

POPULATION, FAMILY AND REPRODUCTIVE HEALTH, PHD

PhD Program Overview

This PFRH handbook describes the program of study for PhD students. It is based on the competencies for the program shown below and the 12 foundational learning objectives required for all programs in schools of public health by the Council on Education in Public Health (CEPH). All PFRH PhD students should have a fundamental understanding of statistical methods and their application, epidemiology, research ethics, advanced research methods in a selected methodological area, expertise in an area of interest, as listed below, and the application of life course perspectives on health, demography, and population dynamics to this area of interest. They are also required to take four terms of the first-year doctoral seminar, two terms of the second-year doctoral seminar, and the PFRH Proposal Writing Seminar (until completion of the Preliminary Oral Examination).

The department's current areas of interest include:

- Adolescent Health (<https://www.jhsph.edu/departments/population-family-and-reproductive-health/areas-of-interest/adolescent-health/>)
- Child Health (<https://www.jhsph.edu/departments/population-family-and-reproductive-health/areas-of-interest/child-health/>)
- Maternal, Fetal, and Perinatal Health (<https://www.jhsph.edu/departments/population-family-and-reproductive-health/areas-of-interest/maternal-fetal-perinatal-health/>)
- Population and Health (<https://www.jhsph.edu/departments/population-family-and-reproductive-health/areas-of-interest/population-and-health/>)
- Women's, Sexual and Reproductive Health (<https://www.jhsph.edu/departments/population-family-and-reproductive-health/areas-of-interest/women-sexual-and-reproductive-health/>)

Program Requirements

During the program, students are required to:

- Successfully complete courses that address the 12 foundational learning objectives required for all programs in schools of public health by CEPH
- Successfully complete all examinations including the comprehensive exam in year two, department preliminary oral examination, schoolwide preliminary oral examination, and final defense examination
- Complete and update an individual development plan for their doctoral studies as they progress through the program and annual reviews of progress (after year two)
- Complete one full year of residency (a minimum of 16 units per term for four consecutive terms)
- Successfully complete a Research Apprenticeship
- Achieve a grade point average (GPA) of 3.0 or higher in all course work
- Achieve a grade B or better in all required PFRH Core courses (life course perspectives on health, demography, and population dynamics as applied to their area of interest)

Students are required to take a minimum of 16 units each term in order to be considered full-time students. Tuition support is contingent on full-time status.

Course location and modality is found on the BSPH website (<https://publichealth.jhu.edu/academics/course-directory/coursesection-numbers-explained/>).

School-wide PhD Requirements

Students must choose:

Code	Title	Credits
PH.340.721	Epidemiologic Inference in Public Health I	5
or PH.340.751	Epidemiologic Methods 1	
Select one of the following:		16
PH.140.621 & PH.140.622 & PH.140.623 & PH.140.624	Statistical Methods in Public Health I and Statistical Methods in Public Health II and Statistical Methods in Public Health III and Statistical Methods in Public Health IV	
PH.140.651 & PH.140.652 & PH.140.653 & PH.140.654	Methods in Biostatistics I and Methods in Biostatistics II and Methods in Biostatistics III and Methods in Biostatistics IV	
Select a minimum of 3 units of Research Ethics		3
PH.550.860	Academic & Research Ethics at BSPH	0

Students must complete all courses meeting the Council on Education for Public Health (CEPH) objectives prior to completing the School-wide Preliminary exam.

Total Credits 24

COMPETENCY

1. Applying statistical methods to address the health of populations. **(Choose 4 in sequence)**

Code	Title	Credits
Select four of the following:		
PH.140.621 or PH.140.651	Statistical Methods in Public Health I (Term 1) Methods in Biostatistics I	4
PH.140.622 or PH.140.652	Statistical Methods in Public Health II (Term 2) Methods in Biostatistics II	4
PH.140.623 or PH.140.653	Statistical Methods in Public Health III (Term 3) Methods in Biostatistics III	4
PH.140.624 or PH.140.654	Statistical Methods in Public Health IV (Term 4) Methods in Biostatistics IV	4

2. Applying epidemiological methods to address the health of populations.

Code	Title	Credits
Select one of the following:		
PH.340.721	Epidemiologic Inference in Public Health I (Terms 1,3)	5
PH.340.751	Epidemiologic Methods 1 (Term 1)	5

3. Applying ethical concepts and tools to population health research and practice.

Code	Title	Credits
PH.550.860	Academic & Research Ethics at BSPH (Terms 1,2,3,4)	

Select one of the following:

PH.306.665	Research Ethics and integrity: U.S. and International Issues (Term 3)	3
PH.550.600	Living Science Ethics - Responsible Conduct of Research (Term 1) ¹	1

If students choose PH.550.600 Living Science Ethics - Responsible Conduct of Research, they must also take one of the following courses: PH.306.663 Legal and Ethical Issues in Health Services Management or PH.221.616 Ethics of Public Health Practice in Developing Countries

CEPH Requirements

1. Explain public health history, philosophy, and values.

Code	Title	Credits
Select one of the following:		
PH.380.624	Maternal and Child Health Legislation and Programs (Term 2)	4
PH.552.601	Foundational Principles of Public Health (Terms 1,3)	0.5

2. Identify the core functions of public health and the 10 Essential Services.

Code	Title	Credits
Select one of the following:		
PH.380.624	Maternal and Child Health Legislation and Programs (Term 2)	4
PH.552.601	Foundational Principles of Public Health (Terms 1,3)	0.5

3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health. (Must take both)

Code	Title	Credits
PH.380.603	Demographic Methods for Public Health (Terms 2,3)	4
PH.552.603	The Role of Qualitative Methods and Science in Describing and Assessing a Population's Health (Term 1)	0.5

4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program.

Code	Title	Credits
PH.380.600	Principles of Population Change (Term 2)	4

5. Discuss the science of primary, secondary, and tertiary prevention in population health, including health promotion, screening, etc.

Code	Title	Credits
Select one of the following:		
PH.340.721	Epidemiologic Inference in Public Health I (Terms 1,3)	5
PH.340.751	Epidemiologic Methods 1 (Term 1)	5

6. Explain the critical importance of evidence in advancing public health knowledge.

Code	Title	Credits
Select one of the following:		
PH.380.664	Reproductive and Perinatal Epidemiology (Term 4)	4

PH.552.606	The Critical Importance of Evidence in Advancing Public Health Knowledge (Terms 2,4)	0.5
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7. Explain effects of environmental factors on a population's health.

Code	Title	Credits
Select one of the following:		
PH.380.616	Child Health Epidemiology (Term 4)	3
PH.552.607	Essentials of Environmental Health (Terms 1,3)	0.5

8. Explain biological and genetic factors that affect a population's health.

Code	Title	Credits
PH.552.608	Biologic, Genetic and Infectious Bases of Human Disease (Terms 2,4)	0.5

9. Explain behavioral and psychological factors that affect a population's health.

Code	Title	Credits
PH.380.604	Life Course Perspectives on Health (Terms 1,2)	4

10. Explain the social, political, and economic determinants of health and how they contribute to population health and health inequities.

Code	Title	Credits
PH.380.604	Life Course Perspectives on Health (Terms 1,2)	4

11. Explain how globalization affects global burdens of disease.

Code	Title	Credits
PH.380.600	Principles of Population Change (Term 2)	4

12. Explain an ecological perspective on the connections among human health, animal health, and ecosystem health (eg, One Health).

Code	Title	Credits
PH.552.612	Essentials of One Health (Term 1)	0.5

PFRH Course Requirements

PhD students are required to take four research methods courses in a specific methodological area in addition Epidemiologic Inference or Epidemiologic Methods I. These requirements must be completed before taking the PFRH comprehensive examination. The methods areas and course requirements are listed in alphabetical order below. PhD students must also complete doctoral seminars throughout their program.

SOCIAL SCIENCE SPECIALTY CORE REQUIREMENTS

Competency

1. Evaluating and applying rigorous strategies for measurement and data collection across a range of study designs.

Code	Title	Credits
Select one of the following:		
PH.340.717	Health Survey Research Methods (Term 2)	4
PH.380.711	Issues in Survey Research Design (Term 3)	3
PH.224.690	Qualitative Research Theory and Methods (Term 3)	3
PH.410.690	Ethnographic Fieldwork (Term 3)	3

2. Evaluating and applying study designs for addressing research and evaluation questions about the health of populations.

Code	Title	Credits
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Select one of the following:

PH.380.611	Fundamentals of Program Evaluation (Terms 1,3)	4
PH.309.616 & PH.309.617	Introduction to Methods for Health Services Research and Evaluation I and Introduction to Methods for Health Services Research and Evaluation II (Term 3 for 616, Term 4 for 617) ¹	4

¹PH.309.616 Introduction to Methods for Health Services Research and Evaluation I is a multi-term course. Must take both courses in order to receive a grade for the course.

