

# EPIDEMIOLOGY, M.P.H.

Epidemiologists are "disease detectives." Epidemiology investigates and controls disease and injury patterns in populations.

Whether it's an infectious disease outbreak, such as influenza, or a disparately high rate of hypertension in a resource-poor community, epidemiologists do the fieldwork that pinpoints the root causes, what the risks are, who is at risk and how to prevent further harm to the public.

At Saint Louis University, Master of Public Health students who concentrate in epidemiology learn to understand how various behavioral, genetic, environmental and health policy factors affect the health of communities.

## Program Highlights

SLU's strong job placement rates are based largely on its competencies-based training, collaborative faculty and team-based experience. In this concentration, you will:

- Develop appropriate study designs and analytical strategies to test epidemiologic hypotheses
- Accurately interpret epidemiologic data
- Appropriately communicate epidemiologic findings
- Use data to describe the health of populations
- Critically analyze the epidemiologic literature

## Curriculum Overview

Learn to investigate and control disease distributions and the determinants of disease in human populations. Students in the M.P.H. epidemiology concentration develop skills in disease surveillance, sampling methods, identifying and improving study designs, analyzing health data used in epidemiologic studies, and the application of epidemiologic principles and methods related to chronic and infectious diseases.

In addition to concentrating in epidemiology as part of your M.P.H. program at SLU, you can add it as a joint concentration to almost every other concentration we offer and still graduate in two years. Blending concentrations enables you to combine your interests and provides additional skills that future employers will value.

You can choose these concentration options at SLU (all require just 54 credit hours):

- Behavioral Science and Health Education
- Biosecurity and Disaster Preparedness
- Biostatistics
- Global Health
- Health Management and Policy
- Maternal and Child Health

## Fieldwork and Research Opportunities

Among other things, Saint Louis University epidemiology faculty are researching:

- Cancer epidemiology
- Exposure assessment

- Global health
- Indoor and outdoor air pollution

SLU's M.P.H. program is designed to give students the practical skills needed for any public health career. Over 50% of M.P.H. students work on research projects with faculty outside of a class requirement.

Students complete an internship after their first year of study to gain practical experience in their chosen career path. Students have interned in a variety of settings from local nonprofits to academic research centers, state and federal agencies, and multilateral institutions. Students work with the M.P.H. internship coordinator and their faculty advisor to identify an appropriate internship in St. Louis, nationally, or across the globe.

Students who focus on epidemiology have completed practice experiences with:

- BJC Healthcare
- Missouri Department of Health and Human Services
- City of St. Louis Department of Health
- St. Charles County Public Health Department
- St. Louis County Department of Public Health
- St. Louis Integrated Health Network

## Careers

Master of Public Health students who chose to concentrate in epidemiology at SLU have gone on to careers in public health departments, the CDC, in hospitals and health systems doing infectious disease control and outcomes research, consulting companies and more.

SLU's public health graduates are employed at federal, state and local health agencies; consulting firms; consumer advocacy organizations; community-based organizations and health care centers; hospitals; research centers; and universities.

Within the first year of graduation, the vast majority of M.P.H. graduates are beginning their careers, participating in fellowships or furthering their graduate education.

## Scholarships and Financial Aid

The College for Public Health and Social Justice offers several ways to help finance graduate education. Opportunities include a limited number of merit-based scholarships and graduate research assistantships.

Awards are made to applicants with the highest combinations of GPAs and test scores who complete their applications by the priority deadlines.

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

## Accreditation

The College for Public Health and Social Justice is fully accredited by the Council on Education for Public Health (CEPH).

View a PDF of the Most Recent CEPH Self-Study (July 2016) ([http://www.slu.edu/public-health-social-justice/pdfs/cphsj\\_self\\_study\\_august\\_2015\\_report.pdf](http://www.slu.edu/public-health-social-justice/pdfs/cphsj_self_study_august_2015_report.pdf))

## Learning Outcomes

### Evidence-based Approaches to Public Health

- Graduates will be able to apply epidemiological methods to the breadth of settings and situations in public health practice.
- Graduates will be able to select quantitative and qualitative data collection methods appropriate for a given public health context.
- Graduates will be able to analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate.
- Graduates will be able to interpret results of data analysis for public health research, policy or practice.

