

# INDUSTRIAL HYGIENE



The Industrial Hygiene program at the University of Minnesota School of Public Health focuses on the health and safety of people at work, the community at large, and the environment. The curriculum emphasizes recognition, evaluation, and control of workrelated chemical, physical, and biological hazards.

Improve workplace safety and health on a grand scale through this rigorous, highlyrated program that expertly blends science with public health concepts.

## **PROGRAM OVERVIEW**

The Industrial Hygiene master's (MS and MPH) programs are accredited (2014 to 2020) by the Applied Science Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).

#### MPH DEGREE

The MPH program requires a minimum of 52 credits. The MPH is often thought to be a terminal degree for practitioners, although it is possible to proceed to a PhD degree program after completing an MPH. Students pursuing an MPH degree may prepare either a research paper or a literature review for their integrated learning experience.

#### **MS DEGREE**

The MS program requires a minimum of 52 credits, and is ideal for both practitioners and those contemplating careers in research or academic institutions. It can lead to further study toward a PhD degree. Students pursuing the MS degree must prepare a research paper for their culminating experience.

#### PhD DEGREE

A PhD degree in industrial hygiene prepares students for careers in research and higher education. Students must submit a dissertation with original research as part of this degree. Incoming PhD students should hold a master's degree in Industrial Hygiene from an ABET-accredited program, or expect to take the required courses that are part of the University of Minnesota MS or MPH degrees.

## **ADVANTAGES OF THE PROGRAM**

**Connections.** Strong connections with industry partners such as 3M, Honeywell, Cummins, and Medtronic enhance the student experience through classroom instruction and support for field experiences.

**Career focused.** The importance of Industrial Hygiene has grown rapidly in recent years as society increasingly recognizes the need to maintain healthy and safe work environments.

**Support.** Industrial Hygiene program alumni are heavily invested in the program and support student success through mentorship and career networking.

**State-of-the-art facilities.** The 2,500 sq. ft. Industrial Hygiene Laboratory is well-equipped with the latest instruments and equipment necessary to learn sampling procedures and conduct research.

# CAREERS

Industrial hygienists identify, evaluate, and prevent unhealthy exposures that cause workplace injury or illness. They are trained to recognize new and existing hazards and predict the likelihood of their effects.

Industrial hygiene professionals are in high demand, and according to a 2013 survey of American Industrial Hygiene Association (AIHA) members, the average salary for an industrial hygienist is \$105,000. Salaries for industrial hygienists with an MS or MPH degree and 5 years or fewer in the profession averaged about \$70,000 per year in 2013.

# **POSITIONS HELD BY GRADUATES**

3M Company (PhD) Technical Services and Regulatory Affairs Manager

Drexel University (PhD) Assistant Professor

Amazon (MS) Worldwide Industrial Hygiene Program Manager

#### Intel Corporation (MS)

Corporate Safety Engineer

Minnesota Department of Health (MPH) Biomonitoring & Emerging Contaminants Unit Supervisor

## M.A. Mortenson Company (MPH)

Environmental Director

## **ADMISSIONS**

#### **APPLICATION REQUIREMENTS**

- · Official transcripts
- 3 letters of recommendation

#### PREREQUISITES

**PhD:** A master's degree in Industrial Hygiene, or MS or MPH required courses must be incorporated into the PhD degree.

**MPH & MS:** Undergraduate coursework in biology, chemistry (including organic chemistry), physics, and mathematics (including calculus). Absence of one of these prerequisite courses may be offset by relevant work experience.

## STUDENT RESEARCH EXAMPLES



#### MASTER'S STUDENT RESEARCH EXAMPLES

- Nanopartical Releases During Vehicle Recycling Jessica Ingraham (MPH)
- Biological Safety Cabinet and Clean Bench as Exposure Control Methods for Mouse Urine Protein Exposure during Cage Changing *Ning Lee (MS)*
- Comparison of Emissions Between Self-Generated Vacuum and Conventional Sanding Systems David Liverseed (MPH)

#### PhD RESEARCH EXAMPLES

- Effects of Spray Surfactant and Particle Charge on Respirable Dust Control Mei Tessum
- The Use of Heuristics and Exposure Models in Improving Exposure Judgment Accuracy Susan Arnold
- An Assessment of Occupational Inhalation Exposures to Volatile Oil Components on Four Rig Vessels for the GuLF STUDY *Tran Huynh*

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