



DEPARTMENT OF GLOBAL HEALTH

UNIVERSITY *of* WASHINGTON

PHD IN GLOBAL HEALTH:
METRICS AND IMPLEMENTATION SCIENCE
STUDENT HANDBOOK
2017-2018

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SECTION 1: PROGRAM INFORMATION

PROGRAM OVERVIEW

The Department of Global Health (DGH) PhD in Global Health: Metrics and Implementation Science Program builds on the expertise of our faculty in the areas of Metrics and Implementation Science. This unique, interdisciplinary PhD Program is comprised of a core curriculum in advanced quantitative methods, epidemiology, population health measurement, impact evaluations, and implementation science methods. Students develop skills through a combination of didactic courses, seminars, and research activities including primary data collection and analysis. This PhD Program trains global health researchers for careers in academic institutions, international organizations, Ministries of Health, foundations, and the private sector.

Program website: <http://globalhealth.washington.edu/phd>

PROGRAM LEADERSHIP

Emmanuela Gakidou, PhD
Co-Director, PhD in Global Health, Metrics
gakidou@uw.edu

Kenneth Sherr, PhD, MPH
Co-Director, PhD in Global Health, Implementation Science
ksherr@uw.edu

Céline Abell
Program Manager (PM), PhD in Global Health
celinea@uw.edu

PROGRAM GOVERNANCE

Committees address various student, program, department, and school activities and issues. Elections for these positions happen annually in September.

DGH PHD STUDENT REPRESENTATIVE

Duration and eligibility: Minimum one year, any student.

What is involved: Attend GH PHD faculty meetings and serve as liaison to the student body by providing input around Program and departmental initiatives. Oversee and serve as a resource for high concern departmental communication.

DOCTORAL STUDENT AFFAIRS (FUTURE COMMITTEE)

This committee will help maintain effective communication between the faculty and students of the Program. It organizes the new student orientation, Program retreat, research symposium, oversight of the Student Handbook and is a forum for discussion of non-academic student concerns.

STUDENT AFFAIRS REPRESENTATIVE

Duration and eligibility: Minimum one year, any students.

What is involved: Help organize and initiate Program events.

DEPARTMENT OF GLOBAL HEALTH CURRICULUM COMMITTEE (DGH CC)

Oversees the teaching program in Global Health including the detection of curriculum gaps, course duplication and overall quality control. Responsibilities include programmatic development, proposal of teaching assignments to the Chair, and supervision of peer and student evaluation.

STUDENT CURRICULUM REPRESENTATIVE

Duration and eligibility: Minimum one year, second year and continuing students.

What is involved: Membership, attendance, and participation in monthly department meeting (1.5 hours) along with faculty, staff, and student representatives.

STUDENT RECRUITMENT REPRESENTATIVES

Duration and eligibility: Length of program enrollment, all students.

What is involved: Work with program faculty and staff to recruit students to the program, including attending information sessions, responding to applicants, allowing PM to share email to potential applicants, and assisting with prospective student days.

DGH DIVERSITY REPRESENTATIVE

Duration and eligibility: Minimum one year, all students.

What is involved: Attend department diversity committee meetings and serve as liaison to the program student body by providing input around program and departmental initiatives.

GRADUATE AND PROFESSIONAL STUDENT SENATE (GPSS)

GPSS is the official student government for graduate and professional students at the University of Washington. GPSS provides students with representation both on campus and in the legislature, and builds community with regular communications and opportunities for involvement throughout the year.

STUDENT SENATE REPRESENTATIVE

Duration and eligibility: One to two years, first year and continuing students

What is involved: GPSS Senators are expected to communicate GPSS information and events to Global Health students.

DEPARTMENT OF GLOBAL HEALTH FACULTY

For a list of all DGH faculty, contact information, and research interests, please visit:

<http://globalhealth.washington.edu/faculty>

TUITION SCHEDULE

The tuition schedule is outlined on the UW website at: <http://opb.washington.edu/content/quarterly-tuition-and-fees>. Global Health PhD students pay Graduate Tier III Tuition and Fees.

ACADEMIC EXPECTATIONS POLICY

This policy is to clearly lay out academic expectations for students in the program. Students, faculty, and staff should use these guidelines to determine parameters for both academic performance and progress, and academic misconduct. For students struggling with academic progress and performance, or misconduct, the program will make every effort to provide early, appropriate, and consistent interventions to support student success.

DEFINING ACADEMIC PROGRESS, PERFORMANCE, & ACADEMIC MISCONDUCT

The program follows the [UW Graduate School's general guidelines](#) for defining academic progress and performance and the [University's Student Conduct Code](#) addressing academic misconduct. Evaluation includes:

GPA REQUIREMENTS

Grades will be monitored on a quarterly basis by PM and faculty leadership. Students who's cumulative or quarterly grade point average (GPA) falls below 3.0 are not considered to be making satisfactory performance and will be asked to meet with the Program Directors and the faculty advisor/dissertation Chair. Cumulative and quarterly GPAs are computed on course, taken while the student is enrolled in the UW Graduate School. Computation is based only on courses numbered 400-599; courses graded S/NS, and CR/NC/N are excluded, as are the 600-800 series.

PERFORMANCE IN THE FULFILLMENT OF DEGREE PROGRAM REQUIREMENTS

Students are expected to complete their coursework, exams, and dissertation research in a professional manner and to positively represent the University of Washington, School of Public Health, and DGH. Any infraction of academic misconduct qualifies as failing to meet expectations for performance and progress. Academic misconduct includes: plagiarism, multiple submissions of a single paper, cheating on an exam, illegal collaboration, and falsification of research. For more information, see the [Student Conduct Code](#) and the [Student Academic Responsibility Statement](#). We follow the [School of Public Health's procedures for Suspected Academic Misconduct](#). In addition to the School's process, faculty, students, and staff are asked to inform the program director in cases of suspected misconduct.

RESEARCH CAPABILITY, PROGRESS, AND PERFORMANCE

Students are responsible for establishing a workable timeline with their committee. It is the responsibility of the committee to evaluate research progress of students under their supervision and take proper action accordingly. Failure to progress or perform upon agreed terms is unsatisfactory progress and can qualify for probation, etc.

UNSATISFACTORY PERFORMANCE ON PRELIMINARY WRITTEN EXAMINATION

For students who do not pass, a retake examination will be offered one year later. Students who do not pass after two attempts will not be eligible to continue the doctoral program and may be offered the opportunity to complete a Master of Public Health (MPH) degree.

UNSATISFACTORY PROGRESS OF THE GENERAL EXAMINATION

It is the responsibility of the students committee to evaluate the performance on the General Examination.

The committee has three options that it may utilize in grading the General Examination

1. The committee may pass the student, in which case the student passes to PhD candidacy and progresses toward conferring the PhD degree.
2. The committee may decide to reexamine the student after a further period of study. The Dean of the Graduate School will approve no more than two reexaminations.

3. The committee may decide not to recommend the student for further work toward the PhD degree. The effect of this recommendation is termination of the student's enrollment in the doctoral program. If this occurs, a student may be offered the opportunity to complete a MPH degree.

ACTIONS FOR UNSATISFACTORY PERFORMANCE & PROGRESS OR ACADEMIC MISCONDUCT

The below recommendations may be taken if determination of unsatisfactory performance and progress or misconduct is made in consideration of a student's progress relative to other students in the program or to an individually negotiated schedule. In each situation, students will be required to meet with program leadership to review a letter from the program director including:

1. The circumstances involved and evidence that the action requested is supported by program leadership,
2. necessary steps and a timeline articulating what a student must do to return to good standing, and
3. consequences if the plan is not acted on.

WARNING

A 'warning' is issued in the following circumstances:

1. Student's cumulative GPA drops below 3.0
2. Student has failed to meet expectations for performance and progress

PROBATION

Probation is issued to students who have not corrected the deficiency that caused the warning action within the time limit specified or for students who depart suddenly and substantially from scholarly achievement. Note: A previous warning is not necessary.

FINAL PROBATION

Final probation is issued when students have not corrected the condition(s) that caused the probation recommendation within the time limit specified. Students who have corrected previous probation conditions, but failed additional performance requirements and did not progress toward completion of the program. Final probation is only recommended for one quarter, though the Graduate School will consider an additional quarter in extenuating circumstances. The program must recommend one quarter of final probation before recommending a drop.

