

ENVIRONMENTAL AND OCCUPATIONAL HEALTH

Environmental and Occupational Health Certificate Program

NOTE: This certificate program may be complete entirely online!
OVERVIEW

The certificate program educates and trains students to identify major environmental health issues facing public health professionals today. Courses explore the sources of environmental agents, their distribution in community and work environments, transfer routes to humans and possible health effects; the basic biological mechanisms underlying the association between prior exposure and subsequent development of adverse health effects; and control strategies and interventions.

EDUCATIONAL OBJECTIVES

1. Define the major environmental agents that cause adverse effects on human health, and their sources
2. Identify the carriers or vectors that promote the transfer of these agents from the environment to the human
3. Describe various risk management approaches both in the workplace and in the environment
4. Develop and discuss strategies that effectively mitigate and prevent adverse health effects caused by environmental and/or occupational agents and conditions
5. Illustrate how concepts such as exposure assessment, the hierarchy of controls, biological monitoring, medical screening and surveillance are used to prevent occupational injuries and illnesses
6. Identify and describe important current and emerging environmental and/or occupational problems that pose a risk to public health.

CONTACT INFORMATION

Sponsoring Department
 Environmental Health and Engineering

Faculty Sponsor
 Jacqueline Agnew

Faculty Co-Sponsor and Certificate Program Contact
 Carla Reinhard (<https://www.jhsph.edu/faculty/directory/profile/3589/carla-s-reinhard/>)
creinha2@jhu.edu

ELIGIBILITY

The certificate program is intended for public health professionals (non-degree students) who are currently practicing in environmental or occupational health or other areas of public health and seek formal graduate-level training in environmental and occupational health. It is also offered to masters and doctoral students currently enrolled in any division or department of The Johns Hopkins University; JHSPH MAS degree students are not eligible to apply. Non-degree students must have at least a baccalaureate degree from an accredited college or university with a strong record of successful academic performance.

ADMISSIONS PROCESS

All applicants must review the General Certificate Guidelines page (<http://e-catalog.jhu.edu/public-health/certificates/#newitemtext>), which provides important information about how to apply to a certificate program.

APPLYING TO THE CERTIFICATE PROGRAM AS A JHU GRADUATE STUDENT

Students already enrolled in a graduate program at JHU are not required to submit the School's electronic admissions application, but must email the Certificate Program Contact (creinha2@jhu.edu) prior to starting coursework.

Start terms: It is possible to begin the certificate program only in these terms: 1, 2, 3, & 4.

APPLYING TO THE CERTIFICATE PROGRAM AS A NON-DEGREE STUDENT

Students who are not currently enrolled in a graduate program at JHU are required to apply to certificate programs using SOPHAS Express (<https://sophasexpress.liaisoncas.com/applicant-ux/#/login>). All non-degree applicants should review the general Certificates Admissions (<http://e-catalog.jhu.edu/public-health/certificates/#newitemtext>) page for instructions on how to apply to a certificate program and application deadlines.

Start terms: It is possible to begin the certificate program only in these terms: 1,2,3, & 4.

TOEFL/IELTS: Required.

Prerequisites or special requirements: None

REQUIREMENTS FOR SUCCESSFUL COMPLETION

The certificate requires a minimum of 18 term credits. All required and elective courses must be taken for a letter grade; a minimum grade of C is required in all certificate coursework and students must maintain a 2.75 or better overall GPA for all certificate coursework. The certificate program length is flexible, however the certificate must be completed within three years.

The student should review the section of the website that addresses completion (<http://e-catalog.jhu.edu/public-health/certificates/#courserrequirements>) (<https://www.jhsph.edu/academics/certificate-programs/completion.html>) before completing certificate program requirements. The student's transcript will not indicate that the certificate was earned until the Notification of Completion has been submitted and verified by the certificate program and processed by the Registrar.

COURSE OF STUDY

Students should check the JHSPH course directory (<http://www.jhsph.edu/courses/>) to confirm when courses are offered.

Students should also check for pre-requisites and if instructor consent is required.

