Program in Public Health: PhD in Population Health and Clinical Outcomes Research

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Degree Awarded
PhD in Population Health and Clinical Outcomes Research For information about the Program in Public Health, please visit https://publichealth.stonybrookmedicine.edu/

Application
www.sophas.org

About the Program
As part of the SUNY Stony Brook Graduate School, the graduate program in Population Health and Clinical Outcomes Research [PHCOR] provides a multidisciplinary, integrated, applied problem-solving approach to support students in addressing the important issues within the field. The purpose of this small and highly specialized graduate degree program is to train population health and clinical outcomes researchers, academicians, and practitioners – who will advance the field on a local, regional and national level.

It has been recognized that there is a critical need for well trained people with the skills of population health and clinical outcome research. For example the new health care legislation places great emphasis on population based approaches to the obesity epidemic and clinical outcomes approaches to establishing comparative efficacy of treatments. We believe that these skills will be in great demand in the public, private and academic sectors. By uniquely placing a focus on human subject studies and trials, in combination with best practices in clinical care and community interventions, the PHCOR program will extend knowledge in the areas of safety, quality, efficiency, accessibility, accountability, and equity of care by supporting opportunities for development of new knowledge about health and disease prevention, diagnosis, treatment, and prognosis.

Students will gain knowledge, skills, and experience by means of a series of rigorous quantitative and analytical courses designed to develop advanced problem-solving skills. Working under faculty mentor guidance, student projects will focus on substantive current health care problems affecting population health, health policy, clinical practice, and patient-based health care decisions. Graduates will be competent in the design, conduct, and evaluation of research studies that will improve the future public health and medical care provided.

Preparation for a research career will includes publishing in peer reviewed journals and writing proposals to obtain research project funding. The Ph.D. program consists of two years of course work, followed by the Preliminary Examination and independent research leading to the dissertation. Students are expected to work with faculty to develop their own independent research projects, which will go beyond the boundaries of existing faculty research.

The goals of the program are to provide graduate students with a rigorous, innovative, mentored, learning experience with the following competency goals:

• Identification of the determinants of health and factors associated with disease prevention.
• Assessment of the health care needs of populations as related to their environment.
• Understanding of the context for population health and clinical science research questions, as well as the organization, politics, and financing of the health care system.
• Appraisal of the performance of the health system in terms of access to care, safety, quality of care, resource consumption, cost-effectiveness, and accountability.
• Conduct of independent studies of the health care system (evaluating determinants of access, quality, health outcomes, resource consumption, and cost-effectiveness) using state of the art research methods.
• Commitment to conduct population health and clinical research for human subjects both ethically and responsibly.
• Design and implementation for a mentored student research project experience including an in-depth focus on scientific writing and professional presentations (e.g., requiring manuscripts, presentations, and grant submissions).
• Career development by providing experiential opportunities to teach and present research findings.

Degree Offered

<table>
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<tr>
<th>Degree Option</th>
<th>Specialization</th>
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<tbody>
<tr>
<td>Ph.D.</td>
<td>- Population Health or</td>
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<td></td>
<td>- Clinical Outcomes Research</td>
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</table>

Primary Application:

Primary applications are accepted through SOPHAS, the centralized application service for schools and programs of public health.

• For Admissions Deadlines, visit https://publichealth.stonybrookmedicine.edu/admissions.
Transfer from Other Institutions

A candidate for a degree may petition to transfer graduate credits from another institution toward their degree requirements. These credits must be from an institution authorized to grant graduate degrees by recognized accredited commissions and meet the following guidelines:

- Credits must not have been used to fulfill the requirements for either a baccalaureate or another advanced degree or certificate.
- Credits must not be more than five years old at the time the student is admitted to graduate study at Stony Brook. Courses older than five years will be accepted only in rare circumstances.
A course listed as both graduate and/or undergraduate level will not be considered for transfer.

Credits must carry the grades of A or B. “Pass” or “Satisfactory” grades are not transferable unless these grades can be substantiated by the former institution as B (3.0) or better.

Grades earned in transferred courses are not counted as part of the overall GPA at Stony Brook.

Transfer Between Primary and Secondary Programs

A maximum of 12 graduate credits from Stony Brook, which were earned in a primary program prior to a student being accepted into a secondary program, can be applied to the secondary program. Credits applied to the degree requirements of a primary program cannot be applied toward the degree requirements of a secondary program.