3. Evaluating and applying study designs for addressing research and evaluation questions about the health of populations.

Code	Title	Credits
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Select one of the following:

PH.410.615	Research Design in the Social and Behavioral Sciences (Term 2)	3
PH.410.710	Concepts in Qualitative Research for Social and Behavioral Sciences (Term 2)	3
PH.410.631	Introduction to Community-Based Participatory Research: Principles and Methods (Term 3)	3

4. Analyzing data using methodological tools appropriate to the study question and available data.

Code	Title	Credits
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PH.330.657	Statistics for Psychosocial Research: Measurement (Term 1)	4
PH.140.658	Statistics for Psychosocial Research: Structural Models (Term 2)	4
PH.224.691	Qualitative Data Analysis (Term 4) ¹	3

¹PH.224.690 Qualitative Research Theory and Methods is a prerequisite for the course PH.224.691 Qualitative Data Analysis.

PH.380.651	Methods and Measures in Population Studies (Term 4)	4
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EPIDEMIOLOGY SPECIALTY CORE REQUIREMENTS

Option 1 Professional Track

(PH.340.721 Epidemiologic Inference in Public Health I)

Competency

1. Evaluating and applying rigorous strategies for measurement and data collection across a range of study designs.

Code	Title	Credits
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Select one of the following:

PH.340.717	Health Survey Research Methods (Term 2)	4
PH.380.711	Issues in Survey Research Design (Term 3)	3

2. Evaluating and applying study designs for addressing research and evaluation questions about the health of populations.

Code	Title	Credits
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PH.340.722	Epidemiologic Inference in Public Health II (Terms 2,4)	4
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3. Evaluating and applying study designs for addressing research and evaluation questions about the health of populations.

Code	Title	Credits
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Select one of the following:

PH.340.645	Introduction to Clinical Trials (Term 2)	3
PH.223.664	Design and Conduct of Community Trials (Term 3)	4
PH.340.728	Advanced Methods for Design and Analysis of Cohort Studies (Term 1)	5

4. Analyzing data using methodological tools appropriate to the study question and available data. **(Must take both)**

Code	Title	Credits
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PH.340.770	Public Health Surveillance (Term 2)	3
PH.140.630	Introduction to Data Management (Terms 2,4)	3

Option 2

(PH.340.751 Epidemiologic Methods 1)

Competency

1. Evaluating and applying rigorous strategies for measurement and data collection across a range of study designs.

Code	Title	Credits
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Select one of the following:

PH.340.717	Health Survey Research Methods (Term 2)	4
PH.380.711	Issues in Survey Research Design (Term 3)	3

2. Evaluating and applying study designs for addressing research and evaluation questions about the health of populations.

Code	Title	Credits
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Select one of the following:

PH.340.645	Introduction to Clinical Trials (Term 2)	3
PH.223.664	Design and Conduct of Community Trials (Term 3)	4

DEMOGRAPHY SPECIALTY CORE REQUIREMENTS

Competency

1. Evaluating and applying rigorous strategies for measurement and data collection across a range of study designs.

Code	Title	Credits
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Select one of the following:

PH.340.717	Health Survey Research Methods (Term 2)	4
PH.380.711	Issues in Survey Research Design (Term 3)	3

2. Evaluating and applying study designs for addressing research and evaluation questions about the health of populations.

Code	Title	Credits
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PH.410.615	Research Design in the Social and Behavioral Sciences (Term 2)	3
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3. Analyzing data using methodological tools appropriate to the study question and available data. **(Must take both)**

Code	Title	Credits
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PH.380.650	Demographic Methods for Measuring Health and Longevity (Term 3)	4
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PH.340.728	Advanced Methods for Design and Analysis of Cohort Studies (Term 1)	5
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3. Evaluating and applying study designs for addressing research and evaluation questions about the health of populations. **Both courses fulfill competency 3 & 4.**

Code	Title	Credits
PH.340.752	Epidemiologic Methods 2 (Term 2)	5
PH.340.753	Epidemiologic Methods 3 (Term 3)	5

4. Analyzing data using methodological tools appropriate to the study question and available data. **Both courses fulfill competency 3 & 4.**

Code	Title	Credits
PH.340.752	Epidemiologic Methods 2 (Term 2)	5
PH.340.753	Epidemiologic Methods 3 (Term 3)	5

HEALTH ECONOMICS SPECIALTY CORE REQUIREMENTS

Competency

1. Evaluating and applying rigorous strategies for measurement and data collection across a range of study designs.

Code	Title	Credits
Select one of the following:		
PH.313.603	Economic Evaluation III (Term 3) ¹	3
PH.380.711	Issues in Survey Research Design (Term 3)	3

¹PH.313.601 Economic Evaluation I and PH.313.602 Economic Evaluation II are pre-requisites for PH.313.603 Economic Evaluation III

2. Evaluating and applying study designs for addressing research and evaluation questions about the health of populations.

Code	Title	Credits
Select two of the following:		
PH.313.601	Economic Evaluation I (Term 1) ¹	3
PH.313.653	Advanced Health Economics I (Term 1)	2
PH.313.654	Advanced Health Economics II (Term 2)	2
PH.313.655	Advanced Health Economics III (Term 3)	2
PH.313.656	Advanced Health Economics IV (Term 4)	2
AS.180.600	General Equilibrium Theory (Term 1)	4
AS.180.601	Microeconomic Theory I (Term 2)	4

¹PH.313.601 Economic Evaluation I and PH.313.602 Economic Evaluation II are pre-requisites for PH.313.603 Economic Evaluation III

3. Analyzing data using methodological tools appropriate to the study question and available data.

Code	Title	Credits
Select one of the following:		
PH.221.644	Econometric Methods for Evaluation of Health Programs (Term 4)	4
PH.309.617 & PH.309.616	Introduction to Methods for Health Services Research and Evaluation II and Introduction to Methods for Health Services Research and Evaluation I (Terms 3,4) ¹	4
PH.221.645	Large-scale Effectiveness Evaluations of Health Programs (Term 4)	4

PH.300.713	Research and Evaluation Methods for Health Policy (Term 3)	3
PH.313.602	Economic Evaluation II (Term 2) ²	3

¹Students who elect to take PH.309.616 Introduction to Methods for Health Services Research and Evaluation I must also take PH.309.617 Introduction to Methods for Health Services Research and Evaluation II
²PH.313.601 Economic Evaluation I and PH.313.602 ECONOMIC EVALUATION II are pre-requisites for PH.313.603 ECONOMIC EVALUATION III

HEALTH SERVICES RESEARCH AND EVALUATION SPECIALTY CORE REQUIREMENTS

Competency

1. Evaluating and applying rigorous strategies for measurement and data collection across a range of study designs.

Code	Title	Credits
Select one of the following:		
PH.340.717	Health Survey Research Methods (Term 2)	4
PH.380.711	Issues in Survey Research Design (Term 3)	3
PH.224.690	Qualitative Research Theory and Methods (Term 3)	3
PH.410.690	Ethnographic Fieldwork (Term 3)	3

2. Evaluating and applying study designs for addressing research and evaluation questions about the health of populations.

Code	Title	Credits
Select one of the following:		
PH.380.611	Fundamentals of Program Evaluation (Terms 1,3)	4
PH.309.616 & PH.309.617	Introduction to Methods for Health Services Research and Evaluation I and Introduction to Methods for Health Services Research and Evaluation II (Terms 3,4)	4

3. Evaluating and applying study designs for addressing research and evaluation questions about the health of populations.