DROP

A "drop" from the program is issued as a final action for students who have not corrected the condition(s) that caused the final probation recommendation within the time limit specified.

Recommendations for probation, final probation, and drop will be reviewed by the Dean of the Graduate School. Recommendations are noted on a student's unofficial transcript. In addition to notification from the program, students will receive final probation and drop status letters from the Dean of the Graduate School. No action will appear on the transcript for any subsequent quarter unless a new recommendation is made by the Dean.

GRIEVANCE PROCEDURE

Occasionally major difficulties arise during a student's tenure at the University. It is recommended that students first talk with program leadership within the department to resolve such issues. If the situation cannot be resolved within the department, specific grievance procedures are outlined in the [Graduate School Memo 33: Academic Grievance Procedure](#).

SECTION 2: DEGREE REQUIREMENTS

The degree may be completed in four to five years, generally through two years of coursework with the remaining time for dissertation research, primary data collection, writing, and defense. In order to qualify for the doctoral degree, it is the responsibility of the student to meet the following Graduate School minimum requirements:

1. Completion of a program of study and research as planned by the PM in the student's major department or college and the doctoral committee. At least 18 credits of course work at the 500 level and above must be completed prior to scheduling the General Examination.
2. Presentation of 90 credits, 60 of which must be taken at the University of Washington. With the approval of the degree-granting unit, an appropriate master's degree from an accredited institution may substitute up to 30 credits of enrollment. The Director of student's area of emphasis must approve this.
3. Numerical grades must be received in at least 18 quarter credits of course work taken at the UW prior to scheduling the General Examination. The Graduate School accepts numerical grades in approved 400-level courses accepted as part of the major, and in all 500-level courses. A minimum cumulative GPA of 3.00 is required for a graduate degree at the University.
4. Creditable passage of the General Examination. Registration as a graduate student is required the quarter the exam is taken and candidacy is conferred.
5. Preparation of and acceptance by the Dean of the Graduate School of a dissertation that is a significant contribution to knowledge and clearly indicates training in research. Credit for the dissertation ordinarily should be at least one-third of the total credit. The Candidate must register for a minimum of 27 credits of dissertation over a period of at least three quarters. At least one quarter must come after the student passes the General Examination. With the exception of summer quarter, students are limited to a maximum of 10 credits per quarter of dissertation (GH 800).
6. Creditable passage of a Final Examination, which is usually devoted to the defense of the dissertation and the field with which it is concerned. The [General](#) and [Final](#) Examinations cannot be scheduled during the same quarter. Registration as a graduate student is required the quarter the exam is taken and the degree is conferred.
7. Completion of all work for the doctoral degree within ten years. This includes quarters spent On-Leave or out of status as well as applicable work from the master's degree from the UW or a master's degree from another institution, if applied toward one year of resident study.
8. Registration maintained as a full- or part-time graduate student at the University for the quarter in which the degree is conferred (see detailed information under [Final Quarter Registration](#)).
9. A student must satisfy the requirements that are in force at the time the degree is to be awarded.

SECTION 3: PROGRAM COMPETENCIES & CURRICULUM

CORE COMPETENCIES (BOTH AREAS OF EMPHASIS)

1. Discuss and evaluate the major issues confronting global health, including their levels and trends, their determinants, and their effect on individual and populations.
2. Describe, evaluate and apply the methods and metrics used in the Global Burden of Disease Study and alternative summary measures of population health.
3. Develop in-depth skills to design, implement, monitor and/or evaluate health programs and health systems, including their inputs, outputs, effectiveness, cost-effectiveness, and financial management.
4. Describe the biology of major global health diseases, and differentiate among the pathogenesis of diseases, infectious disease transmission modes, genetic susceptibility, nutritional concepts and the biological basis of major biomedical public health interventions.
5. Explain and assess the functions, operations, processes and performance of health systems, including critical decision-making and priority-setting mechanisms.
6. Analyze, explain and assess the role of global institutions, international non-governmental organizations and major funders and review their impact on global health.
7. Identify and differentiate the principles of financing in global health and health systems at the macro-level and the micro-level.
8. Critically appraise the current literature, evaluate the evidence, synthesize findings, draw inferences, and apply theoretical and conceptual models from a range of relevant disciplines to global health.
9. Effectively collect, collate, synthesize, analyze and assess the quality of global health data, including primary and secondary data from health information systems and a variety of other sources.
10. Acquire qualitative, quantitative, operations research and modeling skills and apply them to developing new innovative solutions for global health problems.
11. Ensure the ethical and responsible conduct of research in the design, implementation and dissemination of global health research.
12. Develop culturally-relevant professional leadership skills to work collaboratively, and to motivate and inspire others to help solve global health problems.
13. Conduct independent research that is of publishable quality and is characterized by conceptual and methodological rigor, as well as practical value, and which demonstrates expertise in global health research.
14. Critically appraise grants and participate in the grant writing and review process.
15. Effectively communicate research findings and their implications to appropriate academic, professional, policy, and lay audiences.
16. Demonstrate skills critical to teaching and mentoring.

PROGRAM CURRICULUM

All students are expected to complete a minimum of 98 credits. This includes a minimum of 27 dissertation credits, 43 credits in the core requirements, 12 credits in the area of emphasis, and the remaining credits in elective courses.

CURRICULUM REQUIREMENTS	CREDITS
CORE CREDITS	43
<u>Global Health</u>	
G H 511 - Problems in Global Health	(4)
G H 535 - Advanced Methods for Global Health I	(4)
G H 536 - Advanced Methods for Global Health II	(4)
G H 537 - Advanced Methods for Global Health III	(4)
G H 541 - Fundamentals of Implementation Science in Global Health	(4)
G H 580 - Global Health Doctoral Seminar	(4)
<u>Epidemiology</u>	
EPI 512 – Epidemiologic Methods I	(4)
EPI 513 – Epidemiologic Methods II	(4)
<u>Quantitative Methods</u>	(8)
<u>Leadership, Policy & Management</u>	(3)
AREAS OF EMPHASIS	12
<u>Metrics</u>	
Advanced Quantitative Methods	(8)
Global Health Measurement	(4)
G H 539 – Methods, Tools, And Data in Global Health	
<u>Implementation Science</u>	
Advanced Health Systems Research Methods	(8)
Operations Research/Modeling	(4)
<u>ELECTIVES</u>	16
DISSERTATION	27
TOTAL CREDITS REQUIRED	98

CORE REQUIREMENTS

GLOBAL HEALTH (24 CREDITS)

G H 511 Problem in Global Health (4) Autumn

Explores social, political, economic, environmental determinants of developing countries' health; traces development of societal responses to problems. Includes: origins of primary healthcare; child survival; traditional systems; population; water; sanitation; international agencies; impact of economic policies. Case study formulating pharmaceutical policy in a developing country.

G H 535 Advanced Methods for Global Health I (4) Autumn

Introduces advanced methods for global health including implementation science theory and methods, qualitative research methods, mixed methods, and economic evaluation.

Pre-Requisites: EPI 512-513; and BIOST 517-518 (or equivalent statistics courses)

G H 536 Advanced Methods for Global Health II (4) Winter

Introduction to Global Burden of Disease (GBD), health systems analysis and strengthening, and operational research. Includes health systems definition, components, analysis and improvement (comparative health systems analysis, health system financing, reforms, insurance and financing health in low and middle-income countries), and operations research (modeling for decision making, systems improvement approaches).

Pre-Requisites: EPI 512-513; and BIOST 517-518 (or equivalent statistics courses)

G H 537 Advanced Methods for Global Health III (4) Spring

Advanced quantitative methods for Implementation Science and evaluation/study designs (considerations, designs and analysis techniques) process evaluations, randomized designs (cluster randomized trials, stepped wedge randomized trials), causal inference in non-experimental studies, quasi-experimental designs (segmented time-series regression, difference-in-differences), correlation (nested and repeated measures), and hybrid effectiveness and adaptive intervention designs.

Pre-Requisites: EPI 512-513; and BIOST 517-518 (or equivalent statistics courses)

G H 541 Fundamentals of Implementation Science in Global Health (4) Spring

Provides an introduction to the emerging field of implementation research by outlining various methods that are applied to improving implementation (including applied engineering, management tools, health systems, and policy research), and using experiential case studies from global health leaders. Addresses barriers to effective replication and scale-up in local settings.

