choice of BST 210; 213; 232; 260; PHS 2000A*
- BST 228 (Fall) Applied Bayesian Analysis (5.0) *BST 210 or PHS 2000A&B and BST 222*
- GHP 534 (Spring 2) Introduction to Spatial Methods for Public Health (2.5)
- EPI 207 (Fall 1) Advanced Epidemiologic Methods (2.5) *EPI 204 or (BST210 and EPI289) or BST 233*
- EPI 289 (Spring 1) Epidemiology Methods III: Models for Causal Inference (2.5) *EPI 201 and 202*
- SBS 263 (Spring) Multilevel Statistical Methods: Concept and Application (5.0)
- STAT 160/260 (Fall) Design and Analysis of Sample Surveys (5.0)
- GHP 228 (Spring) Econometric Methods in Impact Eval (5.0) *Econometrics and intermediate micro-economics required*
- EDU S043 (Fall) Multilevel and Longitudinal Models (5.0) *S052, STAT 139, or equivalent*

STUDENTS MUST ALSO SELECT TWO TRACKS AND TAKE 10.0 CREDITS FROM EACH

1. NONCOMMUNICABLE DISEASES (NCDs)

Rationale: This collection of multidisciplinary courses will deepen students' understanding of the epidemiology of NCDs and prepare them to conduct research on these emerging global health threats. GHP 216 is an introductory course to the global epidemiology of NCDs, strategies for primary prevention and implementation of health services with a focus on low- and middle-income countries. GHP 207 covers the concepts and methods required to estimate the effect of risk factors or interventions on disease outcomes at the population level. While most of the course readings and examples are drawn from the field of cardiovascular epidemiology, the methods apply broadly to most NCDs. ID 537, GHP 208, EPI 213, and ID 240, will provide students with an in-depth understanding of NCDs including obesity, mental health, cancer, and injuries, respectively.

- GHP 207 (Spring 1) Risk Factors and Population Health (2.5)
- GHP 208 (Spring 2) Case Studies in Global Mental Health Delivery (2.5)
- GHP 213 (Summer 1) Global Cardiovascular Disease Prevention - Methods, Study Designs and CS (2.5)
- ID 510 (Fall 2) Nutritional Epidemiology of Cancer (2.5)
- ID 537 (Fall) Obesity Epidemiology (2.5)
- EPI 213 (Spring 1) Epidemiology of Cancer (2.5)
- ID 240 (Spring 1) Principles of Injury Control (2.5)

2. MATERNAL & CHILD HEALTH (includes reproductive health)

Rationale: ID 217 and GHP 208 focus on cross-cutting global health issues affecting maternal and child health (MCH), introducing students to the emerging global health challenges these present. GHP 231 introduces students to the concepts and current issues, while EPI 269 enables students to build on this foundation. GHP 504 introduces students to qualitative research methods with emphasis on MCH topics. SBS 246 examines MCH program and policy implementation.

- GHP 204 (Fall 1) Foundations of Global Mental Health (2.5)
- GHP 208 (Spring 2) Case Studies in Global Mental Health Delivery
- GHP 209 (Spring) Early Childhood Development in Global Contexts (5.0)
- GHP 231 (Spring 2) Sexual and Reproductive Health: A Global Perspective (2.5)
- GHP 504 (Spring 1) Qualitative Research Methods for Global Health (2.5)
- GHP 511 (Winter) International Perspectives on Justice for Children (2.5)
- GHP 553 (Fall 2) Human Rights Dilemmas in Child Protection (2.5)
- ID 217 (Spring) Nutrition and Global Health (2.5)
- EPI 269 (Fall 2) Epidemiologic Research in Obstetrics and Gynecology (2.5)
- SBS 220 (Spring 1) Society and Its Effects on Child Health (2.5)
- SBS 246 (Fall 2) Issues in Maternal & Child Health Programs and Policies (2.5)

3. INFECTIOUS DISEASE

Rationale: GHP 539 and IID 201 give a multidisciplinary perspective on Infectious Diseases (IDs). EPI260 provides modelling tools and GHP 534 provides spatial epidemiology tools, both applicable to several IDs covered in GHP 539 and IID 201. GHP 255 covers the rationale and mechanisms for major biological, behavioral and structural HIV prevention and treatment interventions. Lastly, GHP 532 uses a case-based teaching approach to address the design of efficient and effective global health interventions.

