HEALTH OUTCOMES RESEARCH, PH.D.

Health outcomes research is a rapidly expanding, interdisciplinary field that provides evidence and guidance for understanding the endpoints of treatments, interventions and health care practices, be they clinical, functional, quality of life or economic. It builds evidence about benefits, risks and results of treatments, as well as quality and cost of care to allow clinicians and patients to make informed health care decisions and for policymakers to implement best practices.

Saint Louis University's Doctor of Philosophy (Ph.D.) in Health Outcomes Research is a program that trains researchers in the areas of health outcomes research, health services research and health data science to meet the changing needs of the health care system. The goal of the program is to prepare robust clinical and health outcomes researchers. Students receive a solid foundation in research methodology, data management and statistical analysis, data science, and scientific writing and presentation. In addition to coursework, students work collaboratively with their mentor, research and clinical faculty and other students to produce high-quality research throughout their program.

Curriculum Overview

The program requires a total of 48 credits for completion; 36 credits of coursework and 12 dissertation credits. Additionally, students must pass a written comprehensive exam, an oral examination/proposal of the dissertation, and a public presentation and defense of the dissertation.

Fieldwork and Research Opportunities

Saint Louis University Center for Health Outcomes Research (SLUCOR) (https://www.slu.edu/slucor/) partners with clinical faculty in the SLU School of Medicine (https://www.slu.edu/medicine/) and conducts research in numerous clinical areas, including diabetes, oncology, pediatrics, otolaryngology, infectious disease and health care quality. Additionally, SLUCOR faculty have expertise in health data science, research methodology, biostatistics, epidemiology, survey design and outcomes measurement. Students have the opportunity to work with their primary mentor, other SLUCOR faculty, and clinical faculty on both short- and long-term research projects.

Careers

Graduates are prepared to work as academics and researchers at universities, medical centers, government and non-government health agencies, hospital systems, insurance, and other areas of the health industry.

Admission Requirements

Applicants should have a master's degree from an accredited college or university in a social science, biomedical science, public health or related discipline. Successful candidates will have maintained a minimum 3.5 GPA in graduate coursework and scored at least at the 50th percentiles for GRE verbal and quantitative reasoning. Students must also demonstrate evidence of interest in an area of research and identify a willing and suitable faculty mentor.

Application Requirements

Begin your application for this program at www.slu.edu/apply (http://www.slu.edu/apply.php).

• Application form and fee
• Transcripts from most recent degree(s)
• Professional statement
• Résumé or curriculum vitae
• Three letters of recommendation

Requirements for International Students

All admission policies and requirements for domestic students apply to international students along with the following:

• Demonstrate English Language Proficiency (http://catalog.slu.edu/academic-policies/office-admission/graduate/english-language-proficiency/)
• Proof of financial support must include:
  • A letter of financial support from the person(s) or sponsoring agency funding the time at Saint Louis University
  • A letter from the sponsor's bank verifying that the funds are available and will be so for the duration of study at the University
• Academic records, in English translation, of students who have undertaken postsecondary studies outside the United States must include the courses taken and/or lectures attended, practical laboratory work, the maximum and minimum grades attainable, the grades earned or the results of all end-of-term examinations, and any honors or degrees received. WES and ECE transcripts are accepted.

Application Deadline

Applications to the program are considered on a rolling basis.

Apply Now (http://www.slu.edu/apply.php)

Scholarships and Financial Aid

For priority consideration for graduate assistantship, applicants should complete their applications by Feb. 1.

For more information, visit the student financial services office online at http://finaid.slu.edu.

Learning Outcomes

• Graduates will be able to effectively review, summarize, and synthesize literature related to clinical aspects of health outcomes
• Graduates will be able to apply appropriate data management strategies related to clinical aspects of health outcomes
• Graduates will be able to critically evaluate clinical aspects and healthcare-specific methodological designs
• Graduates will be able to demonstrate a thorough and ethical approach to conducting academic research
• Graduates will be able to effectively communicate study results related to clinical aspects of health outcomes

Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ORES 5010</td>
<td>Introduction to Biostatistics for Health Outcomes</td>
<td>3</td>
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<tr>
<td>or HDS 5310</td>
<td>Analytics and Statistical Programming</td>
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ORES 5160  Data Management  3
ORES 5300  Foundations of Outcomes Research I  3
ORES 5320  Scientific Writing and Communication  3
ORES 5430  Health Outcomes Measurement  3
ORES 5150  Multivariate Analysis for Health Outcomes Research  3-4
or HDS 5320  Inferential Modeling
ORES 6990  Dissertation Hours in Outcomes Research (taken over multiple semesters)  12

Program Elective Courses
Select six courses from the following:  18
HDS 5210  Programming for Health Data Scientists
HDS 5230  High Performance Computing
HDS 5330  Predictive Modeling and Machine Learning
HMP 5000  Health Care Organization
ORES 5210  Foundations of Medical Diagnosis and Treatment
ORES 5400  Pharmacoeconomics
ORES 5410  Evaluation Sciences
ORES 5560  R Programming
ORES 5550  SAS Programming I
ORES 5260  Pharmacoepidemiology
ORES 5440  Comparative Effectiveness Research
ORES 6980  Advanced Graduate Readings in Outcomes Research

Total Credits  48-49

Continuation Standards
Students must maintain a cumulative grade point average (GPA) of 3.00 in all graduate/professional courses.

Roadmap
Roadmaps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Courses and milestones designated as critical (marked with !) must be completed in the semester listed to ensure a timely graduation. Transfer credit may change the roadmap.

This roadmap should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor/mentor each semester. Requirements, course availability and sequencing are subject to change.

Course Title Credits
Year One
Fall
ORES 5010  Introduction to Biostatistics for Health Outcomes or Analytics and Statistical Programming  3
ORES 5300  Foundations of Outcomes Research I  3
ORES 5320  Scientific Writing and Communication  3
Credits  9

Spring
ORES 5160  Data Management  3

ORES 5210  Foundations of Medical Diagnosis and Treatment (Program Elective #1)  3
HDS 5210  Programming for Health Data Scientists (Program Elective #2)  3

Credits  9

Summer
HDS 5320  Inferential Modeling (Can substitute for ORES 5150 or be used as an elective)  3

Credits  3

Year Two
Fall
ORES 5430  Health Outcomes Measurement  3
Program Elective #3  3
Program Elective #4  3
Credits  9

Spring
Program Elective #5  3
Program Elective #6  3
Credits  6

Year Three
Fall
ORES 6990  Dissertation Hours in Outcomes Research  6
Credits  6

Spring
ORES 6990  Dissertation Hours in Outcomes Research  6
Credits  6

Total Credits  48