Note: Please see any additional distributed PHCOR Program policies regarding Transfer Credits. Questions should be directed to the PHCOR Program Director.

Special Circumstances

Readmission

Graduate students who have interrupted their attendance at Stony Brook by withdrawing from the University or by taking a leave of absence must be readmitted to reactivate their graduate career. The student initiates the process by submitting a completed “Readmission” form to their program. The form is available at the Graduate School or may be downloaded at www.gradsunysb.edu.

- Students returning from a currently approved Leave of Absence are generally guaranteed readmission.
- Students not on an official leave of absence must pay a $500 readmission fee.
- International students must also submit a new financial affidavit and be cleared by an international student advisor before the readmission process can be concluded.

If the program approves the request, the readmission form is submitted to the Graduate School for final approval. The program or the Graduate School may set specific requirements to be fulfilled by the readmitted student during the first year of their readmission.

Conditional Admission

In exceptional cases where certain admission requirements are not met or the prior education preparation is inadequate, an applicant may be admitted conditionally. Such applicants will be considered on probation during the first semester. PHCOR Program recommendation and Graduate School approval are required for conditional admission.

- Students admitted conditionally for a low cumulative GPA must earn an overall graduate average of at least a B (3.0) during the first semester of enrollment to be permitted to continue. In this case, the student is considered to have achieved regular status.
- A student admitted conditionally because of a low cumulative GPA who fails to earn a B (3.0) average in the first semester will not be permitted to reenroll. Both the student’s program and the Graduate School may set conditions that the student must satisfy during the early period of graduate work.

Secondary Program

Should a PHCOR student wish to add a secondary program to his or her primary program of study, a Permission to Enroll in a Secondary Degree or Certificate Program form must be submitted to the Graduate School with original signatures by both prior and new department or program chairs. Final approval rests with the Graduate School. International students are also required to obtain approval of an international student advisor.

Degree Requirements

The Population Health and Clinical Outcomes Research program offers one doctoral degree with two possible concentrations: Population Health or Clinical Outcomes Research. Core requirements are the same for both concentrations. Students specialize through the different concentration requirements. With advisor approval, students may tailor their degree to their specific interests via the selection of elective course offerings in departments such as Molecular Genetics, Molecular and Cellular Biology, the Graduate Program in Public Health, Technology and Society, Pharmacologic Sciences, Sociology or Psychology.

Population Health

The population health specialization will focus on understanding the community and the quality, effectiveness, and efficiency of public health and community-based interventions. It will emphasize methodology in observational study design, determinants of population health, and development of evidence-based public health practice including efficiency, effectiveness, and access studies. Students will identify a cognate area that provides theoretical and/or methodological depth related to a population health problem and its determinants. A cognate area may be multi-disciplinary or discipline-specific. As an example of a multi-disciplinary approach, a student might develop a family violence cognate through the selection of courses in psychology, sociology, public policy, and social welfare. Another example of a potential cognate area might be health communications, with courses found primarily in journalism or psychology.

Clinical Outcomes Research

The clinical outcomes specialization will provide students with the tools to enhance preventive or chronic care strategies, and analyze the patient care outcomes for clinical disciplines. Moreover, the students within the clinical outcomes specialization will be able to formulate policies,
advance clinical practice, or identify patient-based opportunities to improve medical care. As an example of a multi-disciplinary approach, biomarkers for cancer may become a cognate emphasis with advanced courses selected from the graduate programs in Experimental Molecular and Cellular Biology or Molecular Genetics. Another cognate area might relate to evaluating the impact of e-health initiatives upon ischemic heart disease medication management, with advanced courses selected from the departments of Technology and Society or Pharmacologic Sciences.

Additional Requirements

In addition to the core and concentration requirements, doctoral students will be required to pass a preliminary written examination, submit and have approved a dissertation proposal, complete a dissertation, and submit two publishable manuscripts. Preliminary Examination Doctoral students will be required to pass a preliminary examination. The Preliminary Examination will emphasize the integration of the student’s knowledge in the core areas. The successful completion of this examination will allow the student to proceed towards the formal identification of their research supervisor and supervisory committee for the preparation and defense of the doctoral dissertation requirement. The purpose of the Preliminary Examination is to test the preparedness of the student for the doctoral research phase of the program. Students will be expected to exhibit a mastery of the material covered in the three areas—quantitative analysis, research methods, and the determinants of health and disease—as well as an ability to integrate and synthesize concepts and approaches relevant to population health and clinical science research.