Code	Title	Credits
Select one of the following:		
PH.223.664	Design and Conduct of Community Trials (Term 3)	4
PH.300.713	Research and Evaluation Methods for Health Policy (Term 3)	3
PH.300.715	Advanced Research and Evaluation Methods in Health Policy (Term 4) ¹	4
PH.221.638	Health Systems Research and Evaluation in Developing Countries (Term 4)	4
PH.410.631	Introduction to Community-Based Participatory Research: Principles and Methods (Term 2)	3
PH.224.692	Methods in Formative Research and Human Centered Design for Intervention Development (Term 4)	4
PH.313.790	Introduction to Economic Evaluation (Term 4)	3
PH.312.693	Introduction to Comparative Effectiveness and Outcomes Research (Term 3)	3
PH.390.675	Outcomes and Effectiveness Research (Term 4)	3

PH.410.710	Concepts in Qualitative Research for Social and Behavioral Sciences (Term 2)	3
PH.380.612	Applications in Program Monitoring and Evaluation (Term 4)	4

4. Analyzing data using methodological tools appropriate to the study question and available data.

Code	Title	Credits
PH.223.632	Methods for Planning and Implementing Evaluations of Large-Scale Health Programs in Low and Middle income Countries (Term 4)	4
PH.224.691	Qualitative Data Analysis (Term 4) ¹	3
PH.221.644	Econometric Methods for Evaluation of Health Programs (Term 4)	4

PH.224.690 Qualitative Research Theory and Methods is a prerequisite for PH.224.691 Qualitative Data Analysis

PFRH DOCTORAL SEMINARS

Code	Title	Credits
First Year Doctoral Students		
PH.380.817	PFRH First Year Doctoral Seminar Part 1 (Terms 1,2)	1
PH.380.822	PFRH First Year Doctoral Seminar Part 2 (Terms 3,4)	1
Second Year Doctoral Students		
PH.380.823	Research Seminar in Population, Family and Reproductive Health I (Term 1)	2
PH.380.824	Research Seminar in Population, Family and Reproductive Health II (Term 2)	2
PH.380.821	PFRH Proposal Writing Seminar (Term 4) ¹	2
Third Year Doctoral Students		
PH.380.821	PFRH Proposal Writing Seminar (Terms 1,2,3,4)	2

¹ Second year doctoral students also register for 1 credit PH.380.840 Special Studies in PFRH in 3rd Term for PFRH Proposal Writing Seminar

PFRH Areas of Interest Requirements for PhD

Students must take a minimum of seven required courses from one of the department's areas of interest. The courses fulfilling these requirements must be taken **in addition to** any departmental **or** schoolwide course requirements. The current areas of interest for students include the following:

- Adolescent Health
- Child Health
- Maternal, Fetal and Perinatal Health
- Population and Health
- Women's, Sexual and Reproductive Health

Doctoral students must take 7 courses to meet the requirements for the areas of interest component of their degree program. Within a given area of interest, a unique course needs to be selected for each of the following competencies:

1. Applying selected frameworks to understand population health problems, including a multiple determinants framework for the health of populations across the life course;
2. Identifying and assessing the causes and consequences of population change.
3. Applying demographic methods to the health of populations to the area of interest.
4. Assessing the principal health concerns for the populations relevant to the area of interest, the associated population-based risk factors, and the relative impact of each risk factor.
5. Evaluating strategies to promote population health, including the policies and programs that address health concerns and behavior in the relevant populations.
6. Applying frameworks specific to the area of interest (beyond life course) for improving the health of the relevant populations.
7. Critiquing health services and systems delivery strategies used to address health concerns in the relevant populations

Courses meeting the health services and systems delivery strategies competency are eligible for all areas of interest, but the department recommends that this course be closely related to the students' chosen area of interest. A unique course must be taken to fulfill each competency. If a student chooses to complete a second area of interest, courses may be double counted across their primary and secondary area of interests; students must, however, complete the course requirements for at least one area of interest. The department encourages students to select electives from other area of interests to enhance the breadth and depth of understanding in their chosen and other area of interests. Area of interests and their eligible courses are listed in the following tables by alphabetical order.

ADOLESCENT HEALTH

Competency

1. Applying selected frameworks to understand population health problems, including a multiple determinants framework for the health of populations across the life course.

Code	Title	Credits
PH.380.604	Life Course Perspectives on Health (Terms 1,2)	4

2. Identifying and assessing the causes and consequences of population change.

Code	Title	Credits
PH.380.600	Principles of Population Change (Term 2)	4

3. Applying demographic methods to the health of populations.

Code	Title	Credits
PH.380.603	Demographic Methods for Public Health (Terms 2,3)	4

4. Assessing the principal health concerns for the populations relevant to the area of interest, the associated population-based risk factors, and the relative impact on each risk factor.

Code	Title	Credits
Select one of the following:		
PH.380.623	Adolescent Health and Development (Term 3)	3
PH.380.747	International Adolescent Health (Term 4)	3

5. Evaluating strategies to promote population health, including the policies and programs that address health concerns and behavior in the relevant populations.

Code	Title	Credits
Select one of the following:		
PH.380.624	Maternal and Child Health Legislation and Programs (Term 2)	4
PH.380.665	Family Planning Policies and Programs (Term 3)	4
6. Applying frameworks specific to the area of interest (beyond life course) for improving the health of the relevant populations.		
Code	Title	Credits
PH.380.725	The Social Context of Adolescent Health and Development (Term 4)	3
7. Critiquing health services and systems delivery strategies used to address health concerns in the relevant populations.		
Code	Title	Credits
Select one of the following:		
PH.380.661	Clinical Aspects of Maternal and Newborn Health (Term 3)	3
PH.380.760	Clinical Aspects of Reproductive Health (Term 3)	3
PH.221.627	Issues in the Reduction of Maternal and Neonatal Mortality in Low income Countries (Term 2)	4
PH.380.665	Family Planning Policies and Programs (Term 3)	4
PH.380.624	Maternal and Child Health Legislation and Programs (Term 2)	4
PH.380.721	Schools and Health (Term 4)	3

Electives

Code	Title	Credits
PH.380.720	Masculinity, Sexual Behavior & Health: Adolescence & Beyond (Term 2)	3
PH.380.721	Schools and Health (Term 4)	3
PH.380.762	HIV Infection in Women, Children, and Adolescents (Term 4)	4
PH.380.761	Sexually Transmitted Infections in Public Health Practice (Term 4)	4
PH.380.625	Evidence and Opportunities to Mitigate Childhood Adversity and Promote Well-Being (Term 3)	3
PH.380.640	Children in Crisis: An Asset-Based Approach to Working With Vulnerable Youth (Term 3)	3
PH.380.771	Understanding and Changing International Reproductive Health Policy (Term 4)	3
PH.380.749	Adolescent Sexual and Reproductive Health (Term 4)	3

CHILD HEALTH*Competency*

1. Applying selected frameworks to understand population health problems, including a multiple determinants framework for the health of populations across the life course.

Code	Title	Credits
PH.380.604	Life Course Perspectives on Health (Terms 1,2)	4

2. Identifying and assessing the causes and consequences of population change.

Code	Title	Credits
PH.380.600	Principles of Population Change (Term 2)	4
3. Applying demographic methods to the health of populations.		
Code	Title	Credits
PH.380.603	Demographic Methods for Public Health (Terms 2,3)	4
4. Assessing the principal health concerns for the populations relevant to the area of interest, the associated population-based risk factors, and the relative impact of each risk factor.		
Code	Title	Credits
PH.380.616	Child Health Epidemiology (Term 4)	3
5. Evaluating strategies to promote population health, including the policies and programs that address health concerns and behavior in the relevant populations.		
Code	Title	Credits
PH.380.624	Maternal and Child Health Legislation and Programs (Term 2)	4
6. Applying frameworks specific to the area of interest (beyond life course) for improving the health of the relevant populations.		
Code	Title	Credits
Select one of the following:		
PH.380.642	Child Health and Development (Term 2)	3
PH.380.744	Nutrition and Growth in Maternal and Child Health (Term 1)	3

7. Critiquing health services and systems delivery strategies used to address health concerns in the relevant populations.

Code	Title	Credits
Select one of the following:		
PH.380.661	Clinical Aspects of Maternal and Newborn Health (Term 3)	3
PH.380.760	Clinical Aspects of Reproductive Health (Term 3)	3
PH.221.627	Issues in the Reduction of Maternal and Neonatal Mortality in Low income Countries (Term 2)	4
PH.380.665	Family Planning Policies and Programs (Term 3)	4
PH.380.624	Maternal and Child Health Legislation and Programs (Term 2)	4
PH.380.721	Schools and Health (Term 4)	3

Electives

Code	Title	Credits
PH.223.663	Infectious Diseases and Child Survival (Term 3)	3
PH.380.640	Children in Crisis: An Asset-Based Approach to Working With Vulnerable Youth (Term 3)	3
PH.330.640	Childhood Victimization: A Public Health Perspective (Term 4)	3
PH.380.765	Preventing Infant Mortality and Promoting the Health of Women, Infants and Children (Term 4)	3
PH.380.762	HIV Infection in Women, Children, and Adolescents (Term 4)	4
PH.221.627	Issues in the Reduction of Maternal and Neonatal Mortality in Low income Countries (Term 2)	4

PH.380.625	Evidence and Opportunities to Mitigate Childhood Adversity and Promote Well-Being (Term 3)	3
PH.380.740	Nutrition Programs, Policy and Politics in the United States: the Impact on Maternal, Child and Family Health (Term 2)	3
PH.380.742	Family - Health, Public Health and Policy (Term 2)	3
PH.380.623	Adolescent Health and Development (Term 3)	3
PH.410.752	Children, Media, and Health (Term 3)	3

PH.221.627	Issues in the Reduction of Maternal and Neonatal Mortality in Low income Countries (Term 2)	4
PH.380.665	Family Planning Policies and Programs (Term 3)	4
PH.380.624	Maternal and Child Health Legislation and Programs (Term 2)	4
PH.380.721	Schools and Health (Term 4)	3

MATERNAL, FETAL AND PERINATAL HEALTH

Competency

1. Applying selected frameworks to understand population health problems, including a multiple determinants framework for the health of populations across the life course.