- GHP 255 (Fall 2) HIV Interventions: Rationale, Design, and Evaluation (2.5)
- GHP 539 (Fall 1) Control of Infectious Diseases in LMICs: Social, Political & Economic Dimensions (2.5)
- IID 201 (Fall 1) Ecology, EPI, and control of important parasitic diseases of developing areas (2.5)
- EPI 260 (Spring 2) Mathematical Modeling of Infectious Disease (2.5)
- GHP 532 (Spring 1) Introduction to Global Health Care Delivery (2.5)
- GHP 534 (Spring 2) Introduction to Spatial Methods for Public Health (2.5)

4. ECONOMICS

Rationale: The courses Econ2010a and 2020b are microeconomic theory courses that are required for more advanced courses in the economics department. When possible, students should take this microeconomic sequence in their first year and proceed to higher level courses in year two. The development economics sequence is useful particularly for

students planning field work. Psychology and economics covers issues in behavioral economics that have health applications.

- ECON 2020a (Fall) Microeconomic Theory I (5.0)
- ECON 2020b (Spring) Microeconomic Theory II (5.0)
- ECON 2390 (Fall) Development Economics (5.0)
- ECON 2326 (Fall) Economic Development: Theory and Evidence (5.0)
- ECON 3017 (Fall & Spring) Research in Health Economics (5.0)
- ECON 2035 (Spring) Psychology and Economic Theory (5.0)

5. RISK AND DECISION SCIENCE*

Rationale: This sequence of courses introduces quantitative methods and simulation modelling for decision analysis, cost effectiveness analysis, and economic evaluation. RDS 280 is an introductory course in decision analysis. RDS 285 and GHP 501 introduce different mechanistic modelling methods for decision analysis. GHP 201 builds on GHP 501, and offers advanced methods for modeling for health system analysis and priority setting in global health. RDS 282 is an intermediate-level course in economic evaluation, and RDS 290 is focused on the application of decision science methods to a research problem chosen by the student. The sequence RDS 280, 285, 282 and 290 have been deliberately developed to provide an introductory/intermediate sequence of decision science methods. RDS 284 focuses on the theoretical underpinnings of decision science, and is targeted to doctoral students with interests in this area.

- RDS 202 (Spring) Decision Science for Public Health (2.5)
- RDS 280 (Fall 2) Decision Analysis for Health and Medical Practices (2.5)
- RDS 282 (Spring 2) Economic Evaluation of Health Policy & Program Management (2.5)
- RDS 284 (Fall) Decision Theory (5.0)
- RDS 285 (Spring 1) Decision Analysis Methods in Public Health and Medicine (2.5)
- RDS 290 (Spring) Experiential Learning & Applied Research in Decision Analysis (2.5)
- RDS 500 (Fall 1) Risk Assessment (2.5)
- GHP 501 (Spring1) Modeling for Health System Analysis & Priority Setting (2.5)
- GHP 201 (Spring 2) Advanced Modeling for Health System Analysis & Priority Setting (2.5); *GHP 501*

*****Foundational courses in microeconomic theory (ECON 2020a & 2020b) are very useful for students intending to concentrate in this area

Total Credits Required: 60

NOTE: All courses taken to fulfill a requirement must be taken for a letter grade (ordinal). No Audits or Pass/Fail grades are permitted with the exception of HPM 548. Credits from courses appearing in multiple tracks may only be counted towards a single track.

APPENDICES

1. SM2 Advisor / Advisee Document
2. SM2 Thesis Guidelines
3. Outside Reader Procedures
4. Departmental Committees
5. Department Course Offerings (2020-2021)
6. Other Resources

Appendix 1

SM2 ADVISOR/ADVISEE DOCUMENT

For Academic Advisors to SM2 Degree Students in GHP

What is expected of you as an academic advisor?

- Comply with times when faculty attendance is required, these are noted in the Harvard Chan Faculty Handbook.
- Provide clear communication with advisees in advance of when you will be away and indicate who to contact in your absence.
- Be clear about how advisees should reach you and how to go about setting up appointments with you (e.g., email, sign-up sheet, office hours, or assistant).
- Use the appropriate resources available to you to provide advice. These include the Harvard Chan Student Handbook, the Department Degree Guide, the Master of Science Program Checklist, and the GHP Webpages.
- Take the time to familiarize yourself with the requirements of the GHP SM2 degree program. In conjunction with your advisees, you are responsible for making sure they take all the requirements in accordance with both the school's and department's time table.
- Be aware of key deadlines (these are often reminded by the Registrar's office and by the GHP Education Office).
- Read and respond to emails from your advisees in a timely fashion.
- You are expected to meet with your advisees ***at least*** once each quarter.
- Be aware of specific benchmarks in each year of this 2 year program and be prepared to hold additional meetings to discuss these with your advisee as appropriate – internships (year 1), and thesis and jobs/further schooling (year 2).
- Reinforce any expectations of attendance at certain events/seminars/etc. that have been made by the SM2 Committee or the Department Chair.
- If you have any type of concerns about your advisee, please contact Barbara Heil (617) 432-1179, who can help facilitate your concerns.

