Occupational and Environmental Health Sciences, M.P.H., Ph.D.

Degrees Offered

- Master of Public Health
- Doctor of Philosophy

Nature of the Program

MPH IN OCCUPATIONAL AND ENVIRONMENTAL HEALTH SCIENCES

The MPH degree with a major in Occupational and Environmental Health Sciences provides students with the practical skills needed to solve occupational and environmental health problems. Students will focus on understanding occupational and environmental processes and their effects on humankind, as well as developing the skills needed to assess and address their health consequences.

Upon completion of the MPH degree with a major in Occupational and Environmental Health Sciences, students will be prepared to either continue their graduate education at the doctoral level or begin a career as consultants, managers, and leaders in public health practice, research settings, government, or industry, addressing such issues as environmental pollution related to air, water, and waste, occupational health hazards, and work-related injury. The degree and major are ideal for recent college graduates or early to mid-career public health professionals seeking to develop or advance their current careers.

PH.D. IN PUBLIC HEALTH SCIENCES (OCCUPATIONAL AND ENVIRONMENTAL HEALTH SCIENCES MAJOR)

The Ph.D. in Public Health Sciences, Occupational and Environmental Health Major, is a degree for scientist-practitioners in the area of prevention of premature mortality, morbidity and disability resulting from occupational and environmental exposures, communicable and chronic disease, and injury. This degree emphasizes both evidence-based primary prevention of disease and injury, as well as health promotion research and practice. Students completing this degree will have the necessary theoretical knowledge and critical understanding of occupational and environmental health problems, including analytical and methodological research skills, to investigate, evaluate and find solutions to public health challenges. To this end, students should expect rigorous course work and training typical of a Ph.D. program.

The Department of Occupational and Environmental Sciences has a close collaboration with the National Institute of Occupational Safety and Health (NIOSH), which shares our Health Sciences campus in Morgantown. Collaborating NIOSH faculty add important enrichment and mentorship potential for the interested student.

FACULTY

CHAIR
- Weimin Gao - PhD (University of Pittsburgh)

PROFESSORS
- Lan Guo - PhD (West Virginia University)
- Christopher Martin - MD (Memorial University of Newfoundland)

ASSOCIATE PROFESSORS
- Robert Gerbo - MD (West Virginia University)
- Chuanfang Jin - MD (Shanxi Medical University)

CLINICAL ASSOCIATE PROFESSOR
- Michael McCawley - PhD (New York University)

ASSISTANT PROFESSORS
- Travis Knuckles - PhD (North Carolina State University)
- Jennifer Lultschik - MD (University of Toronto Faculty of Medicine)

LECTURER
- Doug Boyer - PhD (West Virginia University)
Admissions

If you are ready to apply to the West Virginia University School of Public Health, the admissions team is here to assist you.

MASTER OF PUBLIC HEALTH (MPH) IN OCCUPATIONAL AND ENVIRONMENTAL HEALTH SCIENCES

ADMISSION GUIDELINES

• Baccalaureate degree from an accredited college or university with a preferred overall GPA of 3.0.
• GRE scores of 150 Verbal (preferred), 147 Quantitative (preferred), and 3.0 Analytical Writing.
• International Students Only: TOEFL scores: minimum 550 paper-based or 213 computer-based, IELTS (minimum 6.5), or PTE score of 53-55.

APPLICATION PROCESS

Our CEPH accredited Master of Public Health program participates in the Schools of Public Health Application Service (SOPHAS), http://www.sophas.org/. The MPH Admissions process has two steps. (1) All MPH applications must be submitted through the national SOPHAS service and (2) applicants must also submit a WVU Graduate application, https://graduateadmissions.wvu.edu/.

In addition to the application, applicants must submit to SOPHAS a statement of purpose and objectives, official GRE test scores, three letters of reference, a current resume/curriculum vitae, and all university transcripts. SOPHAS requires original transcripts from ALL U.S. and International institutions attended (even Study Abroad).

There is a SOPHAS application fee. Applicants must indicate their first choice of MPH major and may also indicate a second choice. A maximum of two choices is allowed.

• E-submit your application as soon as the applicant entered information is complete. Do NOT wait for SOPHAS to receive transcripts, recommendations or test scores.

• Plan Ahead! Allow up to 4 weeks for SOPHAS to verify grades, process, and mail your application to your designated institutions after your documents have been received.

• SOPHAS grants fee waivers based upon financial need for Peace Corps Volunteers, McNair Scholars, Gates Millennium Scholars Program, AmeriCorps, U.S., and International applicants.

Once the department has reviewed the SOPHAS application, students will receive a communication from the WVU School of Public Health regarding their recommendation for acceptance and instructions to complete the WVU graduate application and pay the application fee.