G H 580 Global Health Doctoral Seminar (2 per Qtr, 4 total) Winter and Spring

The purpose of this course is to provide a foundation from all disciplines in global health to all incoming doctoral students. This four-quarter course is designed to expose students to the most critical issues in global health, bringing in the complementary perspectives of pathobiology, metrics, and implementation science to build a multidisciplinary understanding of these issues, including effective and appropriate strategies for their control. This course will contribute to the preparation of students for their preliminary examination.

EPIDEMIOLOGY (8 CREDITS)

EPI 512 Epidemiologic Methods I (4) Autumn

Considers principles and methods of epidemiology. Covers measures of disease frequency, descriptive epidemiology, overview of study designs, measures of excess risk, causal inference, screening, measurement error,

misclassification, effect modification, and confounding. First in a two-course sequence. Prerequisite: BOST 511, which may be taken concurrently, or equivalent.

EPI 513 Epidemiologic Methods II (4) *Winter*

Considers how epidemiologic studies may be designed to maximize etiologic inference. Covers infectious disease epidemiologic studies, randomized controlled trials, cohort studies, case-control studies, cross-sectional studies, ecological and multilevel studies, and selected topics such as meta-analysis. Second in a two-course sequence. Prerequisite: EPI 512.

QUANTITATIVE METHODS (8 CREDITS)

Students may choose from the following biostatistics (biost) or Center for Statistics & the Social Sciences (CS&SS) series to fulfill requirements.

BOST 511 Medical Biometry I (4) *Autumn*

Presents the principles and methods of data description and elementary parametric and nonparametric statistical analysis. Examples from the biomedical literature, and real data sets are analyzed by the students after a brief introduction to the use of standard statistical computer packages. Statistical techniques covered include description of samples, comparison of two sample means and proportions, simple linear regression and correlation.

BOST 512 Medical Biometry II (4) *Winter*

Multiple regression, analysis of covariance, and an introduction to one-way and two-way analyses of variance: including assumptions, transformations, outlier detection, dummy variables, and variable selection procedures. Examples drawn from the biomedical literature with computer assignments using standard statistical computer packages. Prerequisite: either BOST 511 or BOST 517, or equivalent.

BOST 513 Medical Biometry III (4) *Spring*

Analysis of categorical data including two sample methods, sets of 2 x 2 tables, R x C tables, and logistic regression. Classification and discrimination techniques. Survival analysis including product limit estimates and the Cox proportional hazards model. Prerequisite: BOST 512 or permission of instructor.

BOST 517 Applied Biostatistics I (4) *Autumn*

Introduction to the analysis of biomedical data. Descriptive and inferential statistical analysis for discrete, continuous, and right-censored random variables. Analytic methods based on elementary parametric and non-parametric models for one sample; two sample (independent and paired), stratified sample, and simple regression problems.

BOST 518 Applied Biostatistics II (4) *Winter*

Multiple regression for continuous, discrete, and right-censored response variables, including dummy variables, transformations, and interactions. Introduction to regression with correlated outcome data. Model and case diagnostics. Computer assignments using real data and standard statistical computer packages. Prerequisite: BOST 517 or permission of instructor.

CS&SS 501 Advanced Political Research Design and Analysis (5) *Winter*

Testing theories with empirical evidence. Examines current topics in research methods and statistical analysis in political science. Content varies according to recent developments in the field and with interests of instructor. Offered: jointly with POL S 501.

CS&SS 503 Advanced Quantitative Political Methodology (5) *Spring*

Theory and practice of likelihood inference. Includes probability modeling, maximum likelihood estimation, models for binary responses, count models, sample selection, and basis time series analysis. Offered: jointly with POL S 503.

LEADERSHIP, POLICY & MANAGEMENT (3 CREDITS)

Students may choose from the following to fulfill requirements.

G H 521 Leadership Development in Global Health (3) *Autumn*

Focuses on management and leadership skills for complex global health settings. Includes personal leadership strengths/values; management dilemmas, data-driven decisions; program planning design and evaluation; and resource management.

G H 522 Global Program Management and Leadership (3) *Winter*

Designed to expand the student's capacity to support individuals, groups, and organizations. Provides students an understanding of their current level of leadership performance and effectiveness, their strengths, and their development needs. Relies heavily on assessment, feedback, and interactive activities.

G H 523 Policy Development and Advocacy for Global Health (3) *Spring*

Provides a foundation for developing a generic leadership perspective and orientation to the issues associated with the organization, financing, and delivery of healthcare services. Introduces skills in organizing, managing, and leading complex systems and processes within a variety of local, regional, national, or global contexts.

METRICS

ADVANCED QUANTITATIVE METHODS (8 CREDITS)

Students may choose from the following to fulfill requirements.

BIOST 536 Categorical Data Analysis in Epidemiology (4) *Autumn*

Summary of univariate categorical data analysis; introduction to multivariate analysis of categorical epidemiologic and health sciences data using multiplicative models. Experience at interpretation; familiarity with available software programs gained by analysis of bona fide data and critiques of published analyses appearing in literature. Prerequisite: BIOST 515; EPI 513 and either BIOST 513 or BIOST 518; or permission of instructor. Offered: jointly with EPI 536.

BIOST 540 Correlated Data Regression (3) *Spring*

Introduction to regression modeling of longitudinal and clustered data from epidemiology and health sciences. Interpretation and familiarity with software gained by analysis of data and critiques of published analyses. Prerequisite: either BIOST 513, BIOST 515, BIOST 518, BIOST 536, or permission of instructor.

CSE 446 Machine Learning Data (4) *Autumn*

Methods for designing systems that learn from data and improve with experience. Supervised learning and predictive modeling: decision trees, rule induction, nearest neighbors, Bayesian methods, neural networks, support vector machines, and model ensembles. Unsupervised learning and clustering. Prerequisite: CSE 332; either STAT 390, STAT 391, or CSE 312.

CS&SS 510 Maximum Likelihood Methods for the Social Sciences (5) *Autumn*

Introduces maximum likelihood, a more general method for modeling social phenomena than linear regression. Topics include discrete, time series, and spatial data, model interpretation, and fitting. Prerequisite: POL S 501/CS&SS 501; POL S 503/CS&SS 503. Offered: jointly with POL S 510.

CS&SS 536 Analysis of Categorical and Count Data (3) Autumn

Analysis of categorical data in the social sciences. Binary, ordered, and multinomial outcomes, event counts, and contingency tables. Focuses on maximum likelihood estimations and interpretations of results. Prerequisite: SOC 504, SOC 505, SOC 506, or equivalent. Offered: jointly with SOC 536/STAT 536.

CS&SS 560 Hierarchical Modeling for the Social Sciences (4) Spring

Explores ways in which data are hierarchically organized, such as voters nested within electoral districts that are in turn nested within states. Provides a basic theoretical understanding and practical knowledge of models for clustered data and a set of tools to help make accurate inferences. Prerequisite: SOC 504, SOC 505, SOC 506 or equivalent. Offered: jointly with SOC 560/STAT 560.

CS&SS 564 Bayesian Statistics for the Social Sciences (4) Spring

Statistical methods based on the idea of probability as a measure of uncertainty. Topics covered include subjective notion of probability, Bayes' Theorem, prior and posterior distributions, and data analysis techniques for statistical models. Prerequisite: SOC 504, SOC 505, SOC 506 or equivalent. Offered: jointly with STAT 564.

CS&SS 566 Causal Modeling (4) Spring

Construction of causal hypotheses. Theories of causation, counterfactuals, intervention vs. passive observation. Contexts for causal inference: randomized experiments; sequential randomization; partial compliance; natural experiments, passive observation. Path diagrams, conditional independence, and d-separation. Model equivalence and causal under-determination. Prerequisite: course in statistics, SOC 504, SOC 505, SOC 506, or equivalent. Offered: jointly with STAT 566.

GLOBAL HEALTH MEASUREMENT (4 CREDITS)

Students must enroll in GH 539, and may choose from either of the following to fulfill additional requirements.

G H 533/HSERV 527/CS&SS 527 Survey Research Methods (4) Spring

Provides students with skills in questionnaire development and survey methods. Students develop a questionnaire and design a survey research proposal on a health-related or social topic. Prerequisite: either HSERV 511/HSERV 513; BOST 517/BOST 518; or EPI 512/EPI 513, which may be taken concurrently, or permission of instructor. Students should have a survey project in mind.

