



UNIVERSITY OF  
**ILLINOIS CHICAGO**

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# **Student Handbook**

## **Academic Certificate Programs**

*AY 2022-2023*

Revised August 2022

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## ACADEMIC CERTIFICATE PROGRAM OVERVIEW

***NOTE: The Student Handbook is a static document that is updated each August. The requirements contained in this handbook are applicable to students who commence an Academic Certificate Program during AY 2022-2023. Students should consult the SPH website if interested in curriculum revisions adopted during the current year. Such changes will apply to students beginning a certificate program in the following academic year.***

During AY 2022-2023 the School of Public Health is admitting students into five fully online programs leading to a campus certificate. Students in these programs receive academic credit which may be applied toward a degree if the student later chooses to pursue one. Successful completion of a certificate program does not guarantee admission to any of the degree granting programs in the School.

- Emergency Management and Resilience Planning Certificate
- Health Disparities Research Certificate
- Public Health Geographic Information Systems Certificate
- Public Health Informatics Certificate
- Pharmacoepidemiology Certificate

## Emergency Management and Resilience Planning

The School of Public Health and the Division of Health Policy and Administration currently administers the EMRP certificate. The certificate complements the new profile of the program, which emphasizes decision support management, and planning skills, which are essential for emergency management professionals as well as public health administrators. At an operational level, many of the EMRP instructors are related to public health and the business administration domain.

The online EMRP certificate is a collaborative venture between the School of Public Health and the Departments of Information and Decision Sciences (College of Business Administration).

### Learning Objectives

The Emergency Management and Resilience Planning (EMRP) Certificate Program emphasizes decision support, management, and planning skills, which are essential for emergency management professionals as well as public health administrators.

The academic certificate in Emergency Management and Resilience Planning requires 5 courses for a total of 16 semester hours (SH) and is designed for completion in as little as three semesters (two courses each in the fall and spring semester and one in the summer). This certificate requires the following courses:

### Certificate Program Requirements (16 SH)

Course	Title	Credits
Required Course		
HPA 407	Fundamentals of Emergency Management and Resilience Planning	4 SH
HPA 408	Decision Support Systems for Emergency Management and Resilience Planning	4 SH

A minimum of 8 hours selected from the following courses:

Course	Title	Credits
HPA 466	Critical Infrastructure Protection and Allocation of Assets Planning	4 SH
HPA 497	Integrative Project in Emergency Management	4 SH
HPA 569	Risk Visualization and Management Techniques in Homeland Security Sciences	4 SH
HPA 575	Strategic Planning for Disaster Resilience	4 SH
HPA 576	Disaster Response and Recovery Operations	4 SH
HPA 593	Social Vulnerability Analysis	4 SH

**Contact Information**

For further information about the Emergency Management and Resilience Planning certificate please contact:

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Online Education Program Coordinator, Health Policy and Administration

(312) 413-3760

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## Health Disparities Research

The School of Public Health offers a post-baccalaureate Certificate in Health Disparities Research in a completely online format. This certificate will provide a documented concentration of study for graduate students, fellows, junior faculty, and working professionals particularly interested in identifying, analyzing, and addressing health disparities in vulnerable communities and broader populations. Aimed at health science professionals across the spectrum, course content is applicable across disciplines. Courses completed as part of the Certificate program may be applied toward the Master of Public Health (MPH) in Health Policy and Administration if the student is later admitted into the MPH program, although successful completion of the Certificate program does not guarantee admission into the degree program.