Important: When sending GRE scores for consideration for admission to WVU, please use the WVU School of Public Health College GRE code: 0157. This code MUST be used, otherwise, your GRE score will not be reported to SOPHAS and your application will be incomplete. Incomplete applications cannot be reviewed for an admissions decision. [Each program at West Virginia University has a specific code.]

DOCTOR OF PHILOSOPHY (PH.D.) IN PUBLIC HEALTH SCIENCES (OCCUPATIONAL AND ENVIRONMENTAL HEALTH SCIENCES MAJOR)

ADMISSION GUIDELINES

• A Master's degree in Public Health or a closely related field is strongly preferred. Exceptional applicants with a Bachelor's degree in a relevant field may also be considered.
• A minimum GPA of 3.0 is required, 3.5 is preferred.

• The following GRE scores are preferred: Verbal 150; Quantitative 155; and Writing 3.5.
• WVU requires international students to submit TOEFL scores. Preferred scores are as follows: 550 on the paper-based test; 213 on the computer-based test; and 80 on the internet-based test. The IELTS (minimum score 6.5) or PTE score of 53-55 can be used in lieu of TOEFL.

APPLICATION PROCESS

Applying to the Ph.D. program is a two-step process in which prospective students first submit an application through the national SOPHAS service, http://www.sophas.org/. If you are accepted into the PhD program by the School, the next step is for you to complete a WVU Graduate Application, https://graduateadmissions.wvu.edu/.
The SOPHAS application requires:

- Official test scores
- Official transcripts from all US institutions attended
- A Personal Statement
- 3 Letters of Recommendation
- Current CV/Resume

Applicants must indicate their first choice of Major and may indicate a second choice (you are allowed a maximum of two choices).

There is a SOPHAS application fee. However, SOPHAS grants fee waivers based upon financial need for McNair Scholars, Gates Millennium Scholars, as well as for AmeriCorps and Peace Corps Volunteers.

**Tips for completing the SOPHAS application:**

- **APPLY EARLY!** Allow up to 4 weeks for SOPHAS to verify your transcripts and test scores and send them to the Universities to which you have applied. Your application may not be reviewed if it does not contain verified transcripts and test scores.
- **When submitting your GRE scores, be sure to use the college code 0157 for the WVU School of Public Health.** This code MUST be used so that verified scores are sent by SOPHAS to the WVU School of Public Health for review.
- Submit your application once you have provided the required information. DO NOT wait for SOPHAS to receive transcripts, recommendations or test scores prior to submitting your application.

**Personal Statement**

The Personal Statement is a critical piece of the application. The content of the Statement and the applicant’s writing skills will be evaluated in the admissions decision. The Statement should address the following in no more than 1000 words:

- What is it about Public Health that interests you?
- What is it about your selected major, specifically, that interests you?
- What are your career goals?
- What topics or areas of research do you wish to pursue and why? If you have identified a potential dissertation topic, briefly describe that as well.
- Which faculty members in the SPH do you see as being potential mentors to help you succeed in your area of interest?

Applicants should also include any additional information about their interests, background, prior experience, or special circumstances that may be helpful to the SPH Admissions Committee.

**Letters of Recommendation**

Three letters of recommendation are required. At least two of these should be from people who can attest to your academic abilities.

**Deadlines**

**Please refer to SOPHAS for the current deadline.** Applications received after this deadline will not be considered. All admissions are for the Fall semester. We do not admit students into the Ph.D. program in the Spring or Summer semesters.

**Review process**

All completed and verified SOPHAS applications are first reviewed by the Admissions Committees of the major to which an applicant has applied (EPID, OEHS, or SBHS). Candidates that are recommended for admission at this level, are put forth to the SPH Doctoral Admissions Committee, which makes the final decisions on admissions and funding.

**Advanced Standing for Applicants with a Master's Degree**

Students who enter the Ph.D. program with an MPH or approved Master's degree are eligible for **Advanced Standing**. This allows students to complete an abbreviated course of study that takes between 2 and 3 years to complete, depending on the student’s past course work and current interests.

MPH Major Code: 8407

PhD Major Code: 8410

**Occupational and Environmental Health, M.P.H.**

For specific information on this program, please use the link to the right.

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Occupational and Environmental Health, Ph.D.

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- Occupational and Environmental Health, Ph.D.

COURSES

OEHS 601. Environmental Health. 3 Hours.
A review of issues illustrating responsibilities and roles of public health work force in identifying, managing and preventing casualties from environmental causes in air, water, soil, food, pesticides, and related subjects. WV policy dilemmas.

OEHS 610. Environmental Practice. 3 Hours.
The course involves application of Public Health principles to the planning and operation of drinking water, sewage disposal, solid and hazardous waste management, air pollution and general community sanitation.

OEHS 620. Occupational and Environmental Hazard Assessment. 4 Hours.
Lecture and laboratory experience to understand occupational and environmental hazards related to the workplace. Principles from chemistry, physics and biology are used quantify exposures. This course provides an overview of various industrial hygiene concepts.