Code	Title	Credits
PH.380.604	Life Course Perspectives on Health (Terms 1,2)	4

2. Identifying and assessing the causes and consequences of population change.

Code	Title	Credits
PH.380.600	Principles of Population Change (Term 2)	4

3. Applying demographic methods to the health of populations.

Code	Title	Credits
PH.380.603	Demographic Methods for Public Health (Terms 2,3)	4

4. Assessing the principal health concerns for the populations relevant to the area of interest, the associated population-based risk factors, and the relative impact of each risk factor.

Code	Title	Credits
PH.380.664	Reproductive and Perinatal Epidemiology (Term 4)	4

5. Evaluating strategies to promote population health, including the policies and programs that address health concerns and behavior in the relevant populations.

Code	Title	Credits
PH.380.624	Maternal and Child Health Legislation and Programs (Term 2)	4

6. Applying frameworks specific to the area of interest (beyond life course) for improving the health of the relevant populations.

Code	Title	Credits
Select one of the following:		
PH.380.744	Nutrition and Growth in Maternal and Child Health (Term 1)	3
PH.380.655	Social and Economic Aspects of Human Fertility (Term 2)	3

7. Critiquing health services and systems delivery strategies used to address health concerns in the relevant populations.

Code	Title	Credits
Select one of the following:		
PH.380.661	Clinical Aspects of Maternal and Newborn Health (Term 3)	3
PH.380.760	Clinical Aspects of Reproductive Health (Term 3)	3

Electives

Code	Title	Credits
PH.380.662	Critiquing the Research Literature in Maternal, Neonatal, and Reproductive Health (Term 2)	4
PH.380.765	Preventing Infant Mortality and Promoting the Health of Women, Infants and Children (Term 4)	3
PH.380.740	Nutrition Programs, Policy and Politics in the United States: the Impact on Maternal, Child and Family Health (Term 2)	3
PH.380.765	Preventing Infant Mortality and Promoting the Health of Women, Infants and Children (Term 4)	3
PH.120.620	Fundamentals of Reproductive Biology (Terms 1,2)	3

POPULATION AND HEALTH

Students selecting the Population and Health Area of interest must select the Demography Specialty Core to fulfill the Research Methods Course Requirements.

Competency

1. Applying selected frameworks to understand population health problems, including a multiple determinants framework for the health of populations across the life course.

Code	Title	Credits
PH.380.604	Life Course Perspectives on Health (Terms 1,2)	4

2. Identifying and assessing the causes and consequences of population change.

Code	Title	Credits
PH.380.600	Principles of Population Change (Term 2)	4

3. Applying demographic methods to the health of populations.

Code	Title	Credits
PH.380.603	Demographic Methods for Public Health (Terms 2,3)	4

4. Assessing the principal health concerns for the populations relevant to the area of interest, the associated population-based risk factors, and the relative impact of each risk factor.

Code	Title	Credits
Select one of the following:		
PH.380.655	Social and Economic Aspects of Human Fertility (Term 2)	3
PH.380.750	Migration and Health: Concepts, Rates, and Relationships (Term 3)	3

5. Evaluating strategies to promote population health, including the policies and programs that address health concerns and behavior in the relevant populations.

Code	Title	Credits
Select one of the following:		
PH.380.665	Family Planning Policies and Programs (Term 3)	4
PH.380.624	Maternal and Child Health Legislation and Programs (Term 2)	4
6. Applying frameworks specific to the area of interest (beyond life course) for improving the health of the relevant populations.		
Code	Title	Credits
PH.380.655	Social and Economic Aspects of Human Fertility (Term 2)	3
PH.380.750	Migration and Health: Concepts, Rates, and Relationships (Term 3)	3
PH.380.756	Poverty, Economic Development, and Health (Term 2)	4
7. Critiquing health services and systems delivery strategies used to address health concerns in the relevant populations.		
Code	Title	Credits
Select one of the following:		
PH.380.661	Clinical Aspects of Maternal and Newborn Health (Term 3)	3
PH.380.760	Clinical Aspects of Reproductive Health (Term 3)	3
PH.221.627	Issues in the Reduction of Maternal and Neonatal Mortality in Low income Countries (Term 2)	4
PH.380.665	Family Planning Policies and Programs (Term 3)	4
PH.380.624	Maternal and Child Health Legislation and Programs (Term 2)	4
PH.380.721	Schools and Health (Term 4)	3

Electives

Code	Title	Credits
PH.380.635	Urban Health in Contemporary America (Term 4)	4
PH.380.664	Reproductive and Perinatal Epidemiology (Term 4)	4
PH.380.662	Critiquing the Research Literature in Maternal, Neonatal, and Reproductive Health (Term 2)	4
PH.380.765	Preventing Infant Mortality and Promoting the Health of Women, Infants and Children (Term 4)	3
PH.380.767	Couples and Reproductive Health (Term 1, variable credit)	3

¹ Students selecting the Population and Health Area of interest must select the Demography Specialty Core to fulfill the Research Methods Course Requirements.

WOMEN'S, SEXUAL AND REPRODUCTIVE HEALTH*Competency*

- Applying selected frameworks to understand population health problems, including a multiple determinants framework for the health of populations across the life course.

Code	Title	Credits
PH.380.604	Life Course Perspectives on Health (Terms 1,2)	4

- Identifying and assessing the causes and consequences of population change.

Code	Title	Credits
PH.380.600	Principles of Population Change (Term 2)	4

- Applying demographic methods to the health of populations.

Code	Title	Credits
PH.380.603	Demographic Methods for Public Health (Terms 2,3)	4

- Assessing the principal health concerns for the populations relevant to the area of interest, the associated population-based risk factors, and the relative impact of each risk factor.

Code	Title	Credits
Select one of the following:		

PH.380.664	Reproductive and Perinatal Epidemiology (Term 4)	4
PH.380.666	Women's Health (Term 3)	3

- Evaluating strategies to promote population health, including the policies and programs that address health concerns and behavior in the relevant populations.

Code	Title	Credits
Select one of the following:		

PH.380.665	Family Planning Policies and Programs (Term 3)	4
PH.380.771	Understanding and Changing International Reproductive Health Policy (Term 4)	3
PH.380.667	Women's Health Policy (Term 4)	3
PH.380.768	Selected Topics in Women's Health and Women's Health Policy (Term 1)	4

- Applying frameworks specific to the area of interest (beyond life course) for improving the health of the relevant populations.

Code	Title	Credits
Select one of the following:		

PH.380.655	Social and Economic Aspects of Human Fertility (Term 2)	3
PH.380.668	International Perspectives on Women, Gender, and Health (Term 4)	3

- Critiquing health services and systems delivery strategies used to address health concerns in the relevant populations.

Code	Title	Credits
Select one of the following:		

PH.380.661	Clinical Aspects of Maternal and Newborn Health (Term 3)	3
PH.380.760	Clinical Aspects of Reproductive Health (Term 3)	3
PH.221.627	Issues in the Reduction of Maternal and Neonatal Mortality in Low income Countries (Term 2)	4
PH.380.665	Family Planning Policies and Programs (Term 3)	4
PH.380.624	Maternal and Child Health Legislation and Programs (Term 2)	4
PH.380.721	Schools and Health (Term 4)	3

Electives

Code	Title	Credits
PH.380.662	Critiquing the Research Literature in Maternal, Neonatal, and Reproductive Health (Term 2)	4

PH.380.720	Masculinity, Sexual Behavior & Health: Adolescence & Beyond (Term 2)	3
PH.380.749	Adolescent Sexual and Reproductive Health (Term 4)	3
PH.380.762	HIV Infection in Women, Children, and Adolescents (Term 4)	4
PH.410.683	Global Perspectives on LGBT Health (Term 3)	3
PH.340.629	The Epidemiology of LGBTQ Health	3
PH.221.627	Issues in the Reduction of Maternal and Neonatal Mortality in Low income Countries (Term 2)	4
PH.380.663	Gender-Based Violence Research, Practice and Policy: Issues and Current Controversies (Term 4)	3
PH.380.628	Public Health Perspectives On Abortion (Term 4)	3
PH.380.624	Maternal and Child Health Legislation and Programs (Term 2)	4
PH.410.657	Communication Strategies For Sexual Risk Reduction (Term 4)	3
PH.380.767	Couples and Reproductive Health (Term 1, variable credit)	3
PH.380.668	International Perspectives on Women, Gender, and Health (Term 4)	3
PH.120.620	Fundamentals of Reproductive Biology (Terms 1,2)	3

specific degree requirements. This tracking is accomplished by the PFRH department's Annual Review and credentialing process. Rather, the IDP is designed to assist students in considering future career goals and how to best ensure current activities prepare them appropriately for these goals.

