

# Industrial Hygiene, M.S.

---

## Degree Offered

- Master of Science

## Nature of the Program

The industrial hygiene program is designed for students with undergraduate training in the areas of engineering, chemistry, biology, medical sciences, animal sciences or the physical sciences who have an interest in occupational and environmental health and safety.

Through this program, working professionals and full time students can obtain education in industrial hygiene with the overall goal of providing the technical competence to anticipate, recognize, evaluate and control occupational health hazards. This degree is structured to encourage participatory, collaborative and applied problem-solving strategies to address modern day occupational health issues.

## Program Educational Outcomes

In order to meet the Program Educational Objectives of the Industrial Hygiene program, students must be able to meet the following educational outcomes at the time of graduation:

1. Practice Industrial Hygiene and to initiate and develop leadership roles in business, industry and/or government.
2. Continue professional development, and life-long learning.
3. Interact in society and business in a professional, ethical manner to promote occupational and environmental safety and health.
4. Be proficient in written and oral communication and to utilize people-oriented skills in individual and team environments
5. Apply the knowledge and analytical skills from Industrial Hygiene to be proficient in his or her chosen field or further professional or doctoral studies.

---

## FACULTY

### DIRECTOR

- Sergio Caporali Filho - PhD (West Virginia University)  
Professor, Occupational and Environmental Health Sciences

## Admissions

Applicants to graduate programs in the industrial hygiene program are required to provide the following:

- Applicants must have earned a grade point average (GPA) of 3.0 or better (out of a possible 4.0)
- International applicants must submit proof of English language proficiency (<https://graduateadmissions.wvu.edu/how-to-apply/apply-for-2023-2024/international-graduate-applicant/>)
- A completed application submitted to the WVU Admissions Office
- Official transcripts of all previous college course work
- ABET-ANSAC prerequisite course requirements:
  - sixty-three credit hours of approved science, mathematics, and other technical courses. Of these, at least fifteen credit hours must be junior or senior level.
  - Specific pre/corequisite course requirements include two semesters of general/inorganic chemistry and two semesters of physics.
  - On an individual basis, the faculty may identify additional pre/corequisite coursework, often including organic chemistry and biology. Applicants will be advised about their specific requirements at the time of admission.

## Admission Requirements 2024-2025

The Admission Requirements above will be the same for the 2024-2025 Academic Year.

Major Code: 8419

## Curriculum Requirements

Code	Title	Hours
A minimum cumulative GPA of 3.0 is required in all courses		
A minimum of 60% of courses must be from 500 level or above		
<b>Course Requirements *</b>		

BIOS 601	Applied Biostatistics 1	4
PUBH 511	Epidemiology for Public Health Practice	3
OEHS 520	Industrial Hygiene	3
OEHS 521	Industrial Hygiene Laboratory	1
OEHS 622	Public Health Toxicology	3
OEHS 623	Occupational Injury Prevention	3
OEHS 627	Physical Hazards Measurement and Control	3
OEHS 528	Industrial Ventilation Design	3
OEHS 635	Industrial Hygiene Air Sampling and Analysis	3
OEHS 645	Air Sampling and Analysis Laboratory	1
OEHS 647	Physical Hazards Measurement and Control Laboratory	1
OEHS 648	Industrial Ventilation and Respiratory Protection Laboratory	1
OEHS 665	Worksite Evaluation	1
<b>Complete one of the following options:</b>		<b>6</b>

**Thesis Option (6 Hours)**

OEHS 697 Research

Written Proposal/Oral Presentation

Thesis

Final Oral or Written Examination

**Coursework Option (6 Hours)**

OEHS 641 Occupational Safety and Health Awareness Seminar

OEHS 642 Exposure Assessment Seminar

OEHS 643 OSHA Standards Seminar

OEHS 685 Internship

Final oral or written examination

Foundations of Public Health Course: SOLE offered course that students need to complete during their program

Online short course : Basic Course in the Protection of Human Research Subjects - Biomedical Focus <https://www.citiprogram.org/default.asp>

Total Hours 36

\*

Students who do not hold a baccalaureate degree in industrial hygiene may be required to take a set of undergraduate courses above and beyond the minimum coursework requirements. Students must complete those courses and earn at least a "C" in each before completing the 18<sup>th</sup> credit hour in the industrial hygiene curriculum.

**Final Examination**

M.S. students following the thesis option must prepare a written research proposal. The proposal must be approved by the student's AEC at least one semester prior to the final oral examination.

All students, regardless of option, are required to pass a final oral or written examination, administered by their AEC, covering the thesis and/or related course material.

**Major Learning Outcomes****INDUSTRIAL HYGIENE**

- An ability to identify, formulate, and solve broadly defined technical or scientific problems by applying knowledge of mathematics and science and/or technical topics to areas relevant to industrial hygiene
- An ability to formulate or design a system, process, procedure, or program to meet desired needs
- An ability to develop and conduct experiments or test hypotheses, analyze and interpret data and use scientific judgment to draw conclusions
- An ability to communicate effectively with a range of audiences
- An ability to understand ethical and professional responsibilities and the impact of technical and/or scientific solutions in global, economic, environmental, and societal contexts.
- An ability to function effectively on teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty.