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# **Student Handbook**

## **Academic Certificate Programs**

*AY 2019-2020*

Revised August 2019

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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 2019-2020. 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 2019-2020 the School of Public Health is admitting students into seven 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.

- Clinical Research Methods Certificate
- Emergency Management and Continuity Planning Certificate
- Health Disparities Research Certificate
- Public Health Geographic Information Systems Certificate
- Public Health Informatics Certificate
- Public Health Management Certificate
- Pharmacoepidemiology Certificate

## Clinical Research Methods

The School of Public Health offers a Certificate in Clinical Research Methods (CRM) to qualified professionals in a completely online format. This certificate is designed to introduce clinicians, including physicians, pharmacists, nurses, dentists and physical therapists, to an array of methodologies needed to conduct clinical and translational research in a multi-disciplinary research environment. The campus certificate program is open to both degree and non-degree students. The curriculum consists of an online program of study of 5 courses (17 credit hours) of graduate coursework. The credits earned from these courses may be transferred to the Master of Science in Clinical and Translational Science (MS CTS) or the Master of Public Health (MPH) in Health Policy and Administration. Successful completion of the certificate program does not, however, guarantee admission into the MS CTS or MPH degree program. Clinicians currently enrolled in SPH degree programs will be allowed to register for certificate courses where the course content is relevant to their educational programs.

The certificate is designed for completion in approximately three semesters (two courses each in the fall and spring semester and one in the summer) or five semesters (one course per semester). The following courses are required:

### Certificate Program Requirements (17 SH)

Course	Title	Credits
HPA 472	Clinical Research Methods I	4 SH
HPA 473	Clinical Research Methods II	4 SH
HPA 479	Evaluating Clinical Interventions	3 SH
Select at least <b>two</b> of the following courses*:		
HPA 475	Contexts for Clinical Research	3 SH
HPA 477	Data Collection and Management for Clinical Research	3 SH
BHIS 509	Informatics for the Clinical Investigator	3 SH
BPS 508	Concepts in Drug Development: From Bench to Bedside	3 SH
HPA 459	Introduction to Health Inequities in the United States	3 SH
HPA 462	Quantitative Methods of Health Disparities Research	3 SH
HPA 464	Socio-cultural Dimensions of Health Disparities Research	3 SH

\*Substitute courses permitted with the permission of the Program Director.

The program promotes student and faculty interaction through online discussion groups and the use of virtual collaboration sessions. CRM course objectives are assessed by participation in discussion, quizzes and assignments. To earn the CRM certificate, students must maintain a 3.0 (out of 4.0) average for all certificate program courses.

### Contact Information

For further information about the Clinical Research Methods certificate please contact:

Rocelia Viramontes  
 Online Education Program Coordinator, Health Policy and Administration  
 (312) 413-3760  
[CRMCert@uic.edu](mailto:CRMCert@uic.edu)

## Emergency Management and Continuity Planning

The School of Public Health and the College of Business Administration offers a Certificate in Emergency Management and Continuity Planning to qualified professionals in a completely online format.

### Learning Objectives

The Emergency Management and Continuity Planning (EMCP) Certificate Program provides participants with interdisciplinary training with an emphasis on "real" world experience. The courses that comprise the certificate are designed and presented by leading experts in the field in order to help individuals develop and refine their emergency management and continuity planning skills. Participants of the certificate program will be able to:

1. Analyze risk and vulnerabilities due to natural or manmade disasters using widely accepted hazard and risk assessment methodologies.
2. Apply emerging Federal guidelines such as the National Incident Management System, Integrated Command Systems and Target Capabilities to the development of emergency management plans.
3. Formulate strategic plans related to developing the necessary remedies in a municipal or corporate setting to respond to disasters and implement recovery programs.
4. Leverage, understand and evaluate technological and administrative needs with regard to planning and implementing emergency response and recovery plans.
5. Develop operational plans to respond to public health emergencies, natural disasters and terrorist events.