Specific Recommendations for Academic advisors of First Year Students

Pre-Orientation: Upon receiving the names and email addresses of your advisees from the Education Office in late July, you should be emailing a short note welcoming them to the department, encouraging them to read over the course information sent to them from the GHP Education Office, and let them know that you expect to set up a time to meet with them individually during orientation week to help finalize their schedules and answer other questions they may have.

Orientation: Each academic advisor is provided with a sign-up sheet (if interested). Please block off any times during which you have prior commitments and then attach it to your office door for students to sign up to see you for ½ hour blocks. This meeting provides an opportunity for you to both answer the student's questions and to lay out your expectations.

- Be clear about the process to follow for obtaining your approval for courses they plan to take.

- Be specific about the how many times you expect (at a minimum) to meet with your new advisee each term.

Post-Orientation (during 1st year):

- Begin discussing plans for summer research internships in late September.
- Based on internship selection, encourage them to think about using internship for the basis of their thesis; additionally encourage them to think about possible thesis advisors.
- Depending upon internship, students may need to consult *Human Subjects Committee Guidelines* and obtain the proper approval; should be done well in advance.

Specific Recommendations for Academic advisors of Second Year Students

- At beginning of academic year, discuss what they propose to do for a thesis and who they plan to ask to serve as thesis advisor and second reader.
- Each summer, the Education Office conducts an audit of the course work of our returning SM2 students and an email which lists any missing requirements is sent to each student and their academic advisor. This list should be carefully reviewed with your advisee at the beginning of the year to ensure that they complete all of the program requirements.
- Encourage students to take advantage of resume workshops, 'how to interview' workshops, and career fairs that are sponsored through the School's Career Services Office.
- Early in the year have conversations with them about their post-graduation plans – job or additional schooling? While you are not expected to secure jobs for your advisees, it is important that you get them thinking and planning for post-graduation. For those planning to join the work force, give them some direction such as recommending personal contacts and/or agencies, NGO's, etc., that they should follow-up with; share with them any opportunities that come across your desk or any that may become available in any of your current research.

For SM2 Degree Advisees in GHP

What is expected of you as an advisee?

- You will receive clear communication from your academic advisor in advance of when they will be away and information indicating who to contact in their absence should you have any questions. Upon receiving this notice, you should plan any necessary meetings accordingly.
- Be sure you are clear about how you should reach your academic advisor and how to go about setting up appointments (e.g., email, sign-up sheet, office hours, or assistant).
- Use the appropriate resources available to you for guidance. These include the Harvard Chan Student Handbook, the Department Guide, and the GHP Webpages.
- Take the time to familiarize yourself with the requirements of the GHP SM2 degree program. In conjunction with your academic advisor, you are responsible for making sure that you take all the requirements in accordance with both the school's and department's time table.
- Be aware of key deadlines; reminders are often sent by the Registrar's office and by the GHP Education Office.
- Read and respond to emails from your advisor and/or the Education Office in a timely fashion.
- You are expected to meet with your academic advisor ***at least*** once each quarter, but it is highly recommended that you do more than that.
- Be aware of specific benchmarks in each year of this 2-year program and be prepared to hold additional meetings to discuss these with your academic advisor as appropriate – internships (year 1), and thesis and jobs/further schooling (year 2).
- Have a clear understanding of the expectations of attendance at certain events/seminars/etc, which have been recommended by the SM2 Committee or the Department Chair.
- If you find yourself in a situation where you need any type of help and need to reach out to someone other than your advisor, we encourage you to contact Barbara Heil or Allison Conary in the GHP Education Office, who will help facilitate on your behalf.

Specific Recommendations for First Year Students

Pre-Orientation: In mid-summer you should expect to receive a short welcoming note from the department's Education Office. This note will arrive before the beginning of orientation and will include information on course requirements to help guide you when registration starts in August. When you arrive in late August for orientation, you will have the opportunity to meet with your academic advisor, fine tune your course schedule, and answer any other questions you may have.

