

POPULATION, FAMILY AND REPRODUCTIVE HEALTH, PHD

PhD Program Overview

The emphasis of the PFRH PhD program (<https://publichealth.jhu.edu/academics/phd-dept-of-population-family-and-reproductive-health/>) is to integrate coursework in life course and population health with the application of a range of research methods. The PFRH PhD curriculum is focused on equipping students with a fundamental understanding of statistical methods and their application, epidemiology, research ethics, advanced research methods, and the application of life course perspectives on health, demography, and population dynamics.

Faculty in the PFRH Department have expertise in health throughout the life course with a specific focus on certain populations and areas (<https://publichealth.jhu.edu/departments/population-family-and-reproductive-health/research-and-practice/life-course-framework/>). PhD students select courses related to these areas of study:

- Child and Adolescent Health (<https://publichealth.jhu.edu/departments/population-family-and-reproductive-health/research-and-practice/life-course-framework/child-and-adolescent-health/>)
- Maternal, Fetal, and Perinatal Health (<https://publichealth.jhu.edu/departments/population-family-and-reproductive-health/research-and-practice/maternal-fetal-and-perinatal-health/>)
- Population and Health (<https://publichealth.jhu.edu/departments/population-family-and-reproductive-health/research-and-practice/life-course-framework/population-and-health/>)
- Women's, Sexual and Reproductive Health (<https://publichealth.jhu.edu/departments/population-family-and-reproductive-health/research-and-practice/womens-sexual-and-reproductive-health/>)

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

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	4
PH.552.601	Foundational Principles of Public Health	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	4
PH.552.601	Foundational Principles of Public Health	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	4
AND		
PH.224.690	Qualitative Research Theory and Methods	3
OR		
PH.552.603	The Role of Qualitative Methods and Science in Describing and Assessing a Population's Health	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	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	5
PH.340.751	Epidemiologic Methods 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	4
PH.552.606	The Critical Importance of Evidence in Advancing Public Health Knowledge	0.5

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	3
PH.552.607	Essentials of Environmental Health	0.5

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

Code	Title	Credits
PH.380.604	Life Course Perspectives on Health	4

9. Explain behavioral and psychological factors that affect a population's health.
- | Code | Title | Credits |
|------------|------------------------------------|---------|
| PH.380.604 | Life Course Perspectives on Health | 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 | 4 |
11. Explain how globalization affects global burdens of disease.
- | Code | Title | Credits |
|------------|---------------------------------|---------|
| PH.380.600 | Principles of Population Change | 4 |
12. Explain an ecological perspective on the connections among human health, animal health, and ecosystem health (e.g., One Health).
- | Code | Title | Credits |
|------------|--------------------------|---------|
| PH.552.612 | Essentials of One Health | 0.5 |

PFRRH PhD Content Area Competencies

Students must take a minimum of seven unique courses to fulfill these requirements.

1. Apply a life course framework to understand population health problems and illustrate how societal, behavioral, and psychological factors interact with biological and genetic factors to affect population health over the life course.
- | Code | Title | Credits |
|------------|------------------------------------|---------|
| PH.380.604 | Life Course Perspectives on Health | 4 |
2. Evaluate the major explanations and effects of demographic changes on the health of populations.
- | Code | Title | Credits |
|------------|---------------------------------|---------|
| PH.380.600 | Principles of Population Change | 4 |
3. Calculate and interpret measures of mortality, fertility, and migration.
- | Code | Title | Credits |
|------------|---------------------------------------|---------|
| PH.380.603 | Demographic Methods for Public Health | 4 |
4. Critically review research related to the causes and consequences of major health concerns for selected populations across the life course.
- | Code | Title | Credits |
|------------------------------|----------------------------------------------------------|---------|
| Select one of the following: | | |
| PH.380.623 | Adolescent Health and Development | 3 |
| PH.380.747 | International Adolescent Health | 3 |
| PH.380.616 | Child Health Epidemiology | 3 |
| PH.380.664 | Reproductive and Perinatal Epidemiology | 4 |
| PH.380.655 | Social and Economic Aspects of Human Fertility | 3 |
| PH.380.750 | Migration and Health: Concepts, Rates, and Relationships | 3 |
| PH.380.666 | Women's Health | 3 |
5. Assess the effectiveness of policies and programs designed to promote the health of selected populations across the life course.
- | Code | Title | Credits |
|------------------------------|----------------------------------------------------|---------|
| Select one of the following: | | |
| PH.380.624 | Maternal and Child Health Legislation and Programs | 4 |

PH.380.665	Family Planning Policies and Programs	4
PH.380.661	Clinical Aspects of Maternal and Newborn Health	3
PH.380.667	Women's Health Policy	3
PH.380.768	Selected Topics in Women's Health and Women's Health Policy	4

6. Assess population health and/or health promotion strategies through application of theoretical frameworks.

Code	Title	Credits
Select one of the following:		
PH.380.642	Child Health and Development	3
PH.380.725	The Social Context of Adolescent Health and Development	3
PH.380.744	Nutrition and Growth in Maternal and Child Health	3
PH.380.655	Social and Economic Aspects of Human Fertility	3
PH.380.750	Migration and Health: Concepts, Rates, and Relationships	3
PH.380.668	International Perspectives on Women, Gender, and Health	3