If students would like to complete more self-assessment focused IDPs here are a few:

- American Association for the Advancement of Science (AAAS): <https://myidp.sciencecareers.org/>
- University of Michigan: <https://hr.umich.edu/sites/default/files/faculty-idp.pdf>
- Stanford University: <https://biosciences.stanford.edu/current-students/idp/forms/>

An Individual Development Plan helps with self-assessment, planning, and communication:

- An IDP can help students communicate professional development and career planning needs and intentions to others including their adviser, which can lead to helpful advice and resources.
- They can use the IDP to make sure their expectations and those of their adviser are clearly outlined and in agreement so that there are no big surprises, particularly at the end of training.
- The current job market is challenging and research has shown that individuals who perform structured career planning achieve greater career success and satisfaction.
- Some students, especially those early in their studies, may not yet have a firm understanding of where they hope to take their career. The IDP can also help think about strengths and weaknesses as they evolve towards career planning.
- The IDP is meant as a living document, to be modified as students move through the program and solidify their goals and plan.
- The IDP helps to reflect on successes and challenges from the previous year and anticipate any successes and challenges in the coming year(s).
- The questions listed below help as a starting place for thinking; students do not need to respond to all, if some are less relevant, and aspects not included can also be considered.

We hope that you find this opportunity for reflection helpful and welcome feedback on the process.

PFRH Comprehensive Examination

The first and second term doctoral seminars in the second year of the doctoral program of study contribute to preparation for the comprehensive exams. During the first term, all second-year doctoral students participate in an integrated seminar in which they review and critique literature based on readings that span the areas of interest in the department and integrate the core demography courses and life course perspectives in health.

In the second term, students work with faculty members in their area of interest to critically review and evaluate literature specific to the area. The readings address the specific area of interest competencies and methods competencies related to measurement and study design. When appropriate (as determined by seminar leaders), some areas of interest may choose to meet together to critically review and discuss a subset of readings. A practice take-home exam also is reviewed with all second year students at the end of the second term. All second term, second year doctoral seminars meet on the same pre-determined date and time to provide the opportunity for cross area of interest collaboration. Readings

Monitoring Progress of PFRH PhD Students

As of the 2018-2019 academic year, the University Doctoral Board requires that each doctoral student, and Postdoctoral Fellow, should receive an annual review during every year in their program. This review is expected to have 3 components:

1. Student self-assessment and Individual Development Plan (IDP)
2. Monitoring of progress in the program
3. Written feedback to the student/Fellow

For PFRH doctoral students, the IDP self-assessment and Annual Review process embody these three components. With AY2019-2020, first and second-year doctoral students will be asked to complete the IDP, which is described in detail below and will be reviewed as part of meetings of students with their advisers. PFRH encourages doctoral students to meet regularly and frequently with their advisers.

Annual Review

BSPH, and thus PFRH, requires that all doctoral students have a yearly meeting with their academic adviser and other faculty members from PFRH or other BSPH departments. A formal annual review meeting and report is required after the second year of study and takes place annually by mid-November. Faculty who attend the review may change over the course of a student's program. The purpose of the meeting is twofold, serving as an opportunity:

1. for students and faculty to discuss the student's progress and identify resources and potential problems as they progress through the program and
2. ensure that PFRH records on student progress are correct and up-to-date.

Individual Development Plan

The IDP is intended to help PhD students assess their goals, strengths, weaknesses, values, and plans for their future career. They are expected to complete this plan at the beginning of doctoral studies and update it annually. As noted earlier, this IDP is not meant to track progress towards

from the first and second term second year doctoral seminars are used as the basis for some oral exam questions.

A two-part exam includes:

1. Area of interest Specific Written Examination

A written take-home exam will be given that tests the students' ability to critically analyze research in their area of interest and to synthesize and integrate both concepts and required methods learned in course work (including doctoral seminars).

2. Area of interest Oral Examination

The oral exam focuses on content and synthesis of core area of interest and public health knowledge, basic research methods, and follow-up questions on the written examination, providing students an opportunity to clarify written responses.

Departmental Preliminary Oral Examination

This exam is intended to review the student's proposed research plan and determine that the student is academically prepared to undertake the schoolwide preliminary oral exam and to carry out thesis research. The examination provides the student with experience in discussing a research proposal in a formal setting that resembles the School's preliminary oral. It also is a mechanism to review the rigor of the proposed research, independent of the oral performance, and to provide the student with constructive commentary on the strengths and weaknesses of the proposed research, as well as strengths and weaknesses in PFRH content and research design and methods in general. Students are expected to begin with a 10-minute PowerPoint presentation summarizing their proposal.

In order to sit for the departmental oral examination a student must have completed all required coursework, and passed the written and oral components of the Department Comprehensive Examination. Students are also expected to complete a thesis proposal in preparation for the exam. This proposal is completed while working closely with their adviser, co-adviser, if there is one, and department faculty, as appropriate, to determine if the thesis proposal is of adequate rigor before proceeding to the oral exam. The faculty adviser (and co-adviser) is expected to have thoroughly reviewed the proposal and have approved its quality prior to scheduling the examination. Other examiners or department faculty are not responsible for approving the proposal prior to the examination, but consultation during the work from faculty other than the adviser is recommended, as appropriate.

In addition to working with their adviser(s), students are expected to take advantage of the proposal writing seminar. It provides an opportunity to receive feedback from fellow students and the seminar instructor about their proposed research and proposal. Examples of proposals are available for student review in the proposal writing course website and provide models of the expected rigor. Sample proposals are also available for faculty review (see Education Office). Students are expected to discuss feedback received during the proposal writing seminar with their adviser (and co-adviser).

The Departmental Oral Examination is typically scheduled at least one month before the Schoolwide Preliminary Oral Examination. It may be wise to begin contacting faculty about service on the schoolwide oral exam committee before the departmental oral so that paperwork for the schoolwide exam can be submitted shortly after the departmental oral exam is successfully concluded with an unconditional pass. On the other hand, time between the two exams may be advised for students whose

proposal may need additional refinement or for students who may need additional preparation in answering questions in an oral exam.

Schoolwide Preliminary Doctoral Oral Exam

Purpose

The purpose of this examination is to determine whether the student has both the ability and knowledge to undertake significant research in their general area of interest. Specifically, the examiners will be concerned with the student's: (1) capacity for logical thinking; (2) breadth of knowledge in relevant areas; and (3) ability to develop and conduct research leading to a completed thesis. Discussion of a specific research proposal, if available, may serve as a vehicle for determining the student's general knowledge and research capacity. However, this examination is not intended to be a defense of a specific research proposal.

Policy

This exam is a University examination under the jurisdiction of the Graduate Board and is required of all PhD students. The full-time residency requirement must be successfully fulfilled before the Preliminary Oral Examination is requested.

The Examining Committee must:

1. Include five voting members. Two members **MUST** be from the sponsoring department; one of these is the adviser. A third member from the sponsoring department is optional. (LIMIT of 3 members from sponsoring department; co-advisers are 2 of the 3 members.)
 - a. The student's adviser of record must serve as a member of the Committee. If a student is in a department where the adviser serves on the committee, the adviser must be among the members present; an alternate may not serve for the adviser. The senior faculty member without a primary appointment in the student's Department will serve as Chair of the Committee and **MUST** hold the rank of Associate or Full Professor.
 - b. All faculty members must serve on the Committee representing the department of their primary faculty appointment. The only instance when the faculty member can serve in their joint appointment capacity is if they are the student's adviser.
 - c. Most often, the committee is comprised of duly appointed faculty members of a University department and must hold, at the time of selection, an appointment of Assistant Professor or higher. Occasionally, one adjunct or one scientist faculty member, but not both, may serve on the Committee. Neither may serve as the Chair.
 - d. Access to the most current faculty ranks can be found on the school's website at the following address: publichealth.jhu.edu/faculty/directory/list (<https://publichealth.jhu.edu/faculty/directory/list/>) Contact Erin McEvoy, emcevoy2@jhu.edu, with any issues with this directory.
 - e. All members of the Committee must be present at the scheduled exam location; teleconference participation is **NOT** permitted.