### Public Health and Health Care Systems

- Graduates will be able to compare the organization, structure and function of health care, public health and regulatory systems across national and international settings.
- Graduates will be able to discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels.

### Planning and Management to Promote Health

- Graduates will be able to assess population needs, assets and capacities that affect communities' health.
- Graduates will be able to apply awareness of cultural values and practices to the design or implementation of public health policies or programs.
- Graduates will be able to design a population-based policy, program, project or intervention.
- Graduates will be able to explain basic principles and tools of budget and resource management.
- Graduates will be able to select methods to evaluate public health programs.

### Policy in Public Health

- Graduates will be able to discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence.
- Graduates will be able to propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes.
- Graduates will be able to advocate for political, social or economic policies and programs that will improve health in diverse populations.
- Graduates will be able to evaluate policies for their impact on public health and health equity.

### Leadership

- Graduates will be able to apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making.
- Graduates will be able to apply negotiation and mediation skills to address organizational or community.

### Communication

- Graduates will be able to select communication strategies for different audiences and sectors.
- Graduates will be able to communicate audience-appropriate public health content, both in writing and through oral presentation.
- Graduates will be able to describe the importance of cultural competence in communicating public health content.

### Interprofessional Practice

- Graduates will be able to perform effectively on interprofessional teams.

### Systems Thinking

- Graduates will be able to apply systems thinking tools to a public health issue.

## Requirements

### Admission Requirements

A bachelor's degree in a biomedical or social science is preferred, but other majors will certainly be considered. Professional experience in a health-related field is highly valued.

### Application Deadline

Applications are accepted on a rolling basis until classes are full. Apply using the centralized application service S (<https://sophas.org/>)OPHAS (<https://sophas.liaisoncas.com/applicant-ux/#/deeplink/programSearch/organization/6425937835738032128>).

### Review Process

All applicants are considered using a holistic application review process, including in-person, phone or Zoom interviews with faculty members in their intended concentration areas.

### Application Requirements

- Application form and fee
- Transcript(s)
- Three letters of recommendation
- Résumé/curriculum vitae
- Professional goal statement

Apply using the centralized application service SOPHAS (<https://sophas.liaisoncas.com/applicant-ux/#/deeplink/programSearch/organization/6425937835738032128>).

### Requirements for International Students

All admission policies and requirements for domestic students apply to international students. International students must also meet the following additional requirements:

- Demonstrate English Language Proficiency
- Financial documents are required to complete an application for admission and be reviewed for admission and merit scholarships.
- Proof of financial support that must include:
  - A letter of financial support from the person(s) or sponsoring agency funding the student's 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 the student's study at the University
- Academic records, in English translation, of students who have undertaken postsecondary studies outside the United States must include:
  - 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
  - Any honors or degrees received.

WES and ECE transcripts are accepted.

## Program Requirements

Code	Title	Credits
<b>Required Core Courses</b>		
HCE 5020	Ethical Issues in Public Health	1
		or
		2
PUBH 5010	Mission and Practice of Global Public Health	2
PUBH 5030	Methodological Approaches to Understanding Population Health	3
PUBH 5040	Generating Evidence from Public Health Data	3
PUBH 5050	Health Care Across the Life Course: From Policy to Practice	3
PUBH 5060	Environmental and Biological Determinants of Health	3
PUBH 5070	Translating Evidence and Theory for Community Practice	3
PUBH 5910	Practice Experience in Public Health	0
		or
		3
PUBH 5950	Special Study for Examinations	0
PUBH 5960	Capstone in Public Health Practice	3

### Concentrations

Select one of the following:

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## Epidemiology Concentration

Code	Title	Credits
<b>Required core courses listed above and the following:</b>		
BST 5030	Statistical Programming and Study Planning: SAS	3
BST 5100	Introduction to General Linear Modeling	3
BST 5200	Survival Data Analysis	3
BST 5210	Categorical Data Analysis	3
EPI 5020	Epidemiology Methods II	3
Elective	Elective chosen in consultation with mentor	9
<b>Total Credits</b>		<b>48</b>