G H 539 Methods, Tools, and Data in Global Health (2) Autumn (early fall start)

Familiarizes students with current global health issues and their analytical challenges. Introduces analytical methodologies, quantitative concepts, statistical packages applied to global health challenges, and software used in health metrics and evaluations research.

G H 590 Global Burden of Disease (3) Summer

Burden of Disease is a cutting-edge measurement technique that allows health researchers to quantify and understand disease epidemiology at national and global levels. Burden of Disease estimates provide an overview of the levels of population health and the causes of loss of health, which can be used as evidence to inform health policy and advocacy.

IMPLEMENTATION SCIENCE

ADVANCED HEALTH SYSTEM RESEARCH METHODS (8 CREDITS)

Students may choose from the following to fulfill requirements.

HSERV 521 Qualitative Methods in Health Services Research (3) Spring Even Years

Provides students with both a theoretical foundation in qualitative approaches to research in anthropology and

public health and in-depth training in qualitative data management, analysis, interpretation, and presentation. Focuses on how to frame research questions, design, appropriate research strategies that incorporate qualitative methods, and analyze data. Offered: jointly with ANTH 519/G H 538.

HSERV 523 Advanced Health Services Research Methods I (4) Autumn

Introduces the new big data of health services research, health claims, and survey databases. Discusses the promises and pitfalls of the data and models for analyzing the correlates of health care costs and utilization. Prerequisite: either HSERV 511, BIOST 511/BIOST 512/BIOST 513, BIOST 517/BIOST 518, or EPI 511/EPI 512, and permission of instructor.

HSERV 524 Advanced Health Services Research Methods II (4) Winter

Introduces advanced biostatistical techniques for analyzing incomplete data in population health research. Examines a wide range of topics including: missing data and potential outcome framework for causal inference, propensity score and multiple imputation, multilevel random effect linear and logistic models, and empirical Bayes prediction. Prerequisite: either HSERV 523 or permission of instructor.

HSERV 525 Advanced Health Services Research Methods III (4) Spring

Focuses on reviewing statistical methods developed for "micro" (individual-level) data on behavior (choices or exposures) and outcomes in order to make casual inference about the role of a choice or an exposure on outcomes. Prerequisite: either HSERV 523, BIOST 511, BIOST 512, BIOST 513, or permission of instructor.

OPERATIONS RESEARCH & MODELING (4 CREDITS)

Students may choose from the following to fulfill requirements.

CSSS 564 Bayesian Statistics for the Social Science (4) Spring

Statistical methods based on the idea of probability as a measure of uncertainty. Topics covered include subjective notion of probability, Bayes' Theorem, prior and posterior distributions, and data analysis techniques for statistical models. Prerequisite: SOC 504, SOC 505, SOC 506 or equivalent. Offered: jointly with STAT 564.

CSE 446 Machine Learning Data (4) Autumn

Methods for designing systems that learn from data and improve with experience. Supervised learning and predictive modeling: decision trees, rule induction, nearest neighbors, Bayesian methods, neural networks, support vector machines, and model ensembles. Unsupervised learning and clustering. Prerequisite: CSE 332; either STAT 390, STAT 391, or CSE 312.

EPI 554 Introduction to Epidemic Modeling for Infectious Diseases (3) Autumn

Covers the basic tools for building and analyzing mathematical models of infectious disease epidemics. Model types include deterministic and stochastic models, compartmental and individual-based models. Laboratory provides hands-on model building experience in Excel, Stella, and R.

G H 531/EPI 539 Research and Evaluation Methods in Global Health (3-4) Winter

Provides an overview of a range of evaluation and research designs used in global health. Students learn practical methodologies to obtain, validate, and analyze information regarding health status, services, and programs. Discusses usefulness, validity, limitation of vital records, health reports, household (and cluster) surveys, and qualitative methods.

G H 539 Methods, Tools, and Data in Global Health (2) Autumn (Early Fall Start)

Familiarizes students with current global health issues and their analytical challenges. Introduces analytical methodologies, quantitative concepts, statistical packages applied to global health challenges, and software used in health metrics and evaluations research.

IND E 519 Healthcare Modeling and Decision Making (3) Spring

Applications of operations research in healthcare. Introduction to a variety of modeling techniques including decision analysis, cost-effectiveness analysis, Markov models, Markov decision processes, dynamic programming, simulation, queuing, scheduling, machine learning and their applications in healthcare management and medical decision making.

ELECTIVES

Elective credits are flexible and should relate to the student's interests. Courses listed above also satisfy the elective requirement.

CS&SS 564 Bayesian Statistics for the Social Science (4) Spring

Statistical methods based on the idea of probability as a measure of uncertainty. Topics covered include subjective notion of probability, Bayes' Theorem, prior and posterior distributions, and data analysis techniques for statistical models. Prerequisite: SOC 504, SOC 505, SOC 506 or equivalent. Offered: jointly with STAT 564.

CS&SS 544 Event History Analysis (5) Winter

Examines life course research using event-history analysis with applications to the substantive areas of household dynamics, family formation and dissolution, marriage, cohabitation, and divorce, migration histories, residential mobility, and housing careers. Examines continuous- and discrete-time longitudinal models during practical laboratory sessions.

CS&SS 567 Statistical Analysis of Social Networks (4) Autumn

Statistical and mathematical descriptions of social networks. Topics include graphical and matrix representations of social networks, sampling methods, statistical analysis of network data, and applications. Prerequisite: SOC 504, SOC 505, SOC 506, or equivalent. Offered: jointly with STAT 567.

PABIO 553 Survival Skills of Scientific Research (2) Winter

Focuses on skills needed for scientific career: writing abstracts, curriculum vitae, research proposals; preparing for oral presentations; lab management skills; discussion of mentorship/trainee relationships; case-based discussions of various topics in ethics and scientific misconduct. Credit/no-credit only.

COURSEWORK PATH

During the first two years of the program is when students complete the core curriculum and area of emphasis (AoE) courses. It is expected that students will complete their degree within five years if involved in primary data collection, and four years if this is not the case. Students entering the program with masters level training in a relevant area may be able to complete degree requirements sooner.

The course maps below are examples of the coursework that students may take. Students should meet with their faculty advisor to discuss the courses that best suit their research interests and schedule.

SAMPLE CURRICULUM - METRICS

	Fall	Winter	Spring
Yr. 1	G H 511 (4)	G H 580 (2)	G H 580 (2)
	EPI 512 (4)	EPI 513 (4)	G H 541 (4)
	G H 521 (3)	CS&SS 501 (5)	CS&SS 503 (5)
	G H 539* (2)	Elective	Elective
Yr. 2	G H 535 (4)	G H 536 (4)	G H 537 (4)
	AoE (4)	AoE (4)	AoE (4)
	Elective	Elective	Elective
Yr. 3	Dissertation		
Yr. 4	Dissertation		

*early fall start, required

SAMPLE CURRICULUM - IMPLEMENTATION SCIENCE

	Fall	Winter	Spring
Yr. 1	G H 511 (4)	G H 580 (2)	G H 580 (2)
	EPI 512 (4)	EPI 513 (4)	G H 541 (4)
	G H 539* (2)	BIOST 518 (4)	Elective
	BIOST 517 (4)	Elective	
Yr. 2	G H 535 (4)	G H 536 (4)	G H 537 (4)
	AoE (4)	AoE (4)	AoE (4)
	Elective	Elective	Elective
Yr. 3	On Leave (Data Collection) or Dissertation		
Yr. 4/5	Dissertation		

*early fall start, strongly encouraged, but not required

SECTION 4: ADVISING & COMMITTEES

FACULTY ADVISOR

Each student will be assigned to a faculty advisor once accepted into the program. The initial advisor will be selected by the Steering Committee, which seeks to pair each student with a faculty member with related interests. The faculty advisor has the responsibility of assisting students in building an academic course plan that meets the student's goals within the program requirements. Additionally, the advisor serves as a conduit to direct students to academic resources, research opportunities, and the academic community.

During the first quarter of the program, it is expected that students and advisors will meet at least monthly with a focus on building a relationship. In the following quarters, students and advisors meet twice a quarter and focus on the student's success in the program and the course selection process. A greater frequency can be determined by the needs of each student in discussion with advisor.