### Learning Objectives

Students will acquire the following skills and knowledge:

1. Apply lessons from seminal historical events and scientific initiatives to inform efforts to achieve health equity
2. Explore cultural nuances entailed in designing, implementing, and interpreting population research in health disparities
3. Select appropriate conceptual models, strategies, and tools for studying vulnerable populations and health disparities
4. Critique scientific efforts and policy initiatives that endeavor to explain or eliminate health disparities
5. Incorporate knowledge, insights, and skills relative to health disparities in planning and implementing their own specific work

The certificate entails successful completion of four online courses for a total of 13 semester hours (SH) of credit. The four certificate courses address theoretical perspectives of health disparities, research methodology specific to the study of health disparities, and the use of evidence in policy development and implementation. Completion of the four courses is intended to yield greater benefit than any single course for designing, conducting, and collaborating in health disparities research. This certificate requires the following courses:

### Certificate Program Requirements (13 SH)

Course	Title	Credits
HPA 459	Introduction to Health Inequities in the United States	3 SH
HPA 462	Quantitative Methods of Health Disparities Research	4 SH
HPA 464	Sociocultural Dimensions of Health Disparities Research	3 SH
HPA 469	Evidence Based Policy Development and Implementation: Health Disparity Case Studies	3 SH

### **Contact Information**

For further information about the Health Disparities Research certificate please contact:

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### **Public Health Geographic Information Systems**

2022-2023 University of Illinois Chicago School of Public Health – Academic Certificate Student Handbook

The School of Public Health offers a Certificate in Public Health Geographic Information Systems (PHGIS) to qualified professionals in a completely online format. The UIC Public Health Geographic Information Systems online certificate program provides students with an understanding of fundamental GIS tools and their practical applications. Combining cartography, spatial analysis and data management, GIS is a rapidly emerging field in public health. The complex challenges posed by public health threats demand that public health professionals have a concrete understanding of the relationships among the various factors affecting health. In recent years, public health practitioners have grown increasingly aware of the value geographic information systems (GIS) can add in developing an effective framework for action. GIS systems make it possible for public health professionals to visualize population health problems within the context of available social services, demographic factors, and changes in environmental variables. Courses completed as part of the Certificate program may be applied toward the Master of Public Health (MPH) in Health Policy and Administration if the student is later admitted into the MPH program. Successful completion of the Certificate program does not guarantee admission into the degree program.

### Learning Objectives

Students receive advanced training from the experienced faculty of the UIC School of Public Health, as well as from practicing public health professionals. Students will acquire the following skills and knowledge:

1. Comprehension of the goals and analytical methods common to the public health informatics field
2. Command of the basic structure of spatial databases
3. Operational understanding of the most widely used GIS software package (ArcGIS)
4. Ability to consult and communicate effectively with stakeholders, interest groups and regulatory bodies by means of powerful spatial visualization tools
5. A clear understanding of how to apply GIS technology to public health problems

The academic certificate in Public Health Geographic Information Systems requires 13 semester hours (SH) and is designed for completion in as little as four semesters by completing one course each semester. This certificate requires the following courses:

### Certificate Program Requirements (13 SH)

Course	Title	Credits
Required Course		
HPA 436	GIS for Environmental and Public Health Professionals	4 SH
HPA 455	Geographic Information Systems Integrative Project (taken in last semester)	2 SH
HPA 564	Geographic Information System Application in Public Health	3 SH

**A minimum of 4 hours selected from the following courses:**



Course	Title	Credits
HPA 480	Health Related Database Design and Analysis	4 SH
HPA 592	Spatial Data Analysis & Visualization	4 SH
HPA 593	Social Vulnerability Analysis	4 SH
HPA 565	Data-mining Applications in PH	3 SH

**Contact Information**

For further information about the Public Health Geographic Information Systems certificate please contact:

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## Public Health Informatics

The School of Public Health offers a Certificate in Public Health Informatics to qualified professionals in a completely online format. The courses required are a subset of the courses necessary for completion of the online MPH degree in Public Health Informatics. A Certificate can be earned in 15 months; however, there is an accelerated Certificate option which allows for completion of requirements in 12 months.

The Certificate program is intended for professionals with public health experience who wish to upgrade their informatics skills, individuals interested in a shorter course of study in public health informatics, and for those students enrolled in schools of public health in or outside the United States wishing to establish a public health informatics specialization with the agreement of their participating schools as part of their present degree program. Students completing Certificate coursework receive academic credit which may be applied toward an MPH if the student later pursues a degree. Successful completion of the Certificate does not, however, guarantee admission into a degree program.

