Requirements for the PhD in Environmental and Occupational Hygiene

(for students entering autumn 2020 or later)

DEOHS Core Requirements		
Choose one:		
BIOST 511	Medical Biometry I [A] **OR**	(4)
BIOST 517	Applied Biostatistics I [A]	(4)
EPI 511	Introduction to Epidemiology [A]	4
ENV H 501	Foundations of Env. & Occ. Health [A]	4
ENV H 502	Assessing & Managing Risks from Human Exposure to Env. Contaminants [W]	4
ENV H 580	Env. & Occupational Health Seminar [A,W,Sp]	1 x 6 = 6[1]
ENV H 583	Thesis Research Proposal Preparation [Sp]	1(+2)[2]
	Minimum Credit Subtotal	**23**
Degree Option Specific Requirements		
Choose one:		
BIOST 512	Medical Biometry II [W] **OR**	(4)
BIOST 518	Applied Biostatistics II [W]	(4)
ENV H 503	Adverse Health Effects of Env. & Occ. Toxicants [Sp]	4
TBD	Core science courses from a single discipline[3]	11
ENV H 552	Environmental Chemistry of Pollution [Sp]	4
ENV H 553	Env. Exposure Monitoring Methods [W]	4
ENV H 555	Instrumental Methods for IH Measurement [W]	3
ENV H 595[4]	Research Rotation [E]	6 or 9[4]
	Minimum Credit Subtotal	**36**
Culminating Experience		
ENV H 800	Doctoral Dissertation [E]	27
Electives		
TBD	Additional elective credits as needed to reach total minimum of 99 credits[5]	Var.
	Total Minimum Credits =	**99**

1. ENV H 580: Students are required to complete 6 quarters of this 1-credit course for a total of 6 credits.
2. ENV H 583 requires that students take 2 credits of ENV H 600 (Independent Study) concurrently.
3. 11 credits of core science courses from a single discipline that together provide in-depth specialist knowledge in a field relevant to the chosen course of study. Course selection must be approved by the student's faculty advisor.
4. Two rotations (6 credits) required for students with a previous master's degree, three (9 credits) otherwise.
5. Students select ENV H electives in consultation with their faculty advisor. Non-ENV H electives will be approved on a case-by-case basis.

[A] = Typically offered in autumn quarter
[W] = Typically offered in winter quarter
[Sp] = Typically offered in spring quarter
[S] = Typically offered in summer quarter
[E] = Available every quarter

Degree Competencies for the PhD in Environmental and Occupational Hygiene

SPH/CEPH – Foundational Public Health Knowledge Learning Objectives

Profession & Science of Public Health
1. Explain public health history, philosophy and values
2. Identify the core functions of public health and the 10 Essential Services
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.
6. Explain the critical importance of evidence in advancing public health knowledge

Factors Related to Human Health
7. Explain the effects of environmental factors on a population's health
8. Explain biological and genetic factors that affect a population's health
9. Explain behavioral & psychological factors that affect a population's health
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities
11. Explain how globalization affects global burdens of disease
12. Explain an ecological perspective on the connections among human health, animal health, and ecosystem health (e.g., One Health)

DEOHS All Graduate Student Degree Competencies

1. Apply the major components of the environmental and occupational health framework (problem formulation, hazard identification, dose-response assessment, exposure assessment, risk characterization, risk communication, risk management, evaluation, stakeholder engagement, and research) in order to address environmental public health problems experienced in the community or work environment.
2. Use epidemiological and statistical techniques to describe and analyze environmental and occupational health data
3. Formulate hypotheses and design and conduct experiments to test such hypotheses aimed at advancing knowledge in environment and occupational health sciences

DEOHS Degree-Specific Competencies – PhD-EOH

1. Demonstrate mastery of the competencies for the MS degree in Exposure Science or Environmental Health, depending on the student's area of focus (*see below*)
2. Critically evaluate environmental and human exposure data
3. Conceive and develop original research that advances knowledge in the field of environmental and occupational health sciences
4. Formulate and apply appropriate techniques for collection and/or modeling of environmental and human exposure data.

MS in Exposure Science Competencies:
- Identify and characterize hazardous environmental exposures
- Describe the use and limitations of accepted sampling and analysis methods for chemical hazards and quality control measures for environmental exposure assessments
- Demonstrate skills in characterizing exposure to hazardous aerosols

MS in Environmental Health Competencies:
1. Describe the sources, pathways, and routes of exposure of microbial and chemical hazards in the environment
2. Apply measurement and/or modeling methods to microbial and chemical hazards
3. Recognize and explain personal, administrative/regulatory, and engineering controls for environmental hazards