The academic certificate in Emergency Management and Continuity 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
HPA 407	<b>Foundations of Emergency Management and Continuity Programs</b>	3 SH
EOHS 572	Environmental Risk Assessment and Management	4 SH
IDS 524	Strategic Emergency Management and Continuity Planning	3 SH
IDS 541	Disaster Response and Recovery Operations	3 SH
HPA 497	Integrative Project in Emergency Management	3 SH

### Contact Information

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

Ed Zordani  
 Academic Advisor, Environmental and Occupational Health Sciences  
 (312) 996-8856  
[zordani@uic.edu](mailto:zordani@uic.edu)

## 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

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**Contact Information**

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

Rocelia Viramontes

Online Education Program Coordinator, Health Policy and Administration

(312) 413-3760

[hpahdr@uic.edu](mailto:hpahdr@uic.edu)

## Public Health Geographic Information Systems

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
EOHS 475/HPA 480	Health Related Database Design and Analysis	4 SH
HPA/EOHS 564	Geographic Information System Application in Public Health	3 SH
HPA 455	Geographic Information Systems Integrative Project	2 SH
In consultation with your advisor, select at least <b>one</b> of the following courses:		
HPA 436/EOHS 436	GIS for Environmental and Public Health Professionals (required for students with little or no GIS experience).	4 SH
HPA 593	Social Vulnerability Analysis	4 SH
HPA 565	Data-mining Applications in PH	3 SH
HPA 592	Spatial Data Analysis & Visualization	4 SH

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### **Contact Information**

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

EMCP Online Admission Team  
1-866-772-2268, option 1  
[onlineinfo@uic.edu](mailto:onlineinfo@uic.edu)

PHGIS Online Admission Team  
1-866-772-2268, option 1  
[onlineinfo@uic.edu](mailto:onlineinfo@uic.edu)

## 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 (16-19 SH)

Course	Title	Credits
HPA 465	Health Information and Decision Support Systems	4 SH
HPA 481	Development of Public Health Surveillance Information Systems	3 SH
HPA 450	Public Health Informatics Certificate Integrative Paper	0 SH
Select at least <b>three</b> of the following courses:		
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 487	Public Health Informatics Methods	3 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:

Rocelia Viramontes

Online Education Program Coordinator, Health Policy and Administration

(312) 413-3760

[phi@uic.edu](mailto:phi@uic.edu)

## Public Health Management

The School of Public Health offers a Certificate in Public Health Management to qualified professionals in a completely online format. This certificate program provides public health professionals with a greater understanding of how to manage in any public health environment. The core learning experience in all of the courses is student and faculty interaction, accomplished through online discussion groups and the use of virtual collaboration sessions. This learning experience models the way in which public health programs are implemented through team efforts and collaborations.

Participants will gain knowledge of the underlying managerial skills and tools needed to adequately and successfully manage public health personnel. In addition, this knowledge will help public health professionals identify opportunities for gains in operational efficiency and effectiveness. 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

The Public Health Management (PHM) certificate graduates will have the skills necessary to:

1. Implement the core functions of management: planning, organizing, controlling and leading
2. Design and conduct a strategic planning process which will align their organization with its strategic issues, generate new ideas and develop a consensus among stakeholders
3. Design and utilize budgets to increase organizational consensus, evaluate performance and maintain accountability
4. Match their leadership styles to the needs of their public health organization and to the needs of the communities that their organization serves
5. Make resource management decisions that enhance effectiveness, while maintaining the ethical values of their organization and while taking into account the political landscape in which those decisions are made

The academic certificate in Public Health Practice requires 12-13 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 (12-13 SH)

Course	Title	Credits
HPA 400	Principles of Management in Public Health	3 SH
HPA 444	Strategic Planning and Budgeting	3 SH
Select at least <b>two</b> of the following courses:		
HPA 445	Organizational Leadership in Public Health	3 SH
HPA 446	Public Health Resource Management: Methods, Ethics and Policy	3 SH
HPA 460	Introduction to the Economics of Health and Healthcare	3 SH
HPA 465	Health Information and Decision Support Systems	4 SH

**Contact Information**

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

Rocelia Viramontes

Online Education Program Coordinator, Health Policy and Administration (312)

413-3760

[PHM@uic.edu](mailto:PHM@uic.edu)

## 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

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**Contact Information**

For further information about the Pharmacoepidemiology certificate please contact:

Liliana Aceves

Pharmacoepidemiology Program Coordinator

Phone: 312.996.4795

[laceves@uic.edu](mailto:laceves@uic.edu)