Orientation: Each academic advisor is provided with a sign-up sheet. Please be sure to schedule a ½ hour time block to meet with your academic advisor. Use this opportunity to clarify any questions you have about the program, as well as understanding expectations. Gain a clear understanding about the process to follow for obtaining your academic advisor's approval for courses you plan to take, particularly with the electronic approval system.

- Be clear on how many times you should expect (at a minimum) to meet with your academic advisor each term.

Post-Orientation (during 1st year):

- Begin discussing plans for summer internships in late September. Be sure to take advantage of information provided by the 2nd year students based on their summer internship experiences. Sessions to hear directly from the 2nd year students are scheduled early in the fall and have been very useful to 1st year students in planning their internships.
- Based on internship selection, think about using the internship as the basis for your thesis; additionally think about possible thesis advisors.
- Depending upon the type of internship, you may need to consult *Office of Human Research Administration Committee Guidelines* and obtain the proper approval; this should be done well in advance.

Specific Recommendations for Second Year Students

- At beginning of academic year, discuss with your academic advisor what you propose to do for a thesis and who you plan to ask to serve as thesis advisor and second reader.
- Each summer, the Education Office conducts an audit of the course work of our returning SM2 students and an email which lists any missing requirements is sent to each student and their academic advisor. This list should be carefully reviewed with your academic advisor at the beginning of the year to ensure that you complete all of the program requirements.
- Take advantage of resume workshops, 'how to interview' workshops, and career fairs that are sponsored through the School's Career Services Office.
- Early in the year have conversations with your academic advisor about your post-graduation plans – job or additional schooling? It is important to understand that it is not the responsibility of your academic advisor to secure a job for you, but he/she will be able to give you some direction such as recommending personal contacts and/or agencies, NGO's, etc. It is your responsibility to follow-up on any leads or contacts provided to you. If you are thinking about pursuing the doctoral program in this department, you are encouraged to begin having conversations with the faculty working and supervising doctoral students in one of the department's majors as identified in the Department Guide. Conversations with current students may also be useful.

APPENDIX 2

MASTER OF SCIENCE THESIS GUIDELINES 2020-2021

1. Thesis Purpose

The thesis for the two-year Masters students serves several purposes:

- It provides an opportunity for the student to work on a new problem or issue of particular interest
- It allows the student to apply many of the research skills acquired in the different courses taken for the degree
- The thesis itself is proof of the student's mastery of certain skills that are required whether the student begins a research-based career or continues to a doctorate research degree
- It is a useful document that can be shown to employers and supervisors indicating a student's level of achievement in particular areas of research

The research skills and understanding that we expect to see developed through the research thesis include:

- The capacity to conceptualize a problem and to identify the key questions that need to be addressed
- The ability to reduce broad questions and issues to a specific research question that can be answered with the resources available to the student
- The capacity to apply the technical skills acquired in the courses taken during the two-year period of training
- The capacity to concisely summarize new conclusions based on existing evidence and on new findings obtained in the thesis
- The ability to frame the thesis in a broader context and to summarize how the findings contribute to the development of new knowledge and understanding in the domains of Global Health and Population
- The ability to write a scientific report of publishable quality

The system of grading (see below) reflects the importance we attach to each of these elements.

The Master's Thesis is required of all students enrolled in our Department's two-year SM program. Whilst work on the body of the thesis may begin as early as the summer between years 1 and 2, the final written version is produced during the student's second year in the program.

<u>Students are required to register for the thesis (GHP 299, year-long course) in the fall semester and spring semester of their second year</u>.

2. Thesis Structure

The thesis should include a statement of the problem and its relevance to public health, followed by sections such as:

- a critical analysis of the literature with the aim of clarifying current knowledge and formulating the questions that will be the subject of the thesis;

- a description of the methods and materials to be used in the analysis of the chosen problems or issues;
- an analysis of the materials that illustrate the student's mastery of the skills acquired in the course work in the School and elsewhere;
- a concluding section that deals with the public health implications of the work.

The best advice is to consult with your advisors for suggestions on which previous theses should be consulted as models for your own work. These are located in the GHP Education Office.

The *title and signature pages* are self-explanatory. Look at previous theses if in doubt. The *preface or foreword*, as is usual in all good books and theses, is the place where you can say a few more personal words about how the study came about, thank your sponsors, mention people who have been especially helpful and generally add relevant non-scientific information that does not fit in the more formal body of the thesis. The *introduction*, by contrast, opens up the issues you are about to address and positions the work in the flow of previous scholarship. The style here is thus more scientific and impersonal.