Advising is part of every faculty member's responsibilities within the DGH. Therefore, students should not feel as though they are imposing when asking advice from faculty. Advising faculty should be available to meet with assigned students, although students should be respectful of faculty time by scheduling meeting times that are convenient for both students and faculty. **It is the student's responsibility to arrange meeting times with their faculty advisor.**

FACULTY ADVISOR RESPONSIBILITIES

- A. Meet regularly to fill out the appropriate forms needed to track student's success through the program.
- B. Serve as an educational and professional mentor for the student.
- C. Assist with identifying educational and research goals, and individual needs at the start of the program.
- D. Monitor the overall success of the student in an academic and professional setting.
- E. Work with the students to build relationships and networks within Seattle's academic community and its global health organizations.
- F. Maintain contact with AoE director and PM about student progress, excellence, and areas of concern.
- G. Identify and encourage students for funding and travel opportunities, and promote student research.
- H. Have sensitivity and understanding to diverse needs and concerns experienced and shared by the student.
Direct student to PM for additional resources as necessary.

STUDENT (ADVISEE) RESPONSIBILITIES

- A. Maintain close communication with PM; provide feedback about the program, coursework, and other academic opportunities.
- B. Schedule and meet with advisor at least twice each quarter.
- C. Identify and develop professional career goals and research interests.
- D. Understand administrative responsibilities and requirements.
- E. Provide feedback on advising during the annual program retreat each spring.

After the first quarter, advisors and advisees should meet at least twice a quarter to review course plans and complete the [Graduate Student Professional Development Form](#) (this form should be updated yearly in June).

DISSERTATION COMMITTEE

During the second year in the program, each student should begin to identify faculty members with similar research interests who can serve as their dissertation mentor and Chair of their dissertation committee. Students should meet with the program director of their AoE to discuss potential faculty to serve as their Chair before formally asking someone. Once a Chair of a committee has been identified, this faculty member will assume the mentorship role for the student. The student should discuss with their Chair potential committee members, the Chair will approve the committee. At the end of the second year in the program, students email the PM the names of their committee members so that the committee can be officially established through the Graduate School. This committee consists of at least four members, of whom two must have primary, joint or adjunct appointments in the DGH. For more information on this process, please see the information on the [Graduate School's website](#).

All committees must include a [Graduate School Representative \(GSR\)](#) who is a productive scholar in his or her own research area that may differ from that of the student's dissertation project. The remaining members must be productive scholars in the student's major field and/or subfields. If a student wishes to have as a committee member an individual who is not a faculty member at the University of Washington, the Steering Committee of the Program will determine whether this individual can serve on a doctoral committee based on their academic credentials and potential to be a contributing member to a doctoral committee.

The committee will oversee the student's progress, evaluate performance, and conduct all examinations. It is expected that the Chair of the committee will play the strongest mentorship role, but all members will meet with the student regularly and contribute mentorship.

READING COMMITTEE

Once a draft of the first paper has been prepared, the reading committee is officially designated (generally all members of the doctoral committee, minus the GSR) and is responsible for reviewing all drafts and recommending revisions. Students must notify the PM when this step has been achieved so that the names of the reading committee members can be conveyed electronically to the Graduate School.

SECTION 5: EXAMINATIONS

PRELIMINARY WRITTEN EXAMINATION (QUALIFYING EXAM)

The Preliminary Written Examination is given at the end of the second academic year and is intended to test the student's ability to apply the principles and methods presented in the core requirements. The exam is given when the student has completed the core courses, but no later than the end of the second year.

Each student will have 96 hours to complete the exam and can start at any time within the 10-day period (Friday to Sunday).

There will be four different types of questions:

1. data analysis
2. research design
3. critical appraisal of current knowledge of a topic
4. synthesis of existing knowledge into policy implications and recommendations

There is [a minimum level of achievement](#) that must be met on all questions in order to pass the exam. Students who pass, will be eligible to move on to the next phase, which includes [establishing a committee](#) and taking [General Examinations](#) to advance to doctoral candidacy. For students who do not pass on the initial attempt a retake examination will be offered one year later. Students must retake and pass all questions on the exam. Students who do not pass after two attempts will not be eligible to continue the PhD Program and may be offered the opportunity to complete a MPH.

GENERAL EXAMINATIONS (WRITTEN & ORAL EXAMS)

The General Examination will be administered by the student's [committee](#) and consists of two parts, a [written](#) and an [oral](#) part. The examination covers the student's chosen AoE and the general topic of the dissertation. The exam is designed to assess the following:

1. ability to analyze and synthesize information,
2. significant breadth and depth of knowledge in the AoE and the dissertation topic, and
3. adequate knowledge of recent advances in methodological issues relevant to the area of interest.

WRITTEN EXAMINATION

The written exam concentrates on the student's proposed research area and the methods applicable to study their topic of interest ([Preliminary Dissertation Proposal](#)). It is recommended that the [committee](#) and student meet prior to the written exam to review student progress, assess the student's readiness for dissertation work, the feasibility of the project, and resources available for a high quality product. Committee members may require additional coursework to remedy perceived deficiencies in any relevant area. If the committee desires, they may discuss general topic areas for the written exam with the student and provide a few seminal readings in an area. However, it is the student's responsibility to know the relevant literature and methods applicable to the AoE and dissertation.

The format of the written exam should be agreed upon by the committee and student. It is generally a 7-to-14-day take-home exam consisting of 4 to 7 questions. Each faculty member asks one or more exam questions and may suggest an approximate number of pages for the answer to a question. Committee members are encouraged to

read the entire exam, and the Chair must do so. Each faculty member grades his/her own question(s) as Pass, Rewrite, or Fail. The full committee decides if the student has passed the exam overall. A student who does not pass the written portion of the exam may be re-examined, at the discretion of the committee. The committee members can require additional course work to remedy perceived deficiencies in any relevant area.

ORAL EXAMINATION

The oral exam portion is given once the written examination comments are incorporated into the [Final Dissertation Proposal \(FDP\)](#). The oral exam is usually scheduled one to six months after successful completion of the [written examination](#), and after completing the [FDP](#). The committee must have sufficient time to review and discuss the dissertation proposal before the oral examination is held. The oral exam is the UW official exam required for a student to pass to doctoral candidacy and, therefore, the Graduate School Representative must be present at the Oral General Exam. The public is welcome to attend.

In order for the Oral General Exam to proceed, at least four members of a doctoral committee (including the Chair, Graduate School Representative, and one additional Graduate Faculty member) must be present at the examination. If a member(s) or student needs to participate at an exam but cannot be physically present, please refer to the Graduate School Instructions for [Video Conference in Doctoral Examinations](#).

If the committee does not approve the student to move to doctoral candidacy, the student can do further work and repeat of the Oral Examination within six months of the first attempt. If a student fails a second time, the student's enrollment in the PhD Program is terminated, per Graduate School policies and he/she may be offered an opportunity to complete a [MPH](#).

The committee assesses the student's characteristics, experiences, and resources to conduct a high quality dissertation and to eventually become a successful global health researcher. The committee considers the following types of questions:

1. Does the student have sufficient experience in research methods and management through courses or work?
2. Does the student have sufficient resources (data available, data that can be collected and managed) to complete the study?
3. Does the student have sufficient financial support and support from the committee and research team to successfully complete the project?
4. Has the student identified a reasonable list of tasks and timeline, and is it likely that the student can adhere to the timeline?
5. Does the student have the personal skills, intellectual curiosity, work style, and the desire to develop professionally into a health services researcher?

Students must apply formally for a General Exam date at least three weeks prior to the examination. See the [Graduate School website](#) for more information.

The student will reserve a room for the exam. Once the date, the room and committee member's attendance is confirmed, the student will enter the [request](#) for a General Examination.

DISSERTATION DEFENSE (FINAL EXAMINATION)

Writing and defending the doctoral dissertation is the final requirement. Students are required to write a dissertation that addresses an issue of importance in the field of global health and significantly contributes to the advancement of the field of metrics and implementation science. The dissertation may take the format of a three-paper or a book-length dissertation. The topic of the dissertation will be chosen by the student, in consultation with the [doctoral committee](#). The dissertation must demonstrate an understanding of the theory and methods related to the student's AoE and must conform to departmental, school and university guidelines. The doctoral committee will review the dissertation and recommend revisions, as necessary. When the doctoral committee determines at a formal committee meeting that the student is ready for the final examination, the reading committee should be appointed. Students should email the PM their reading committee so it can be established through the Graduate School. At least three weeks before an examination, the student should request for a [final examination](#) on the Graduate School website.