### Learning Objectives

The certificate program is ideal for students seeking an overview of public health informatics, whether public health professionals or students of traditional public health programs interested in a concentrated introduction to PHI. Candidates will specifically develop:

1. Proficiency in health data definitions and standards
2. Knowledge of the basic functions and operations of public health information systems
3. Ability to plan and manage public health information systems projects
4. Expertise to specify the requirements for the development or adaptation of public health information systems

The academic certificate in Public Health Informatics requires 16-19 semester hours (SH) and is designed for completion in three semesters (two courses each fall and spring semester and one during the summer semester) and must be completed over a maximum period of five years. This certificate requires the following courses:

### Certificate Program Requirements (16SH)

Course	Title	Credits
Required Course		
HPA 450	Public Health Informatics Certificate Integrative Paper	0 SH
HPA 465	Health Information and Decision Support Systems	4 SH
HPA 481	Development of Public Health Surveillance Information Systems	3 SH

A minimum of 9 hours selected from the following courses:

Course	Title	Credits
HPA 436	GIS for Environmental and Public Health Professionals	4 SH
HPA 483	Management of Communication Systems for Public Health Informatics Applications	4 SH
HPA 485	Legal and Ethical Issues in Public Health Informatics	3 SH
HPA 486	Survey of Public Health Information Systems	4 SH
HPA 488	Public Health Information Systems Evaluation and Project Management	3 SH
HPA 563	Web-Based Public Health Information Systems	4 SH
HPA 564	Geographic Information System Applications in Public Health	3 SH
HPA 565	Data Mining Applications in Public Health	3 SH

### Contact Information

For further information about the Public Health Informatics certificate please contact:

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## Pharmacoepidemiology

The Pharmacoepidemiology online certificate program is designed to provide participants with education and skills for successful careers in pharmacoepidemiology and pharmacovigilance. The Pharmacoepidemiology certificate program integrates relevant material from biostatistics, epidemiology, pharmacy, and policy and regulatory sciences with the knowledge necessary to make decisions on and manage research programs. Intended for working professionals in the US and abroad, the Pharmacoepidemiology certificate program was designed to meet two primary goals: (1) To provide a comprehensive introduction to the primary methodologies used in pharmacoepidemiology research; and (2) To be accessible to a broad range of working professionals, both in the time required for completion and in the mode of delivery of the content.

### Learning Objectives

On completion of the certificate program participants will be able to:

1. Explain the drug development and approval process.
2. Describe and understand key regulatory requirements in biomedical product regulation related to safety.
3. Describe the role of pharmacoepidemiology in the evaluation of medication safety.
4. Apply key pharmacology principles necessary for conducting and understanding pharmacoepidemiologic research.
5. Describe and apply key research methods appropriate to pharmacoepidemiology.
6. Understand and critically evaluate the design and application of surveillance -and population-based approaches to gauge the benefits and harms of drugs and biological preparations released for widespread use.
7. Apply epidemiologic techniques to study patterns and determinants of drug utilization.
8. Identify strengths and limitations of existing discipline research.

The certificate is structured around the core methods used to study drug use in large populations so as to inform pharmaceutical and health policy treatments decisions made by health care organizations, providers and patients. To earn the certificate, students must complete 4 courses for a total of 13 credit hours. This certificate can be earned in as few as two semesters (two courses each in the fall and spring semester) or can be spread out over a longer period (e.g., 4 semesters -one course per semester). The certificate requires the following courses:

### Certificate Program Requirements (13 SH)

Course	Title	Credits
BSTT 400	Biostatistics I	4 SH
EPID 403	Introduction to Epidemiology: Principles and Methods	3 SH
PSOP 426	Pharmacoepidemiology	3 SH
PSOP 535	Pharmaceutical Policy	3 SH

### **Contact Information**

For further information about the Pharmacoepidemiology certificate please contact:

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