We are keen to have an *abstract* from you since often we are asked to summarize the work of our SM students and it's much better if you write this summary rather than one of us trying to do it for you. Books generally do not contain abstracts but in the case of your thesis, the best place to place this abstract would be after the table of contents as the list in the Guidelines suggests.

3. Credits and assessment

We encourage students and evaluators to think of the thesis as an essential tool in the development of a professional expertise in some part of global health and population. To this end, we have developed a scoring system that is meant to provide readers/assessors and students with a guide to the kind of criteria we will be using to assess the quality of each thesis.

Criterion	Maximum Score
Well-developed research question	10
Mastery of existing literature and knowledge	20
Use of appropriate methods	20
Analysis and interpretation of results	15
Conclusions and implications	15
High quality scientific writing following a standard protocol if applicable	20
TOTAL	100

The Thesis is taken on an ordinal basis only for a total of 5.0 credits. Students must register for GHP 299 in the fall semester and spring semester of their second year (2.5 credits per semester).

4. Supervisors, second readers and other faculty

The supervisor for the Thesis may be ***any*** faculty member within the Department, ***not*** necessarily the student's academic advisor. The thesis supervisor's role is to act as your technical guide on the project. He/she may suggest that you consult other faculty members as well. Students must meet on a regular basis with their thesis supervisor. The thesis supervisor also serves as the first reader and one of the assessors of the thesis.

The Department also requires a second reader. This person need not be a member of this Department but he or she is expected to hold an appointment in a university, a research institute or a professional organization concerned with global health and population. The second reader is involved in the production of the thesis as well as the overall assessment (see Section 5 below). ***If a student wishes to propose a Thesis Supervisor from outside the Department, the agreement of the Chair of the SM2 Committee is required.*** The main criterion used for selection of a second reader is their prior experience with the supervision and assessment of masters' theses, and their written agreement to serve in this role. The degree of involvement of the second reader can vary according to availability and expertise in the area. It is expected, however, that the second reader shall provide feedback at agreed-upon intervals.

Additionally you should plan on three key points of joint communication as a group (thesis supervisor, second reader and yourself): 1) when developing your statement; 2) mid-way in the process; and 3) before the submission deadline of Friday, March 19, 2021. These communications may take place in face to face meetings or electronically. Students are encouraged to make use of other faculty for production of sections of the thesis, perhaps using the tutorial contract as a means to ensure full participation in the process.

5. Tips on Planning

Previous students have found a summer internship to be an excellent way of consolidating skills learned during the first year and of providing both a topic and data for the thesis. We urge you to consider your recent internship experience in terms of your upcoming thesis work.

Students ***must*** follow the timeline for GHP 299. It is important to note the specific deadlines as well as the dates of required attendance.

6. Final Grading

The thesis must have ***two*** readers, your thesis supervisor, and a second reader. Both the thesis supervisor and the second reader will be responsible for grading the thesis. After consultation, they will agree on and submit one grade to the Education Office. The Education Office will be responsible for contacting the thesis supervisor and the second reader about the grade submission process.

7. Length and Format

The final thesis should not exceed 30 single-sided pages in length, including all diagrams, tables, and references. Appendices may be kept separately and they are not counted within the 30-page limit. All pages must be numbered. The thesis should be typed using single line spacing, font size 12. All information should be appropriately referenced and references should appear at the end (no footnotes). Students may use ENDNOTE or variations thereof. With Endnote, the bibliography can either be formatted alphabetically or numerically. The point of the exercise is to learn how to produce a full referenced document with a complete bibliography – the kind of standard expected of journals and other professional publications. The thesis should be permanently bound with a stiff cover, no staples, clips or ring binders. Samples are in the Education Office, and students are encouraged to look at them. The Thesis should contain the following sections **within the 30-page limit**:

- Title page (see next page for format)
- Signature page (see next page for format)
- Preface
- Table of Contents
- Thesis Abstract
- Thesis text with graphs and tables
- References
- *Appendices **(NOT part of the 30-page limit)***

8. Final submission of the completed thesis

After all the changes have been made and approved by the two readers, the student is responsible for submitting **ONE signed copy** of the thesis in its **final bound form** to Barbara Heil or Allison Conary in the GHP Education Office by **Friday, May 14, 2021 at 12:00 noon**.

The final bound and signed copy must be received by the GHP Education Office before grades are submitted to the Registrar's office.