The final examination for the PhD degree consists of a public defense of the student's dissertation orally before the committee. All committee members including the Chair, Graduate School Representative and additional Graduate Faculty members must be present at the examination. Students must successfully defend their research for the degree to be granted. The dissertation presentation must be advertised and is open to the public. Following the presentation, the PhD candidate will meet with the committee. Each member will have the opportunity to question the student on any aspect of the presentation. Students may repeat their defense if performance is unsatisfactory.

APPENDIX A. NEW STUDENT CHECKLIST

FOLLOWING ADMITTANCE

- [Set up a UW NetID](#) and [email](#).
 - Admitted students receive their student number and PAC (personal access code) after accepting the offer of admission. With a student number and PAC, a [UW NetID](#) can be set up. A student's [UW NetID](#) will precede @uw.edu and become the student's UW [email](#) address. The UW offers four email systems.
- Register for courses (requires a [UW NetID](#)).
 - Reference the [UW Academic Calendar](#) for dates of instruction, registration deadlines, school holidays, and more. International students must also complete an [online check-in](#).
- Find housing.
 - The majority of our students live off-campus in shared housing. Campus housing information can be found through [UW Housing and Food Services](#). For off-campus housing, [Craigslist](#) is often used. The [UW School of Law has a list of neighborhood descriptions](#) to assist with identifying housing.

ONCE ARRIVED ON CAMPUS

- Research transportation options.
 - Most students utilize the [U-PASS](#) to travel by [Metro](#) bus around town. Students are automatically charged for the pass each quarter they are registered. Extensive bike and walking trails are found around Seattle as well. The closest airport is SeaTac International Airport.
- Get your [Husky Card](#).
 - The [Husky Card](#) is the official identification card for members of the University of Washington community. The [U-PASS](#) is electronically embedded into the [Husky Card](#) (scan it when boarding the bus or light rail). The [Husky Card Account & ID Center](#) is located on the ground floor of the [Odegaard Undergraduate Library](#).
- Apply for Washington state identification.
 - New Washington state residents are legally required to get a Washington state driver's license or ID card within 30 days of moving to the state. Check out the [Washington State Department of Licensing website](#) to find office locations and information on what type of identification is needed when applying for an ID or driver's license.
- Explore UW resources.
 - The [UW Student Guide](#) is a comprehensive reference for UW students and includes information on Academics, Finances, Student Life, University Policies, and much more. The [University Bookstore](#) is where you can purchase Husky products and books for class.

BEFORE THE FIRST DAY OF CLASS

- Prepare for the first day of class.
 - Helpful maps include a [campus map](#) and a [Health Sciences Building \(HSB\)](#) map. The Health Sciences Building is where many of your classes will be held. It is a very confusing building! You are highly encouraged to locate your classrooms in advance of the first day of class.
- Attend departmental and school orientations.
 - Attendance at the program orientation is required for all entering students. Typically, it is held the week prior to the beginning of Autumn Quarter.

APPENDIX B. CAMPUS RESOURCES

OFFICE	PHONE	EMAIL
<u>Childcare Assistance Program & Student Parent Resource Center</u>	206-543-1041	stuparrc@uw.edu
<u>Disability Resources for Students</u>	206-543-8924	uwdrs@uw.edu
<u>Foundation for International Understanding Through Students</u>	206-543-0735	info@fiuts.org
<u>Graduate School</u>	206-543-5900	uwgrad@uw.edu
<u>Hall Health Primary Care Center</u>	206-685-1011	hppccweb@uw.edu
<u>Husky Card Account & ID Center</u>	206-543-7222	huskycrd@uw.edu
<u>Husky Night Walk</u>	206-685-WALK	
<u>International Students Services</u>	206-221-7857	uwiss@uw.edu
<u>Intramural Activities Building (IMA)</u>	206-543-4590	ima@uw.edu
<u>Libraries Information</u>	206-543-0242	libquest@uw.edu
<u>Ombud</u>	206-543-6028	ombuds@uw.edu
<u>Parking and U-PASS Information</u>	206-221-3701	ucommute@uw.edu
<u>Police, University</u>	206-543-0507	uwpolice@uw.edu
<u>Q Center</u>	206-616-7296	qcenter@uw.edu
<u>Registrar</u>	206-543-5378	registrar@uw.edu
<u>Residence Classification</u>	206-543-5932	resquest@uw.edu
<u>South Campus Center</u>	206-543-0530	hsbrooms@uw.edu
<u>Student Activities Office</u>	206-543-2380	sao@uw.edu
<u>Student Counseling Center</u>	206-543-1240	
<u>Student Financial Aid</u>	206-543-6101	osfa@uw.edu
<u>Student Fiscal Services</u>	206-543-4694	sfshelp@uw.edu
<u>Student Legal Services</u>	206-543-6486	slsuw@uw.edu
<u>Student Union Building (HUB)</u>	206-543-1447	thehub@uw.edu
<u>UW Technology</u>	206-221-5000	help@uw.edu
<u>Visitor's Information Center</u>	206-543-9198	uwvic@uw.edu
<u>Waterfront Activities Center</u>	206-543-9433	h2ofront@uw.edu

APPENDIX C. GLOBAL HEALTH RESOURCE CENTER

The Global Health Resource Center (GHRC) is the University's hub for global health-related activities. GHRC partners with the communications team within the DGH to ensure that our community is up to date on our events, programs, and resources.

- Serves as the main networking hub and information clearinghouse for the UW, DGH.
- Coordinate travel preparation orientations for global health students.
- Provides information and referral to global health contacts, career networks, listservs, and websites.
- Provides individual student advising and work with global health student organizations.

<https://globalhealth.washington.edu/connect/global-health-resource-center-ghrc>

FUNDING OPPORTUNITIES FOR FIELDWORK

The DGH has *five* funding opportunities to provide financial assistance to graduate students, professional students, and medical residents at the University of Washington to help support fieldwork experience in global health.

- WARREN GEORGE POVEY ENDOWED FUND FOR GLOBAL HEALTH STUDENTS FELLOWSHIP
- GLOBAL OPPORTUNITIES IN HEALTH (GO HEALTH) FELLOWSHIP
- STRENGTHENING CARING OPPORTUNITIES THROUGH PARTNERSHIP IN ETHIOPIA (SCOPE) FELLOWSHIP
- STERGACHIS ENDOWED FELLOWSHIP IN INTERNATIONAL EXCHANGE
- THOMAS FRANCIS, JR. GLOBAL HEALTH FELLOWSHIP

These funding opportunities are administered by the [Global Health Resource Center](#) and provide assistance for costs associated with doing fieldwork outside of Seattle.

The Fellowships of up to \$4000 (USD) can be used to support travel costs, including room and board, travel health preparation, travel insurance and/or supplies for a particular global health project. Fellowship funding cannot be used to cover tuition costs, school supplies, conference attendance, or other non-project related expenses.

COMMON ELIGIBILITY CRITERIA

- Participation in a global health-related program or fieldwork experience in an international, resource-limited setting relevant to the student/trainee's career goals
- University of Washington faculty mentor and strong relationship with international partner(s)
- Minimum duration of 4-6 weeks abroad (varies among fellowships)
- Students may apply for multiple fellowships, but can only accept one. If a student is awarded and accepts a Fellowship, they must immediately withdraw their applications to other DGH fellowships.

The fellowship applications are available around beginning early February and close around Mid-March.

Visit the [Funding for Fieldwork](#) page to learn more!

APPENDIX D. PROGRAM TIMELINE CHECKLIST

- Ongoing, provide the PM with news about your travel to conferences, presentations, publications, funding, and other accomplishments.
- Annually in June, provide the PM with your [Student Progress and Planning Form](#) and a copy of your **current CV**. If you maintain an NIH **biosketch**, please provide a copy as well.

YEAR ONE

- Set up meetings with assigned faculty advisor.
- Begin core and AoE coursework.
- Preliminary Written Examination can be taken early if the student starts the PhD Program with a Master's degree. A discussion should be held with the faculty advisor and PM.