Dissertation

The most important requirement for the Ph.D. degree is the dissertation, which must be an original scholarly investigation that meets the standards in the field for scholarly publications. Following the successful completion of the Preliminary Examination, students may be advanced to candidacy upon successful completion of all degree requirements of the Graduate School and program, other than the graduate seminars and the dissertation requirements. The Dean of the Graduate School confers this status upon recommendation from the Doctoral Program Director. Students must advance at least one year prior to the dissertation defense.

A proposal for the dissertation must be prepared, orally defended, and approved by the student’s research supervisor or supervisory committee—appointed by the Doctoral Program Director in consultation with the student. The proposal will synthesize the literature on an important topic in population health or clinical outcomes research, and identify gaps in the literature that clearly demonstrate the importance for the student’s planned dissertation research. The topic should be broad enough to allow for the preparation of at least two publishable papers in peer-reviewed journals.

The makeup of the dissertation committee includes the dissertation supervisor (faculty mentor), defense chairperson, a third member from the program, and at least one person outside of the program or University. To avoid any potential perception of a conflict of interest, the student’s dissertation supervisor (faculty mentor) will not be able to chair their dissertation committee.

Preliminary research to develop a dissertation topic will normally begin in the second year of study and the third year will be mainly devoted to developing and refining the doctoral research.

Seminars organized by the program related to research in progress (i.e., a formal research in progress presentation) will provide an opportunity for students to present their thesis material to other students and interested faculty. Upon approval of the research supervisor or chair of the supervisory committee (and approval of the Graduate Program Director), a public presentation with a defense of the dissertation will be scheduled. Additional requirements for the dissertation may be found in the Graduate School Bulletin under “Degree Requirements”.

Practicum in Teaching

Doctoral students will be provided with teaching opportunities and are expected to develop their teaching skills through the “Practicum in Teaching”, an advanced two semester sequence completed after the Preliminary Examination has been passed. Teaching opportunities for doctoral students will include undergraduate and graduate teaching.

Course Requirements

Core Curriculum:

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>HPH 501</td>
<td>Introduction to the Research Process</td>
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<tr>
<td>HPH 506</td>
<td>Biostatistics I</td>
</tr>
<tr>
<td>HPH 507</td>
<td>Biostatistics II</td>
</tr>
<tr>
<td>HPH 508</td>
<td>Health Systems Performance</td>
</tr>
<tr>
<td>HPH 514</td>
<td>Epidemiology for Public Health</td>
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<tr>
<td>HPH 523</td>
<td>Social &amp; Behavioral Determinants of Health</td>
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<tr>
<td>HPH 527</td>
<td>Health Economics and Policy</td>
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<tr>
<td>HPH 559</td>
<td>Advanced Research Methods</td>
</tr>
<tr>
<td>HPH 560</td>
<td>Applied Biostatistics</td>
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<tr>
<td>HPH 562</td>
<td>Data Management &amp; Informatics</td>
</tr>
<tr>
<td>HPD 605</td>
<td>Intro Doctoral Studies</td>
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<tr>
<td>HPD 685</td>
<td>Research in Population Health &amp; Clinical Science</td>
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Students are required to complete one concentration:

Concentration: Population Health

HPD 673  Longitudinal Data Analysis
HPD 674  Causal Inference
HPH 534  Spatial Analysis
HPD 661  Psychometric Theory

Concentration: Clinical Outcomes Research

HPD 664  Clinical Trials
HPD 665  Clinical Outcomes Research
HPD 673  Longitudinal Data Analysis
HPD 674  Causal Inference

Post-Preliminary Exam Courses:

HPD 692  Practicum in Teaching I
HPD 693  Practicum in Teaching II
HPD 694  Grant Writing
HPD 699  Dissertation Research

Faculty of the Program in Public Health

Please see the Program in Public Health website for more information:

https://publichealth.stonybrookmedicine.edu/faculty

NOTE: The course descriptions for this program can be found in the corresponding program PDF or at COURSE SEARCH.