2. Be comprised of three Departments of the University, **TWO** being from the Bloomberg School of Public Health.

3. Must have appropriate alternate members to serve on the committee. The selection of alternates is very important for ensuring the exam can take place at the originally scheduled date/time. If you have two members on your committee from your sponsoring department, you should have one alternate from your sponsoring department and one from a non-sponsoring department. If you have three members on your committee from your sponsoring department, then your two alternates should be from a non-sponsoring department, at least one of which should be of the rank of Associate Professor or higher and from a department other than the chair if one of the committee members is not from the Bloomberg School of Public Health.

The examination should be taken at the earliest feasible time, not later than the end of the student's third year in residence, and before significant engagement in dissertation research. If the student fails the Preliminary Oral Examination and is permitted a re-examination, they must be re-examined within one year.

Final Doctoral Oral Exam

Policy

The oral defense of the thesis shall be conducted by the Committee of Thesis Readers after the adviser agrees that the candidate is ready for the formal defense. The adviser must certify in writing that the thesis is in a form that is ready for defense before the student may distribute the final written document to the thesis readers. During the defense the committee shall evaluate: (a) the originality and publication potential of the research; (b) the candidate's understanding of the details of the methodological and analytic work; and (c) the final quality of the written thesis document.

Conduct of Examination

If one of the officially appointed members of the committee fails to appear on the date fixed for the defense, the previously approved alternate must be prepared to discharge the responsibility of the absent individual. A final oral examination may not be held with fewer than four officially approved faculty members present in the room. The adviser must be among the members present; an alternate may not serve for the adviser. The examination will be open to the public. It is the prerogative of the Examining Committee to decide on the details of conducting the examination. At the conclusion of the formal presentation by the student, the student, public, and unofficial members of the Faculty Examining Committee will be excused. At the conclusion of the examination with only the committee present, the committee will then vote with a closed ballot on the candidate's performance and written thesis, selecting one of the following outcomes:

Acceptable: This choice requires a unanimous vote of the committee indicating an acceptable thesis with only minor corrections. Minor corrections are considered those that can be comfortably completed within two weeks following the exam.

Conditionally Acceptable: If one or more members require substantive changes to the thesis, these changes must be discussed by the committee. Immediately following this discussion, each member who still requires changes will write down the specific nature of the changes and the time expected for the student to complete them. The appropriately revised thesis must be submitted to each member for final approval; the committee shall remain appointed until the chair writes a letter to the associate dean responsible for student academic affairs indicating that all conditions have been met.

Unacceptable: If one or more members feel that the candidate's understanding of the written thesis is inadequate, or that the thesis in its present form is not acceptable for a doctoral dissertation, then the candidate has FAILED. Re-examination would be in order unless there is a unanimous recommendation to the contrary. The re-examination will normally be by the same committee, but a new committee may be selected by the Chair of the Committee on Academic Standards if petitioned by the student.

Public Seminar

As a culminating experience, the doctoral student will present a formal, public seminar. This requirement provides experience for the student in preparing a formal seminar; provides the faculty and department with an opportunity to share in the student's accomplishment; and gives a

sense of finality to the doctoral experience on behalf of the student. The presentation is expected to not exceed 25 minutes. Students who choose to give a longer presentation should consult their defense committee about the acceptability of longer presentation.

PhD Schoolwide Program Policy

The Department of Population, Family and Reproductive Health candidates for the degree Doctor of Philosophy (PhD) must fulfill all School requirements, as specified in the PhD Schoolwide Policy (https://my.jhsph.edu/Resources/PoliciesProcedures/ppm/PolicyProcedureMemoranda/Academic_Progr%20ams_03_Doctor_Of_Philosophy_Degree_071717.pdf) last revised July 17, 2017. These include, but are not limited to, a minimum of four consecutive academic terms at the School in full-time residency (some programs require 6 terms), continuous registration throughout their tenure as a PhD student, satisfactory completion of a Departmental Written Comprehensive Examination, satisfactory performance on a University Preliminary Oral Examination, readiness to undertake research, and preparation and successful defense of a thesis based upon independent research.

PhD Students are required to be registered full-time for a minimum of 16 credits per term and courses must be taken for letter grade or pass/fail. *Courses taken for audit do not count toward the 16-credit registration minimum.*

Students having already earned credit at BSPH from a master's program or as a Special Student Limited within the past three years for any of the required courses may be able to use them toward satisfaction of doctoral course requirements.

Completion of Requirements

The University places a seven-year maximum limit upon the period of doctoral study. PFRH students are expected to complete all requirements in an average of 4 - 5 years and must achieve a cumulative GPA of 3.0 in order to maintain Satisfactory Academic Progress (SAP). Tuition funding is provided for up to four years. Formal leaves of absence may extend this time.

Unsatisfactory Academic Progress/Cause for Dismissal

A failing grade (F) in two or more courses will be cause for dismissal from the PFRH graduate program. The department will permit a student to remediate one course failure (F). Any student who fails a course will be monitored closely regarding academic progress.

Other causes for dismissal from the program include, but are not limited to, the following:

- Ethics violation
- Failure to pass a re-take examination (Comprehensive, Departmental Oral, Schoolwide Preliminary Oral, and Final Defense Examinations)

Failure to maintain required GPA and to successfully complete all required courses

Departmental Pass/Fail Policy

PFRH requires that doctoral students take all required courses, including required PFRH area of interest and methods courses, for a letter grade. Only elective courses may be taken as Pass/Fail option.

BSPH Courses Taken Prior to Enrollment in Current Degree Program

Students who previously took a course at the School of Public Health who wish to use the course to fulfill a current requirement must have received a “B” or better and taken the course within the last three years of matriculating into their current degree program. Students who took these courses as an undergraduate may use the courses to fulfill course requirements, but may not receive credit for the course to meet the minimum credit requirement for their current degree program.

Course Waiver Policy

Students requesting course waivers must present evidence of prior coursework in the same subject, including, but not limited to, a syllabus and transcript. No waivers will be granted for courses in which the student received less than a B, or did not receive a letter grade. If a waiver is granted, another course in the same subject must be taken as a substitute.

Required PFRH Courses

Students wishing to waive **380.604, Life Course Perspectives on Health**, must petition the instructors and show that they have taken a similar course, demonstrate knowledge of the foundations of a multilevel life course perspective on health, and demonstrate (e.g. through a past course paper) that they understand how to develop a conceptual framework.

Students wishing to waive **Principles of Population Change (380.600) or Demographic Methods for Public Health (380.603)** may do so with the consent of the instructor and with the understanding that they are required to take a higher level course in the same subject area (e.g., Social and Economic Aspects of Human Fertility (380.655) instead of Principles of Population Change or Methods & Measures in Population Studies (380.651) instead of Demographic Methods for Public Health). Doctoral students may petition the Doctoral Committee, with consent from their academic adviser, to **substitute a course requirement with another course not listed in the requirements**. Students should contact the Education Office with their request; the Education Office will forward the request to the degree program director or course instructor, as appropriate. Evidence of having taken a similar course in a previous graduate program or a rationale for substituting a course must be provided with the petition. The request will then be reviewed by the degree (Master’s or Doctoral) program committee.

Required Courses in Other Departments

Students wishing to waive **Epidemiologic Inference (340.721) or Epidemiologic Methods (340.751)** may do so by contacting the Academic Coordinator in the Department of Epidemiology, franBurman@jhu.edu, at the beginning of the 1st term. Students may waive Epidemiologic Inference or Epidemiologic Methods only if they have completed a graduate level course in epidemiology with a grade of B or higher. Students will need to take the waiver exam and receive a score of 85% or better on the exam. Students who do not pass the exam must register for the course. Students who receive a waiver for Epidemiologic Inference must take a higher level course in epidemiologic methods.

The only Biostatistics course that can be waived is **Statistical Methods in Public Health (140.621)**. Students may petition the Department of Biostatistics for a waiver if they can document and demonstrate that they have previously acquired the course competencies. The documentation to grant a waiver requires the title of previous course(s), name of instructor(s), textbook(s) used, course syllabi, and grade(s) received. After review of this documentation, one or more written waiver examinations may be required. Students wishing to request a

waiver should contact the Academic Coordinator in the Department of Biostatistics, margo1@jhu.edu, before the start of the 1st term. Doctoral students are required to take the remainder of the Statistical Methods in Public Health sequence (140.622-624) or Methods in Biostatistics (140.651-654).

Doctoral students may petition the Doctoral Committee, with consent of their academic adviser, to **waive a specific course in the PFRH list of Methods Requirements**, but it must be replaced with a similar or higher-level course. Students should contact the Education Office with their request; the Education Office will forward the request to the Doctoral Committee Chair. Evidence of having taken a similar course in a previous graduate program or a rationale for substituting a course must be provided with the petition. The request will then be reviewed by the Doctoral committee.