7. Evaluate the effect of health systems on the health of selected populations across the life course.

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

PFRRH PhD Research Methods Requirements

1. Evaluate and apply study designs for addressing research and evaluation questions about the health of populations.

Code	Title	Credits
Select 1-2 of the following:		
PH.221.638	Health Systems Research and Evaluation in Developing Countries	4
PH.223.664	Design and Conduct of Community Trials	4
PH.224.692	Methods in Formative Research and Human Centered Design for Intervention Development	4
PH.300.713	Research and Evaluation Methods for Health Policy	3
PH.300.715	Advanced Research and Evaluation Methods in Health Policy	4
PH.309.616	Introduction to Methods for Health Services Research and Evaluation I	2
PH.312.693	Introduction to Comparative Effectiveness and Outcomes Research	3
PH.313.601	Economic Evaluation I	3
PH.313.653	Advanced Health Economics I	2

PH.313.654	Advanced Health Economics II	2
PH.313.655	Advanced Health Economics III	2
PH.313.656	Advanced Health Economics IV	2
PH.313.790	Introduction to Economic Evaluation	3
PH.340.645	Introduction to Clinical Trials	3
PH.340.722	Epidemiologic Inference in Public Health II	4
PH.340.728	Advanced Methods for Design and Analysis of Cohort Studies	5
PH.380.611	Fundamentals of Program Evaluation	4
PH.380.612	Applications in Program Monitoring and Evaluation	4
PH.390.675	Outcomes and Effectiveness Research	3
PH.410.615	Research Design in the Social and Behavioral Sciences	3
PH.410.631	Introduction to Community-Based Participatory Research: Principles and Methods	3
PH.410.635	Applications of innovative Methods in Local and Global Health Equity Research	4
PH.410.710	Concepts in Qualitative Research for Social and Behavioral Sciences	3

2. Evaluate and apply rigorous strategies for measurement and data collection across a range of study designs.

Code	Title	Credits
Select 1-2 of the following:		
PH.224.690	Qualitative Research Theory and Methods	3
PH.313.603	Economic Evaluation III	3
PH.340.717	Health Survey Research Methods	4
PH.380.711	Issues in Survey Research Design	3
PH.410.690	Ethnographic Fieldwork	3

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

Code	Title	Credits
Select 1-2 of the following:		
PH.140.630	Introduction to Data Management	3
PH.140.658	Statistics for Psychosocial Research: Structural Models	4
PH.221.644	Econometric Methods for Evaluation of Health Programs	4
PH.221.645	Large-scale Effectiveness Evaluations of Health Programs	4
PH.223.632	Methods for Planning and Implementing Evaluations of Large-Scale Health Programs in Low and Middle income Countries	4
PH.224.691	Qualitative Data Analysis	3
PH.300.713	Research and Evaluation Methods for Health Policy	3
PH.309.616	Introduction to Methods for Health Services Research and Evaluation I	2
PH.309.617	Introduction to Methods for Health Services Research and Evaluation II	2
PH.313.602	Economic Evaluation II	3
PH.330.657	Statistics for Psychosocial Research: Measurement	4
PH.340.752	Epidemiologic Methods 2	5

PH.340.753	Epidemiologic Methods 3	5
PH.340.770	Public Health Surveillance	3
PH.380.605	Advanced Demographic Methods in Public Health	4
PH.380.712	Methods in Analysis of Large Population Surveys	3

4. Interpret data based on the strength of evidence, recognize study limitations, and draw appropriate inferences.

Code	Title	Credits
PH.380.823	Research Seminar in Population, Family and Reproductive Health I	2
AND		
PH.380.824	Research Seminar in Population, Family and Reproductive Health II	2

5. Participate in the preparation of a peer-reviewed manuscript.

PFRH PhD Program Policies

For a full list of program policies, please visit the PhD in PFRH (<https://publichealth.jhu.edu/academics/phd-dept-of-population-family-and-reproductive-health/>) page where students can find our handbook.

PhD Program Competencies

According to the requirements of the Council on Education for Public Health (CEPH), all BSPH degree students must be grounded in foundational public health knowledge. Please view the list of specific CEPH requirements by degree type (<https://e-catalogue.jhu.edu/public-health/ceph-requirements/>).

All **PFRH doctoral students** must meet proficiency in the following **PFRH PhD content area competencies**:

1. Apply a life course framework to understand population health problems and illustrate how societal, behavioral, and psychological factors interact with biological and genetic factors to affect population health over the life course.
2. Evaluate the major explanations and effects of demographic changes on the health of populations.
3. Calculate and interpret measures of mortality, fertility, and migration.
4. Critically review research related to the causes and consequences of major health concerns for selected populations across the life course.
5. Assess the effectiveness of policies and programs designed to promote the health of selected populations across the life course.
6. Assess population health and/or health promotion strategies through application of theoretical frameworks.
7. Evaluate the effect of health systems on the health of selected populations across the life course.

Additionally, all **PFRH doctoral students** must attain proficiency in the following **PFRH PhD research methods competencies**:

1. Evaluate and apply study designs for addressing research and evaluation questions about the health of populations.
2. Evaluate and apply rigorous strategies for measurement and data collection across a range of study designs.
3. Analyze data using methodological tools appropriate to the study question and available data.

4. Interpret data based on the strength of evidence, recognize study limitations, and draw appropriate inferences.
5. Participate in the preparation of a peer-reviewed manuscript.