YEAR TWO

- Complete core and AoE coursework.
- Take Preliminary Written Examination.
- Begin writing PDP.
- Establish a doctoral committee.
- Inform the PM of your formed doctoral committee.
- Provide the PM with a copy of your PDP.

YEARS THREE

- Complete coursework (if needed).
- Conduct primary data collection (if needed).
- Finalize PDP and submit to committee.
- Take General Examination (Written).
- Revise dissertation and submit [FDP](#).
- Submit the [Request for General Examination](#) to the Graduate School at least three weeks before your intended Oral Exam, including the date, time, and location of your exam.
- Take General Examination (Oral).
- Work on dissertation.
- Provide the PM with a copy of your [FDP](#) (as submitted to your doctoral committee).
- Be sure to provide the PM with copies of all materials associated with your [General Oral Exam](#).
- After you have completed your General Oral Exam, inform the PM of which members of your doctoral committee will now become your reading committee.

YEARS FOUR/FIVE

- Complete steps from Year Three (if needed).
-OR-
- Work on dissertation and search for jobs.
- Submit the [Request for Final Examination](#) (your dissertation defense) to the Graduate School at least three weeks before your intended defense, including the date, time, and location of your defense.
- Dissertation defense.
- [Submit your Dissertation to the UW Graduate School within 60 days](#) of your defense.
- Provide the PM with copies of all materials associated with your **Dissertation Defense**.
- Complete the Program survey and alumni information before graduation.

APPENDIX E. ADVISING SESSION CHECKLIST

The guidelines outlined below are the absolute minimum interactions expected. We encourage students/advisors/Chair to meet more frequently, especially in a student's early stages of their studies. This will foster stronger relations and the potential for life-long colleagues because of this mentoring experience.

YEAR ONE

FIRST QUARTER

- Identify professional and educational objectives.
- Review PhD Program competencies and develop a plan to meet educational goals.
- Identify faculty and research communities that share student's interests.
- If applicable, ensure that student is acclimating to the US education system, standards, and expectations.
- Select courses for next quarter.

SECOND QUARTER

- Schedule two meetings.
- Review grades from previous quarter.
- Discuss research topics of interests.
- Review professional and educational objectives.
- Select courses for next quarter.

THIRD QUARTER

- Schedule two meetings.
 - Review grades from previous quarter.
 - Review professional and educational objectives.
 - Discuss possible research topics for dissertation and possible additional research experiences.
 - Review PhD Program timeline checklist and assess timeliness of progress.
 - Select courses for next quarter.
 - Complete the Student Progress Planning form with faculty advisor.
-

YEAR TWO: ALL QUARTERS

- Schedule meetings.
 - Review grades from previous quarter.
 - Review professional and educational objectives.
 - Continue discussions on possible research topics for dissertation.
 - Identify which faculty you may want on your dissertation committee.
 - Discuss how to prepare to take the Preliminary Written Examination.
 - Review PhD Program timeline checklist and assess timeliness of progress.
 - Complete the Student Progress Planning form with faculty advisor.
-

YEARS THREE-FOUR/FIVE: ALL QUARTERS

- Schedule meetings.
- Finalize committee.
- Review PDP, FDP, and/or Dissertation.
- Discuss steps toward General Examination.
- Discuss steps toward dissertation.
- Review PhD Program timeline checklist and assess timeliness of progress.
- Complete the Student Progress Planning form with faculty advisor.

APPENDIX F. STUDENT PROGRESS AND PLANNING FORM

Please complete this form (and attach your updated CV) and discuss with your Faculty Advisor/Chair. Then return to the PM at ghphd@uw.edu by the end of spring quarter annually.

Student: _____ Date: _____ Track: _____

Faculty Advisor or Chair: _____ Dissertation or Research Topic: _____

SECTION I: ACADEMIC PROGRESS

Please complete the table with course prefix and quarter/year you completed or plan to complete the course.

CURRICULUM REQUIREMENTS	CREDITS	COMPLETED	PLANNED
CORE CREDITS <u>Global Health</u> G H 511 - Problems in Global Health G H 535 - Advanced Methods for Global Health I G H 536 - Advanced Methods for Global Health II G H 537 - Advanced Methods for Global Health III G H 541 - Fundamentals of Implementation Science in Global Health G H 580 - Global Health Doctoral Seminar <u>Epidemiology</u> EPI 512 – Epidemiologic Methods I EPI 513 – Epidemiologic Methods II <u>Quantitative Methods</u> <u>Leadership, Policy & Management</u>	43 (4) (4) (4) (4) (4) (4) (4) (4) (8) (3)		
AREAS OF EMPHASIS <u>Metrics</u> Advanced Quantitative Methods Global Health Measurement G H 539 – Methods, Tools, And Data in Global Health <u>Implementation Science</u> Advanced Health Systems Research Methods Operations Research/Modeling	12 (8) (4) (8) (4)		
ELECTIVES	16		
DISSERTATION	27		

TOTAL CREDITS REQUIRED	98		
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Please complete the table with quarter/year you completed or plan to complete the exams.

PRELIM	GENERAL	DISSERTATION DEFENSE

.....
SECTION II: UPCOMING YEAR PLAN

Please complete the table with your funding plan for next year.

AUTUMN	WINTER	SPRING

.....
ADVISOR'S COMMENTS

Student Signature _____ Faculty Advisor/Chair Signature _____

APPENDIX G. PRELIMINARY DISSERTATION PROPOSAL (PDP) GUIDELINES

The PDP is designed to provide a brief introduction to the proposed research project for review and feedback from the student's committee, as well as with other faculty from the DGH. The PDP should be single-spaced, use Arial 11 font, ½-inch margins, and should follow the outline below. Total length should be 3 pages for sections II-VII.

- I. **TITLE PAGE** (1 page): Project title, student's name, Chair of committee, committee members (including GSR), and date. If your committee is not yet formally constituted, indicate potential committee members under consideration.
- II. **SPECIFIC AIMS** (.5 page): List the project's specific aims in terms of hypotheses to be tested or research questions to be answered. If desired, the overall purpose of this line of investigation may be mentioned in order to indicate the long-term importance of the specific information being sought through this study.
- III. **BACKGROUND AND SIGNIFICANCE** (.5 page): Describe the scientific context for the study, briefly summarizing previous related research. This should include an extensive literature review, including a summary of the major concepts, methods, and literature that have contributed to the field of study and remaining gaps that the project will help to fill.
- IV. **APPROACH** (2-3 pages): This section format may be tailored to meet the needs of the specific study being proposed. It could be organized for the study as a whole, for each specific aim, or for each paper to be written, and will be the longest section of the proposal. The following sub-headings usually apply.
 - A. **STUDY DESIGN**: Define 1) the study design, 2) the intervention to be evaluated (if relevant), and 3) the main analytic variables, including how they will be assessed and quantified.
 - B. **STUDY SETTING**: Describe the location of the research, including the organizational context and implementation setting (if relevant).
 - C. **STUDY SUBJECTS**: Indicate the sources of subjects, eligibility criteria, and anticipated number.
 - D. **DATA COLLECTION**: Describe data sources, sequence of data collection activities, and procedures to assess/assure data quality.
 - E. **DATA ANALYSIS**: Describe how data will be organized and statistical techniques to address the specific aims.
 - F. **STUDY POWER**: Summarize sample size or statistical power calculations.
- V. **LIMITATIONS** (0.25 page): Briefly describe potential difficulties and limitations of the proposed procedures and alternative approaches that may be pursued to achieve the aims.
- VI. **PROTECTION OF HUMAN SUBJECTS** (0.25 page): Briefly describe the current status and plans for obtaining human subjects approval for the research, including for UW and relevant institutional review boards (IRBs) from the countries where the research will be conducted. Even if using an established data set, exemptions or IRB approvals must be documented. Submit documents for UW IRB approval with your PDP, even if another IRB will perform the review, unless the committee approves later IRB submission and sufficient time remains for approval prior to the start of dissertation work.
- VII. **TIMELINE**: Provide an approximate timeline for completion of the project. Indicate the current status of the project, to include plans for: 1) funding; and 2) general exam.
- VIII. **REFERENCES CITED** (.5 page): Provide citations to key literature references used in the proposal.
- IX. **APPENDICES** (.5 page): Appendices are optional, and may include data collection instruments, figures, and tables. Appendices should not present additional information that should be included in the prior sections.