Student’s Responsibilities Regarding Deadlines

If a student needs to postpone taking an examination or submitting a paper for a PFRH course, the student must make the request in writing in advance to the course instructor explaining the reason for the request. The ruling made by the individual faculty member is final about such requests, and there is no appeal process. Original copies of work should be turned in for assignments. **The use of e-mail for turning in work is at the discretion of the instructor. It is the student’s responsibility to ensure that the appropriate faculty member actually receives her/his work.**

Special Studies

Special studies provide students with the opportunity for intensive exploration of substantive and methodological issues in their area of interest, under the supervision of a faculty member. Students are encouraged to undertake such opportunities in advance of planning their master’s essay or doctoral research. It is expected that doctoral students will begin more specialized studies after they have completed most course and degree requirements, and are developing and implementing a research topic for the thesis. A special-studies form must be completed by students and faculty with whom they are working for special studies that are not taken for development of a doctoral research proposal. The form includes the objectives for the special studies and the activities and deliverables undertaken to meet the objectives along with a timeline and frequency of meetings.

Institutional Review Board Research Project Approval Procedures

The Institutional Review board (IRB) of the Bloomberg School of Public Health requires review of all faculty and student research involving the use of human subjects.

Before beginning contact with either human or animal subjects for research, students, as all researchers, must obtain the appropriate approval for their projects from either an institutional review board (e.g., the Institutional Review board, IRB) or the Institutional Animal Care and Use Committee (IACUC). In both cases, the faculty mentor must be involved in this process in that the protocol for the research project is submitted under the faculty’s name with the student listed as a student investigator. NO contact can be made with humans, human tissue, human samples or human records without prior approval of the protocol by the IRB. NO animals can be purchased for the experimentation without an IACUC protocol approval.

It is important for students to make sure that they are either listed on their mentor’s approved protocol or have obtained approval for their

research protocol, in collaboration with their mentor before starting their research.

Information about the IRB committee can be obtained at the Office for Research Subjects in Suite W1100 in Bloomberg School of Public Health building. Students who are conducting original and independent research - under the direction of JHMI faculty advisers - that involves human subjects must have their proposed project approved by this committee.

When students are using data and other information that was developed by a previously approved JHMI or IRB research project, a copy of the previous IRB approval must be forwarded to the IRB in addition to a plan of how the data are to be used in secondary data analysis. If the student will be conducting secondary analysis of data from an existing approved study (refer to IRB list), the student and adviser will complete the IRB short form for approval of a secondary data analysis of the approved data set. The IRB still needs to review and approve how the student plans to use the data and report the findings from the analysis of the data.

For field placement activities outside of JHU, the student's adviser will review the proposed set of activities to be conducted during the field placement experience (usually within the first month of work). If it is difficult to distinguish whether the activities are "practice" or "research", the student should consult the IRB website about the activities. If necessary after review of the website, a memo describing the proposed activities should be submitted to the IRB by the student and adviser for an expedited review. The IRB review process should be completed within two weeks and a decision made as to whether the proposed activity is "professional practice" or "research project".

The IRB will advise the student and adviser of their decision and if the scope of the project requires a full IRB application. In the circumstance that the IRB determines that an MSPH or MHS student is planning to conduct an activity that meets the criteria for a research project, the IRB will request completion of a full application for submission to the Institutional Review board. The letter from the IRB and any subsequent communication will be kept in the student's departmental record.

Authorization must also be obtained from the agency/department sponsoring a field placement for the use and dissemination of the data and information in question. If the student plans to publish their work and/or the work is conducted as "research", a full IRB application must be submitted. Guidelines for preparing an application to the Committee on Human Research are available in Room W1100 and on the IRB website, <https://publichealth.jhu.edu/offices-and-services/institutional-review-board-irb> (<https://publichealth.jhu.edu/offices-and-services/institutional-review-board-irb/>).

Notes: Is it human subjects? Institutional Review Board Research Project Approval Procedures

1. "About" means the data provide information about individual living people, not simply collected from individual living people. Key informant data about agencies or other entities (e.g., asking a hospital administrator about wait times in the ER, asking a drug manufacturer about dispensing patterns) or from experts or opinion leaders about their areas of expertise does not constitute data about individual living people.

2. "Publicly available" means the information is available to anyone, without prior clearance or qualification. Examples of publicly available data include census data, state court records, openly available national

household surveys, or data available on the web. If you need a Data Use Agreement, it is not publicly available.

3. Identifiers provide the possibility of linkage to specific individuals. Examples include names, social security numbers, addresses, hospital IDs, or any HIPAA-defined identifiers. Identifiable can also mean that you can reasonably link to a specific individual based on an ensemble of variables. If you retain records that link an individual to a study ID, even if those records are kept in a separate location, then those individuals remain identifiable as long as you keep those records.

4. Can I still submit something I think is NHSR to the IRB for review? Yes! There is some element of risk in making this determination yourself, should you ever be challenged on the decision not to submit by a journal editor or other source. You are welcome to submit any research protocol to the IRB and you will receive a statement with a determination following review. We urge you to do so to protect yourself if the topic is particularly socially or politically sensitive. If you elect to use the flow chart with attached clarifications, then we recommend printing it out, with notations regarding how you made your ultimate decision, and retain it in your files.

PFRH Teaching Assistant Policy

The Department of Population, Family and Reproductive Health supports full-time graduate students serving in the role of teaching assistants (TA). The department values the educational and learning experience that students gain through participating as a TA in addition to providing monetary compensation to them. The department classifies TA positions into 2 levels: 1.0 FTE TA and 0.5 FTE TA. The expectation for time commitment as well as monetary compensation differs for the two levels. Part-time students are not eligible for TA positions due to FLSA rules.

Information about current TA positions will be sent to students throughout the year. Typically, students should have already taken the course in order to be a TA. Students wishing to serve as a TA in a course should meet with the course instructor prior to agreeing to serve as a TA and discuss the nature of the course as well as the faculty member's expectations. Both should discuss the responsibilities of the TA as well as the tasks the department deems beyond the scope of the TA to be sure there are no misunderstandings about roles. The expected number of hours/week as well as preparation needs should also be addressed. Once a student and faculty member have agreed, they both must sign the TA agreement form; students submit it to the department's payroll office.

The number of hours that a TA actually works may vary substantially from course to course, but it is generally expected that a TA will begin work approximately two weeks prior to the start of the course and continue to work at least 10 days beyond the last class session or until grades are submitted. 1.0 FTE TA is expected to attend each class session. 0.5 FTE TAs may or may not be required to attend class sessions.

Research Apprenticeship

PFRH requires that PhD students undertake one or more research apprenticeship activities with one or more faculty members during their program of study at BSPH. The goal of this requirement is to ensure that PhD students have a structured opportunity to master a specific set of competencies which: a) ensure their competence as public health professionals after graduation and b) represent skills best learned outside a conventional classroom setting in the context of an ongoing research program or project.

PhD students may begin activities aimed at fulfilling these competencies as early in their program of study as they wish. Typically, PhD students

begin to plan for this requirement during the second half of their first year and begin the activities after their first year of studies.

PhD students may proceed to their departmental oral exam without completing the research apprenticeship, although PFRH encourages them to complete the requirement and competencies before the departmental oral. PhD students who have not completed the research apprenticeship at the time of their departmental oral exam will be expected at that time to: a) have demonstrated substantial progress toward their completion; and b) have a concrete plan for completion soon thereafter.

Progress towards completing this requirement should be a major component of the discussion at the PhD students' annual reviews (see next section). PhD students master each of the following six competencies by means of one or several research apprenticeships. The competencies are:

1. Critical Review of the Literature: PhD students must demonstrate the ability to synthesize and critically review a body of literature that is more comprehensive than expected for a standard, course term paper.

2. Framing a Research Question: PhD students must demonstrate the ability to identify a "researchable" question.

3. Instrument Development: PhD students must demonstrate the ability to design an instrument for collecting data. This ability may include identification and evaluation of existing instruments, the ability to adapt existing instruments for new modalities (e.g. self-administered questionnaire converted to use in a telephone interview), or creating a new instrument.

4. Data Collection: PhD students must document experience with primary data collection including activities related to data coding and data entry.

5. Data Analysis: PhD students must document experience with analyzing either primary data they collected as part of a supervised research project or data from a secondary source.

6. Manuscript Preparation: PhD students must have substantially participated in the preparation of a published or publishable manuscript prepared in the form of an original peer-reviewed journal article; this requirement does not include papers from thesis research.

PhD students may demonstrate several or even all competencies by means of one research apprenticeship if the activities involved in the apprenticeship are comprehensive. Alternatively, PhD students may undertake several research activities over their program of study, each of which results in mastery of one or more competencies.