## 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.

## Epidemiology Concentration

Course	Title	Credits
<b>Year One</b>		
<b>Fall</b>		
HCE 5020	Ethical Issues in Public Health	2
PUBH 5010	Mission and Practice of Global Public Health	2
PUBH 5030	Methodological Approaches to Understanding Population Health	3
PUBH 5040	Generating Evidence from Public Health Data	3
PUBH 5060	Environmental and Biological Determinants of Health	3
MPH Professional Development Series: Completion of 6 sessions required during Year 1 (prerequisite for PUBH 5910).		
<b>Credits</b>		<b>13</b>
<b>Spring</b>		
BST 5030	Statistical Programming and Study Planning: SAS	3
BST 5100	Introduction to General Linear Modeling	3
EPI 5020	Epidemiology Methods II	3
PUBH 5070	Translating Evidence and Theory for Community Practice	3
MPH Professional Development Series: Completion of 6 sessions required during Year 1 (prerequisite for PUBH 5910).		
<b>Credits</b>		<b>12</b>
<b>Summer</b>		
PUBH 5910	Practice Experience in Public Health	3
<b>Credits</b>		<b>3</b>
<b>Year Two</b>		
<b>Fall</b>		
BST 5200	Survival Data Analysis	3
BST 5210	Categorical Data Analysis	3
Elective	EPI Elective chosen in consultation with mentor	3
Elective	EPI Elective chosen in consultation with mentor	3
<b>Credits</b>		<b>12</b>
<b>Spring</b>		
PUBH 5050	Health Care Across the Life Course: From Policy to Practice	3
PUBH 5950	Special Study for Examinations	0
PUBH 5960	Capstone in Public Health Practice	3
Elective	Elective chosen in consultation with mentor	3
<b>Credits</b>		<b>9</b>
<b>Total Credits</b>		<b>49</b>

## Epidemiology Concentration (part-time)

Course	Title	Credits
<b>Year One</b>		
<b>Fall</b>		
PUBH 5030	Methodological Approaches to Understanding Population Health	3

PUBH 5040	Generating Evidence from Public Health Data	3
MPH Professional Development Series: Completion of 6 sessions required during Year 1 or 2 (prerequisite for PUBH 5910).		
<b>Credits</b>		<b>6</b>
<b>Spring</b>		
EPI 5020	Epidemiology Methods II	3
PUBH 5060	Environmental and Biological Determinants of Health	3
MPH Professional Development Series: Completion of 6 sessions required during Year 1 or 2 (prerequisite for PUBH 5910).		
<b>Credits</b>		<b>6</b>
<b>Summer</b>		
PUBH 5010	Mission and Practice of Global Public Health	2
<b>Credits</b>		<b>2</b>
<b>Year Two</b>		
<b>Fall</b>		
BST 5100	Introduction to General Linear Modeling	3
PUBH 5070	Translating Evidence and Theory for Community Practice	3
<b>Credits</b>		<b>6</b>
<b>Spring</b>		
PUBH 5050	Health Care Across the Life Course: From Policy to Practice	3
Elective	EPI Elective chosen in consultation with mentor	3
<b>Credits</b>		<b>6</b>
<b>Summer</b>		
HCE 5020	Ethical Issues in Public Health	2
ORES 5550	SAS Programming I	3
<b>Credits</b>		<b>5</b>
<b>Year Three</b>		
<b>Fall</b>		
BST 5200	Survival Data Analysis	3
BST 5210	Categorical Data Analysis	3
<b>Credits</b>		<b>6</b>
<b>Spring</b>		
PUBH 5950	Special Study for Examinations	0
PUBH 5960	Capstone in Public Health Practice	3
Elective	EPI Elective chosen in consultation with mentor	3
<b>Credits</b>		<b>6</b>
<b>Summer</b>		
PUBH 5910	Practice Experience in Public Health	3
Elective	EPI Elective chosen in consultation with mentor	3
<b>Credits</b>		<b>6</b>
<b>Total Credits</b>		<b>49</b>

## Contact Us

Apply for Admission (<https://sophas.liaisoncas.com/applicant-ux/#/deeplink/programSearch/organization/6425937835738032128>)

For additional admission questions, please contact:

Bernie Backer

Director of Graduate Recruitment and Admissions

[bernard.backer@slu.edu](mailto:bernard.backer@slu.edu) ([bernard.backer@slu.edu](mailto:bernard.backer@slu.edu))

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