APPENDIX 3

OUTSIDE READER PROCEDURES

The student and their Dissertation Advisory Committee should meet as soon as the first complete draft of the thesis is in view to discuss possible nominees for the outside reader. All members of the DAC must agree that the thesis is ready for the Outside Reader review before the process may begin. When considering these individuals, please refer to the following criteria:

The Outside Reader should:

a) Be a full professor in a major academic institution with years of experience with the direction and assessment of doctoral dissertations. In general, based on this criterion, those in firms and development agencies are unacceptable.
b) Be a leading figure with professional standing in the field. This is important since we often find our Outside Readers are very valuable as referees for jobs and promotion after graduation.
c) Have worked in the student's area of research (usually evidenced by appearing in the student's bibliography).
d) Should be individuals NOT previously involved directly with the research or the production of the thesis since we are seeking an assessment independent of the work of the student and the previous guidance provided by the DAC.

Contacting a Potential Outside Reader

Once the Research Committee and the student have agreed upon 2-3 individuals as potential Outside Readers based on the criteria outlined above, the following should take place PRIOR to materials being submitted to Barbara Heil for review by the GHP Doctoral Committee. The agreed upon first choice should be contacted informally. This is normally done either by a committee member who knows/is familiar with the individual, or, if no one on the committee has a direct connection, the Committee Chair reaches out. The purpose of this step is really to check on the availability of the first choice individual. This is done by explaining that:

"We are in the process of identifying an Outside Reader for one of our doctoral students who will be defending their thesis soon, and I wanted to explain the process to you and check with you regarding your interest and availability."

The committee member then informs the potential Outside Reader of the following:

- the thesis topic
- the approximate date that they should expect to receive the thesis
- that they will have 6 weeks to review the thesis
- that they will receive a modest honorarium for their work ($500)

- that more detailed information about the review process and specific dates will be provided when the full thesis is sent

The goal is to confirm that your first choice is interested, willing, and available to serve in this capacity based on the dates and information provided to them. This informal step serves to prevent the situation of having a student's first choice approved of by the Doctoral Committee and then subsequently finding out that they are not available to perform this task.

1. With the DAC's approval, the student submits the following materials to Barbara Heil in the Education Office for distribution to the doctoral committee for review:

    a) an abstract of the thesis;
    b) a copy of the bibliography, even if incomplete;
    c) 2-3 names of possible Outside Readers meeting the criteria above with a description of how the work of each is tied to the student's thesis work and the suitability of the person to serve as an Outside Reviewer.

2. The Doctoral Committee will review the materials and inform the student of their preferred nominee with a reserve in case of refusal.

3. Once the nominee has agreed to serve as the Outside Reader, the student's DAC will meet with the student and agree on the final timetable up to and including the thesis defense.

4. The student will then be responsible for emailing their thesis to Barbara Heil **eight weeks** prior to the defense date. **All of the student's DAC members must be copied on this email**. The Education Office will then send the thesis directly to the reader for review. At this time, the role of the reader is explained with the attached instruction sheet and details of responsibilities, the time frame and remuneration. Note that the thesis must be complete (all sections written, tables, graphs and references included) even though the Reader and the Committee recognize this as the penultimate version of the thesis prior to the defense.

5. During this review process, the only communication with the Outside Reader will be through the Doctoral Committee Chair and/or the Education Office. Neither the student, nor members of the student's DAC may contact the outside reader directly at any time during this process.

6. The Outside Reader's report is sent directly to Barbara Heil in the Education Office and is circulated immediately without commentary to all members of the Doctoral Committee, to the student's DAC and to the student before the public defense of the thesis.

7. If the Outside Reader fails to provide a report within the agreed timetable, the Doctoral Committee will take action to ensure that the defense is not unduly delayed.

Recommendations from the Outside Reader

Once the report has been received from the Outside Reader, the student meets with the DAC to review the commentary and to agree on a strategy for responding to any criticisms before the thesis defense and the production of the final version of the thesis. In the past, these comments have included a mix of general commentary, strategic and theoretical and some more detailed points, both statistical and grammatical. After meeting with their DAC to discuss the remarks and recommendations of the Outside Reader, the student will send a brief memo to Barbara Heil outlining the agreed upon next steps. This memo will be circulated to the Doctoral Committee.

In the event that the Outside Reader indicates that the student's thesis is not ready to be defended, the Department Chair will make a determination on the scheduling of the defense after consultation with both the DAC and Doctoral Committees.