When a PhD student masters one or more competencies, s/he must indicate on the apprenticeship form the faculty member who was preceptor for the apprenticeship and the student's adviser, including the signature of each. The original form should be submitted to the Academic Program Administrator who will place it in the student's file and note completion of each competency on the student's tracking sheet. Students who master the competencies one-by-one will typically turn in one form per apprenticeship. It is possible to use previous work to meet one or more of the above competencies, but at least one must be completed during doctoral studies. Supporting documents must be provided to validate the competency when completed in previous work.

PhD students may petition the PFRH Doctoral Committee to certify that they have mastered a competency before they began the program. In such cases, students should attach to their petition documentation of

their mastery (e.g. a senior authored journal article or letter testifying to the student's work as project manager of a data collection effort) and a letter from their adviser expressing support for the request. PhD student may arrange their research apprenticeships with any faculty of JHU or, with the approval of their adviser, with a qualified researcher outside JHU.

Annual Reviews Doctoral Students

BSPH requires that all doctoral students have a yearly meeting with their academic adviser and other faculty members from PFRH or other BSPH departments. This process must begin after the second year of study and occurs annually by mid-November. Faculty who attend the review may change over the course of a student's program. The purpose of the meeting is twofold, serving as an opportunity: 1) for students and faculty to discuss the student's progress and identify resources and potential problems as they progress through the program and 2) ensure that PFRH records on student progress are correct and up-to-date.

Until students complete their schoolwide preliminary exam, the annual meeting is generally held with the academic adviser and one other PFRH faculty member, usually someone the student and adviser select together. Faculty members from other BSPH departments are welcome to attend these early meetings if the student and adviser think it would be helpful. After a student has passed the Schoolwide Preliminary Exam, it is expected that the meeting will include the thesis adviser and faculty with whom the student is working, including faculty from outside PFRH, if desired. The meeting may include members of the Schoolwide Preliminary Oral Exam Committee who have agreed to help guide the student's thesis research on an ongoing basis. Other people (e.g. the Academic Program Administrator) may attend if the student and adviser think it would be helpful. A least one other faculty besides the students' advisers (including co-advisers) must participate in the annual review of doctoral students.

Both students and faculty are responsible for insuring that the annual meetings take place, but students are expected to initiate the meeting.

Students are required to provide a brief written progress report (no more than 1 or 2 pages) at least one day in advance of the meeting. If the report is not submitted a day before the meeting and the report is incomplete, then the meeting will need to be rescheduled. This report should list progress toward graduation since the last meeting and include fulfillment of course requirements and other milestones during the student's course of study. A transcript should also be included as part of the review. Students should bring copies of the report for each faculty member attending the meeting as well as a copy of their transcript.

Students who are working outside the country are encouraged, but not required, to return for advisory meetings. These students must submit a written progress report by an appointed time, determined by their adviser, for the year(s) not in residence. The progress and planning report should be longer and more detailed than those submitted by students who attend in person meetings. The adviser should share this report with other faculty (as in the case of in person meetings) and then proceed in the same way as above by scheduling a meeting for the adviser and other faculty to review progress with the student.

Thesis Advisory Committee

The progress of each PhD student is followed regularly after completing the PFRH comprehensive examination at least once a year by a committee consisting of the adviser and two to four other faculty, from inside and/or outside the student's Department. The objective of the Thesis Advisory Committee is to provide continuity in the evaluation

of the progress and development of the student's research. Committee membership can change during the research phase.

Procedure

1. The student and her/his adviser, with the consent of the Department Chair, decide on the composition of this committee.
2. The first meeting of the Thesis Advisory Committee is when the student is developing their thesis proposal but should be formed shortly after the student completes the departmental comprehensive examination and well before the departmental preliminary oral examination (when the thesis proposal is presented).
3. Students who are working outside of the country or at distant sites within the country are not required to return for an in-person Thesis Advisory Committee meeting but can hold it virtually.
4. All students will submit yearly written progress reports to their Thesis Advisory Committees, which will read and evaluate them. A written evaluation based on this document will be sent to the student and placed in the student's departmental file. It is the responsibility of the Department to provide the administrative oversight of these committees, to ensure that the committee meets and submits reports. A departmental template for the yearly progress report will be shared.
5. A brief written progress report should be submitted by the student at the time each committee meeting. A written evaluation of the student's progress and development will be prepared by the committee after the meeting and discussed with the student; a copy of the evaluation will be placed in the student's departmental file. A departmental template for the TAC meeting report will be shared.

PhD Program Competencies

DEPARTMENT COMPETENCIES

All **PFRH doctoral students** must attain proficiency in the following three (3) competencies:

1. Applying statistical methods to address the health of populations.
2. Applying epidemiological methods to address the health of populations.
3. Applying ethical concepts and tools to population health research and practice.

DEGREE PROGRAM COMPETENCIES

All **PFRH doctoral students** must attain proficiency in eight PhD-specific competencies:

1. Evaluating and applying study designs for addressing research and evaluation questions about the health of populations.
2. Evaluating and applying rigorous strategies for measurement and data collection across a range of study designs.
3. Analyzing data using methodological tools appropriate to the study question and available data.
4. Interpreting data based on the strength of evidence, recognizing study limitations, and drawing appropriate inferences.
5. Analyzing primary quantitative or qualitative data and participating in the preparation of a peer-reviewed manuscript using the data.
6. Designing an instrument for data collection and implementing the instrument with primary data.
7. Preparing and defending a research proposal addressing a clearly identified research question, including the appropriate research methods and conceptual framework for answering the question.

8. Conducting and presenting original, independent, and publishable research about a clearly identified research question.

AREA OF INTEREST COMPETENCIES

All **PFRH doctoral students** must meet proficiency in seven competencies in their selected area of interest:

1. Applying a life course framework to understand population health problems related to their area of interest, including a multiple determinants framework for the health of populations across the life course.
2. Identifying and assessing the causes and consequences of population change.
3. Applying demographic methods to the health of populations.
4. Assessing the principal health concerns for the populations relevant to the area of interest, the associated population-based risk factors, and the relative impact of each risk factor.
5. Evaluating strategies to promote population health, including the policies and programs that address health concerns and behavior in populations relevant to the area of interest.
6. Applying frameworks specific to the area of interest (beyond life course) for improving the health of the relevant populations.
7. Critiquing health services and systems delivery strategies used to address health concerns in relevant populations.

PFRH Doctoral Seminars

Formal seminars are required for all PFRH doctoral students from the first year until students successfully complete their preliminary oral exam. They are described below. The seminar in the first and second term of the first year is planned based on students' interests.

First-year Doctoral Seminars in Population, Family, and Reproductive Health; First and Second Term Course Objectives:

These seminars are designed to facilitate students' transitions into the PFRH doctoral program, introduce skills to help students succeed in the program, and develop students' ability to formulate scientific questions.

At the end of the seminar, students will be able to:

- Describe the requirements, timeline, and benchmarks of the PFRH doctoral program
- Locate opportunities and resources for doctoral students within PFRH, JHBSPPH, and JHU
- Read scientific articles effectively and efficiently
- Describe the nature of scientific questions and how they are identified
- Explain the role of the scientific community in the research process
- Articulate their area of specialization orally and in writing

First-year Doctoral Seminars in Population, Family, and Reproductive Health; Third and Fourth Term Course Objectives:

At the end of these courses, students will be able to:

- Develop a research concept based on their individual interests;
- Link scientific questions with appropriate research designs;
- Discuss strategies for obtaining and managing research funding;
- Evaluate different approaches used to communicate research findings; and
- Create a plan for their research career both as a student and later as a professional.

Second-year Doctoral Seminars in Population, Family, and Reproductive Health; First and Second Term Course Objectives:

At the end of these courses, students will be able to:

- Apply diverse conceptual frameworks to public health issues pertinent to PFRH;
- Critically evaluate empirical articles addressing public health issues related to PFRH;
- Compare and contrast the approaches of various academic disciplines to public health issues of relevance to PFRH; and
- Recognize and critically evaluate common study designs and methods used in research relevant to PFRH.
- Compose and discuss written responses to analytic and conceptual questions about two studies presented as a practice comprehensive exam (second term only)

The first term focuses on integrating life course and demographic methods and approaches across the population area of interests in the department. The second term builds on the first term experience and is specific to the student's chosen area of interest. It also includes a practice written exam for the comprehensive exam.

PFRH Proposal Writing Seminar Course Objectives:

Upon successfully completing this course, students will be able to:

- Develop a research question, study aims, and hypotheses to be used in a dissertation proposal;
- Conduct a literature review which identifies current research and gaps as they relate to the study and research questions and aims;
- Identify an appropriate study design including study population and methodology, both quantitative and qualitative;
- Identify data sets or settings for data collection;
- Examine frameworks and find appropriate frameworks for the study;
- Review analytic methods; develop a feasible timeline for the study; consider ethical issues and IRB approval; and
- Identify potential funding sources.