Code	Title	Credits
PH.550.860	Academic & Research Ethics at JHSPH (All students are required to complete this noncredit course in their first term of study)	

Required courses- Students must complete 3 of the following 6 course selections; students may complete either 180.601 or 180.609, but not both

PH.180.601	Environmental Health	5
PH.180.609	Principles of Environmental Health I	4
PH.182.625	Principles of Occupational and Environmental Hygiene	4
PH.187.610	Public Health Toxicology	4
PH.187.650	Alternative Methods in Animal Testing	3
PH.188.680	Fundamentals of Occupational Health	3

Elective Courses- Students must complete 2-3 courses from the list below to meet the 18 credit minimum required for the certificate program

Sustainability/Climate Change

PH.180.607	Climate Change and Public Health	3
PH.180.611	The Global Environment, Climate Change, and Public Health	4
PH.180.651	Energy, Environment, and Public Health	2
PH.180.653	Climate Change: Avoiding Conflict and Improving Public Health	3
PH.185.600	One Health Tools to Promote and Evaluate Healthy and Sustainable Communities	3
PH.188.682	A Built Environment for A Healthy and Sustainable Future	3
PH.188.688	Global Sustainability & Health Seminar	1

Food Systems/Water

PH.180.606	Case Studies in Food Production and Public Health	4
PH.180.614	Urban Agriculture and Public Health	2
PH.180.620	An Introduction to Food Systems and Public Health	4
PH.180.622	SEAFOOD AND PUBLIC HEALTH: FROM PRODUCTION TO CONSUMPTION	2
PH.180.655	Baltimore Food Systems: A Case Study of Urban Food Environments	4
PH.182.626	Issues for Water and Sanitation in Tropical Environmental Health	2
PH.182.640	Food- and Water- Borne Diseases	3

Occupational Hygiene/Safety/Occupational Health

PH.180.621	Protecting the Environment and Safeguarding Worker Health: A Problem-Based Approach	3
PH.182.613	Exposure Assessment Techniques for Health Risk Management	3
PH.182.614	Industrial Hygiene Laboratory	5
PH.182.615	Airborne Particles	4
PH.182.621	Introduction to Ergonomics	4
PH.182.622	Ventilation and Hazard Control	4
PH.182.623	Occupational Health Management	3
PH.182.625	Principles of Occupational and Environmental Hygiene	4
PH.182.631	Principles of Occupational Safety	2
PH.182.637	Noise and Other Physical Agents in the Environment	4
PH.188.680	Fundamentals of Occupational Health	3
PH.188.681	Onsite Evaluation of Workplace and Occupational Health Programs	5

PH.188.694	Health of Vulnerable Worker Populations	3
<i>Health Security/Infectious Diseases</i>		
PH.180.623	Infectious Disease Threats to Global Health Security	3
PH.180.624	Biotechnology and Health Security	3
PH.180.630	Chemical and Biological Weapons Threats: Science, Public Health, Policy	3
PH.180.670	Introduction to Public Health Emergency Preparedness	3
<i>Environmental Law/Environmental Justice</i>		
PH.180.602	Environment and Health in Low and Middle income Countries	2
PH.180.625	Community-Driven Epidemiology and Environmental Justice	3
PH.180.628	Introduction To Environmental and Occupational Health Law	4
PH.340.680	Environmental and Occupational Epidemiology	4
<i>Toxicology/Physiology/Molecular Mechanisms</i>		
PH.180.640	Molecular Epidemiology and Biomarkers in Public Health	4
PH.180.650	Fundamentals of Clinical Oncology for Public Health Practitioners	3
PH.183.631	Fundamentals of Human Physiology	4
PH.183.638	Mechanisms of Cardiopulmonary Control	2
PH.183.642	The Cardiopulmonary System Under Stress	2
PH.187.625	Animals in Research: Law, Policy, and Humane Sciences	3
PH.187.632	Molecular Toxicology	4
PH.187.633	Introduction to Environmental Genomics and Epigenomics	3
PH.187.634	Analysis for Environmental Genomics and Epigenomics	1
PH.187.640	Toxicology 21: Scientific Foundations	1
PH.187.645	Toxicology 21: Scientific Applications	3
PH.187.650	Alternative Methods in Animal Testing	3
PH.187.655	Evidence-Based Toxicology	3
PH.187.661	Environmental Health in Neurological and Mental Disorders	3
PH.188.686	Clinical Environmental and Occupational Toxicology	3
PH.188.688	Global Sustainability & Health Seminar	1