APPENDIX H. GENERAL EXAMINATION CHECKLIST

Before beginning the General Exam (written and oral) process, you are responsible for knowing the [UW Graduate School's doctoral degree policies](#).

BEFORE SCHEDULING THE GENERAL EXAMINATION

- Complete Preliminary Written Exam (offered every September).
- Complete course requirements for degree.
- Your committee must be established formally – minimum of four members.
- Send the names of your committee members including the Chair, GSR and other members and the tentative quarter of your oral exam to the PM so it can be submitted to the UW Graduate School.
 - Only one of the committee members is permitted not to be appointed as Graduate Faculty.
 - If your committee has changed, please let the PM know

BEFORE SCHEDULING THE ORAL GENERAL EXAMINATION

- Set up a meeting with committee to discuss your PDP.
- Take the General Exam (Written).

This is administered by the students committee and is generally a 7 to 14 day take home exam with 4-7 questions. The student's committee will determine the questions and time period.
- Determine a date for your General Exam (Oral) suitable for the schedule of your GSR and committee.
 - At least four committee members must attend the General Examination, including the Chair and the Graduate School Representative (GSR) and one additional Graduate Faculty member.
- Complete the "General Exam Request" at <http://www.grad.washington.edu/mygrad/student.htm> at least three weeks prior to the exam, if possible. If not, email the PM.
 - To make changes to a submitted request, contact the PM, not the Graduate School.
- Let the PM know you have schedule an exam date.
 - The PM will email you the "warrant" for your general exam. Print it and give to your Chair at Oral Exam.

FOLLOWING THE ORAL EXAMINATION

- All committee members, who are present, must sign the warrant.
 - The Chair must indicate the exam outcome on the warrant. If a member was present by audio/video conferencing, they must email the Chair that they were present by the entire time, and their vote.
- Submit the signed warrant to the PM (before 5:00PM on the last day of the quarter).
- You will become a candidate the quarter after passing the General Examination (Written and Oral). If you pass between quarters, you will become a candidate the quarter after next.
- Have a formal committee meeting, where each member must be in agreement that you should proceed with writing your dissertation.

APPENDIX I. FINAL DISSERTATION PROPOSAL (FDP) GUIDELINES

After the student receives comments from the [committee](#) about the [PDP](#), the student revises the proposal to produce a more detailed FDP. The FDP must be completed before the General Examination (Oral). The format of the FDP is the same as the PDP, and Sections II – VII of the PDP should be no longer than 16 single-spaced pages (using Arial font 11 and ½-inch margins). Especially important in quantitative studies is the level of detail about the intervention (if applicable), variable definition, data sources, and analytic approaches.

- I. [TITLE PAGE](#) (1 page): Project title, student's name, Chair of committee, committee members (including GSR), and date. If your committee is not yet formally constituted, indicate potential committee members under consideration.
- II. [SPECIFIC AIMS](#) (1 page): List the project's specific aims in terms of hypotheses to be tested or research questions to be answered. If desired, the overall purpose of this line of investigation may be mentioned in order to indicate the long-term importance of the specific information being sought through this study.
- III. [BACKGROUND AND SIGNIFICANCE](#) (2 pages): Describe the scientific context for the study, briefly summarizing previous related research. This should include an extensive literature review, including a summary of the major concepts, methods, and literature that have contributed to the field of study and remaining gaps that the project will help to fill.
- IV. [INNOVATION](#) (0.25-.5 page): Explain how the proposed research challenges and seeks to shift current research or practice paradigms. Describe any novel theoretical concepts, approaches or methodologies, instrumentation or intervention(s) to be developed or used, and any advantage over existing methodologies, instrumentation or intervention(s).
- V. [APPROACH](#) (10-12 pages): This section format may be tailored to meet the needs of the specific study being proposed. It could be organized for the study as a whole, for each specific aim, or for each paper to be written, and will be the longest section of the proposal. The following sub-headings usually apply.
 - A. [STUDY DESIGN](#): Define 1) the study design, 2) the intervention to be evaluated (if relevant), and 3) the main analytic variables, including how they will be assessed and quantified.
 - B. [STUDY SETTING](#): Describe the location of the research, including the organizational context and implementation setting (if relevant).
 - C. [STUDY SUBJECTS](#): Indicate the sources of subjects, eligibility criteria, and anticipated number.
 - D. [DATA COLLECTION](#): Describe data sources, sequence of data collection activities, and procedures to assess/assure data quality.
 - E. [DATA ANALYSIS](#): Describe how data will be organized and statistical techniques to address the specific aims.
 - F. [STUDY POWER](#): Summarize sample size or statistical power calculations.
- VI. [LIMITATIONS](#) (0.25 page): Briefly describe potential difficulties and limitations of the proposed procedures and alternative approaches that may be pursued to achieve the aims.
- VII. [PROTECTION OF HUMAN SUBJECTS](#) (0.25 page): Briefly describe the current status and plans for obtaining human subjects approval for the research, including for UW and relevant institutional review boards (IRBs) from the countries where the research will be conducted. Even if using an established data set, exemptions or IRB approvals must be documented. Submit documents for UW IRB approval with your PDP, even if another IRB will perform the review, unless the committee approves later IRB submission and sufficient time remains for approval prior to the start of dissertation work.
- VIII. [REFERENCES CITED](#): Provide citations to key literature references used in the proposal.
- IX. [APPENDICES](#): Appendices are optional, and may include data collection instruments, figures, and tables. Appendices should not present additional information that should be included in the prior sections.

APPENDIX G. FINAL EXAM CHECKLIST

Before beginning the final exam (dissertation defense) process, you are responsible for knowing the [UW Graduate School's doctoral degree policies](#).

BEFORE SCHEDULING THE DISSERTATION DEFENSE

- Complete General Examination (Written and Oral).

BEFORE THE DISSERTATION DEFENSE

- Schedule a doctoral final exam via [MyGrad – Student View](#).
 - At least three weeks prior to the exam.
 - At least four members must be present at your final exam.
- Set up the [reading committee](#).
 - Your reading committee must agree that the dissertation is appropriate for fulfillment of the doctoral degree and that necessary changes can be made prior to the end of the quarter.
- Check your name and thesis details on record with the UW and the Graduate School
 - Go to [MyGrad – Student View](#) – Student View
 - Verify your name and thesis details entered in the UW ETD Administrator Site match this MyGrad record exactly.
- Let the PM know you have schedule an exam date and set a reading committee
 - The PM will email you the “warrant” for your final exam. Print it and give to your Chair at your defense.

FOLLOWING THE DISSERTATION DEFENSE

- All committee members, who are present, must sign the warrant.
 - The Chair must indicate the exam outcome on the warrant. If a member was present by audio/video conferencing, they must email the Chair that they were present by the entire time, and their vote.
- Submit the signed warrant to the PM (before 5:00PM on the last day of the quarter).
- Obtain the necessary signatures on your [Doctoral Dissertation Reading Committee Approval Form](#).
- Upload your Committee Approval Form to the Administrative documents section of the [UW Electronic Thesis/Dissertation \(ETD\) Administrator Site](#).
- The dissertation must adhere to the [Graduate School regulations](#).
- Complete the [Survey of Earned Doctorates \(SED\) online](#).
 - Upon completing the SED, you will receive an SED notification email from SEDWEB@norc.uchicago.edu, which includes your SED Certificate of Completion.
- Upload the SED Certificate of Completion to the Administrative documents section of the [UW Electronic Thesis/Dissertation \(ETD\) Administrator Site](#).
- SUBMIT your (1) dissertation, (2) Committee Approval Form, and (3) SED Certificate of Completion via the UW Electronic Thesis/Dissertation (ETD) Administrator Site by the [quarterly deadline](#).
- Confirm submission: after a successful submission, the message “Your dissertation/thesis has been submitted” will appear in the UW ETD Administrator site.
 - You will also receive a confirmation e-mail from “Administrator of University of Washington.
- The degree will be posted after the end of the quarter in which the final dissertation is submitted.
- A diploma will be mailed to the student by the Registrar’s Office about 4 months after graduation. The student should keep their address up to date through the [MyUW](#) system.
- Please keep contact information up-to-date and keep the PM apprised of future work, research, and accomplishments!