DEPARTMENT DEGREE COMMITTEES 2020-2021

DOCTORAL COMMITTEE

Winnie Yip (*Chair*), wyip@hsph.harvard.edu
Rifat Atun, ratun@hsph.harvard.edu
David Canning, dcanning@hsph.harvard.edu
Goodarz Danaei, gdanaei@hsph.harvard.edu
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Marcia Castro (*ex officio*), mcastro@hsph.harvard.edu

MASTER OF SCIENCE COMMITTEE

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Christopher Sudfeld, csudfeld@hsph.harvard.edu
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Aisha Yousafzai, ayousafzai@hsph.harvard.edu
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MASTER OF PUBLIC HEALTH – GLOBAL HEALTH

Jennifer Leaning, jleaning@hsph.harvard.edu and Shekhar Saxena, ssaxena@hsph.harvard.edu
Field of Study co-Leaders

APPENDIX 5

DEPARTMENT OF GLOBAL HEALTH AND POPULATION
COURSE OFFERINGS 2020-2021

FALL 2020

COURSE	SESSION	INSTRUCTOR	COURSE TITLE	CREDITS
GHP 210	Fall	Canning	Concepts and Methods of Global Health and Population Studies	5.0
GHP 965B	Fall	Leaning, Saxena	Practicum and Culminating Experience for Global Health	1.25 per semester
GHP 272	Fall	Bloom, Lamstein	Foundations of Global Health and Population	5.0
GHP 299A	Fall	Menzies + SM Committee	Master's Thesis	2.5 per semester
GHP 525	Fall	Bauhoff	Econometrics for Health Policy	5.0
GHP 557	Fall	Atun	Fundamentals of Global Health	5.0
ID 205	Fall	Balsari, Leaning	Societal Response to Disasters and War	2.5

GHP 230	Fall 1	McConnell	Intro to Econ with Applications to Health & Development	2.5
GHP 270	Fall 1	Reich	Knowledge and Research in Global Health	2.5
GHP 945A	Fall 1	Norheim	Practicum and Culminating Experience for Global Health	1.25 per term
GHP 539	Fall 1	Cash	Control of Infectious Disease in LMIC: Social, Political and Economic Dimensions	2.5
ID 250	Fall 1	Wikler, Norheim	Ethical Basis of the Practice of Public Health	2.5

GHP 212	Fall 2	Croke	Political Economy of Health Sector Reform	2.5
GHP 220	Fall 2	Castro	Introduction to Demographic Methods	2.5
GHP 244	Fall 2	Bossert	Health Sector Reform: A Worldwide Perspective	2.5
GHP 255	Fall 2	Sudfeld, Mayer	HIV Interventions: Rationale, Design, and Evaluation	2.5
GHP 262	Fall 2	Pham, VanRooyen	Emerging Issues in Humanitarian Response & HR Protection	1.25
GHP 288	Fall 2	Marks	Issues in Health and Human Rights	2.5
GHP 293	Fall 2	Wikler	Individual and Social Responsibility for Health	2.5
GHP 553	Fall 2	Bhabha	Human Rights Dilemmas in Child Protection *HKS IGA 342M	2.5
ID 552	Fall 2	Atun	Innovation in Global Health Systems	2.5

WINTER 2021

COURSE NUMBER	SESSION	INSTRUCTOR	COURSE TITLE	CREDITS
GHP 263	Winter	Dumbaugh	Grant Writing for Funding of Research & Health Care Projects	2.5
GHP 511	Winter	Aptel	International Perspectives on Justice for Children	2.5

GHP 297*	Winter	Bossert	Health Reform and Community Medicine in Chile	2.5
GHP 542*	Winter	Castro	Field Trip to Brazil	2.5
GHP 543*	Winter	Brüderlein	Humanitarian Field Study *HKS IGA 353M	2.5
GHP 544*	Winter	Reich, Lajous	The Mexican Health System: Reform, Implementation, & M/E	2.5
GHP 547*	Winter	Langer	Field Experience in Maternal Health	2.5

*Due to the COVID-19 pandemic, GHP travel courses may not be offered in winter 2021 or, the experiences will be redesigned and offered in a different format. Details will be shared as soon as possible.