OEHS 622. Public Health Toxicology. 3 Hours.
This interdisciplinary course will survey the principles of toxicology that pertain to human health and the environment, and the integration of these principles into public health practice.

OEHS 623. Occupational Injury Prevention. 3 Hours.
This course introduces students to the problem of occupational injury. It covers the epidemiology of occupational injury and provides a critical perspective on injury causation and the strategies used to prevent occupational injury. This course is also listed as OEHS 732 - students may not count both toward degree requirements.

OEHS 625. Advanced Toxicology. 3 Hours.
PR: OEHS 622 or BIOC 531 or PCOL 547 or PHYS 743 or consent. This interdisciplinary course will provide detailed information about toxicology in the instructors areas of research.

OEHS 626. Internship. 1-6 Hours.
PR: Consent. (May be repeated for a maximum of 6 credit hours.) The internship provides students the opportunity to develop their practical skills and enhance professional competencies by applying the knowledge and techniques gained from their MPH coursework to public health practice.

OEHS 629. Capstone. 2 Hours.
This course is the culminating experience for OEHS Master's students through which they will demonstrate their ability to integrate and synthesize the MPH and OEHS competencies in relation to the occupational/environmental public health problem on which their Practice-based Experience (PBE) was focused.

OEHS 630. Public Health Biology. 3 Hours.
This course will provide students with a fundamental understanding of Public Health Biology, which comprises a wide range of concepts including: human physiology, infectious and non-infectious disease, mechanisms of disease pathology, toxicology, and population health disparities. The students will learn underlying and advanced knowledge of human physiology and its role in public health.

OEHS 665. Worksite Evaluation. 1 Hour.
PR: Public Health major, Graduate standing. Students are introduced to health and safety hazards associated with industrial operations through in-plant inspections, interaction with plant medical and safety staff, and in-class discussions.

OEHS 690. Teaching Practicum. 1-3 Hours.
PR: Consent. Supervised practice in college teaching of occupational and environmental health sciences. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It also provides a mechanism for students not on assistantships to gain teaching experience.

OEHS 691. Advanced Topics. 1-6 Hours.
PR: Consent. Investigation in advanced topics that are not covered in regularly scheduled courses.

OEHS 695. Independent Study. 1-9 Hours.
Faculty-supervised study of topics not available through regular course offerings.

OEHS 696. Graduate Seminar. 1-3 Hours.
PR: Consent. Each graduate student will present at least one seminar to the assembled faculty and graduate student body of his or her program.

OEHS 723. Emergency and Disaster Response. 3 Hours.
This course addresses the basics of how public health practitioners respond to disasters, develop response protocols, and perform as skillful public health leaders.

OEHS 732. Occupational Injury Prevention. 3 Hours.
This course introduces students to the problem of occupational injury. It covers the epidemiology of occupational injury and provides a critical perspective on injury causation and the strategies used to prevent occupational injury.
OEHS 733. Organizational Theories of Injury and Disaster Prevention. 3 Hours.
This course will discuss how aspects of work organization shape workplace injury patterns and modify the risk of organizational disasters. Social and organizational theories and contemporary perspectives of safety will be presented and used to illustrate how to reduce the occurrence of work-related injuries as well as the risk of organizational disasters.

OEHS 734. Aerosols and Health. 3 Hours.
This course will give an understanding of the basic principles behind aerosol generation, measurement, mechanics and toxicity for aerosols found in the environment and their application to health effects caused by exposure to these aerosols.

OEHS 742. Outbreak Assessment. 3 Hours.
This course covers environmental and epidemiologic principles and concepts within the context of case studies associated with disease outbreaks.

OEHS 770. Molecular Diagnosis Public Health. 3 Hours.
This course gives an overview of the interdisciplinary approaches in molecular diagnosis and prognosis for personalized patient care. Knowledge of genome-wide association studies will guide hypotheses-driven experimentation and aid clinical decision-making.

OEHS 790. Teaching Practicum. 1-3 Hours.
PR: Consent. Supervised practice in college teaching of OEHS. Note: This course is intended to insure that graduate assistants are adequately prepared and supervised when they are given college teaching responsibility. It also provides a mechanism for students not on assistantships to gain teaching experience.

OEHS 795. Independent Study. 1-9 Hours.
PR: Consent. Faculty-supervised study of topics not available through regular course offerings.

OEHS 796. Graduate Seminar. 1-3 Hours.
PR: Consent. Each graduate student will present at least one seminar to the assembled faculty and graduate student body of his or her program.

OEHS 797. Research. 1-9 Hours.
PR: Consent. Research activities leading to thesis, problem report, research paper or equivalent scholarly project, or a dissertation. (Grading will be S/U.).