NOT OFFERED

GHP 296	Winter	Field Trip to Nepal	2.5
GHP 298	Winter	Field Trip to India	2.5
GHP 540	Winter	Field Trip to Bangladesh	2.5

SPRING 2021

COURSE NUMBER	SESSION	INSTRUCTOR	COURSE TITLE	CREDITS
GHP 209	Spring	Yousafzai, McCoy	Early Childhood Development in Global Contexts *HGSE A827	5.0
GHP 228	Spring	Cohen	Econometric Methods in Impact Evaluation	5.0
GHP 299B	Spring	Menzies + SM Committee	Master's Thesis	2.5 per semester
GHP 515	Spring	Kayden, Gottlieb	International Humanitarian Response I *Tufts DHP 213 and NUTR 324	2.5
ID 217	Spring	Fawzi	Nutrition and Global Health	2.5

GHP 202	Spring 1	Yip	Comparative Health Systems I	2.5
GHP 204	Spring 1	Patel, Saxena	Foundations of Global Mental Health *HMS INDP 530	2.5
GHP 207	Spring 1	Danaei	Risk Factors and Population Health	2.5
GHP 231	Spring 1	Langer	Sexual and Reproductive Health: Global Perspectives	2.5
GHP 501	Spring 1	Verguet	Modeling for HS Analysis & Priority Setting	2.5
GHP 504	Spring 1	Yousafzai	Intro to Qualitative Research for Global Health	2.5
GHP 532	Spring 1	Rhatigan	Intro to Global Health Care Delivery	2.5
GHP 537	Spring 1	Greenough, Pham	Field Methods in Humanitarian Crises I	1.25

GHP 201	Spring 2	Verguet	Advanced Modeling for HS Analysis & Priority Setting	2.5
GHP 203	Spring 2	Yip	Comparative Health Systems II (to be approved)	2.5
GHP 208	Spring 2	Patel, Saxena	Case Studies in Global Mental Health Delivery *HMS SM518.0	2.5
GHP 237	Spring 2	McConnell	Behavioral Economics and Global Health	2.5
GHP 265	Spring 2	Cash	Ethics of Global Health Research	2.5
GHP 269	Spring 2	Bump	The Political Economy of Global Health	2.5
GHP 290	Spring 2	Kruk	Concepts and Methods for Analyzing Health System Quality	2.5
GHP 506	Spring 2	Menzies	Measuring Population Health	2.5
GHP 518	Spring 2	Kayden, Gottlieb	International Humanitarian Response II *Tufts DHP 213 and NUTR 324	1.25
GHP 945B	Spring 2	Norheim	Practicum and Culminating Experience for Global Health	1.25 per term
GHP 534	Spring 2	Castro	Introduction to Spatial Methods for Public Health	2.5
GHP 538	Spring 2	Pham, Greenough, Vinck	Field Methods in Humanitarian Crises II	1.25
GHP 552	Spring 2	S. Sathasivam	Leadership Development in Global Health	1.25
ID 212	Spring 2	Kruk	Large Scale Effectiveness Evaluations	2.5

SUMMER 2020

COURSE NUMBER	SESSION	INSTRUCTOR	COURSE TITLE	CREDITS
GHP 213	Summer 1	Danaei	Global Cardiovascular Disease Prevention – Methods, Study Designs and Case Studies	2.5
GHP 532	Summer 1	Rhatigan, Mukherjee	Introduction to Global Health Care Delivery	2.5
GHP 555	Summer 1	Weintraub	Management Practices in Health Care Delivery	1.25

APPENDIX 6

OTHER RESOURCES

In addition to the information printed within this Degree Guide, students at the Harvard T.H. Chan School of Public Health are expected to review and become familiar with the following resources:

HARVARD CHAN ACADEMIC CALENDAR
For important academic semester or term dates, enrollment deadlines, holidays, etc.

HARVARD CHAN STUDENT HANDBOOK
An important resource for incoming and current students to manage their academic affairs.

HARVARD CHAN COURSE CATALOG
Students should check back frequently for new course postings, classroom assignments, schedule changes, and course cancellations.

STUDENT KNOWLEDGE CENTER
Step-by-step guidance on enrollment procedures, cross-registration, instructor permission requests, waitlists, withdrawals, credit limits, priority waves, and independent studies and research credits.

OFFICE OF HUMAN RESEARCH ADMINISTRATION (OHRA)
Protecting the rights and welfare of subjects involved in human research.

STUDENT SUPPORT SERVICES
The Office for Student Services works to support students who are experiencing difficulties and to ensure the general well-being of the student body.

CAREER AND PROFESSIONAL DEVELOPMENT
Connecting the School's global network with resources and opportunities for professional growth.

Other important resources include:

OMBUDS OFFICE
Melissa Brodrick, Ombudsperson

STUDENT SERVICES
Kathryn Austin, Director of Financial Aid
Robin Glover, Associate Dean of Student Services
Vincent W. James, Director of Admissions
Leah Kane, Director of Student Affairs
Joann Wilson-Singleton, Registrar