

LEARN MORE ABOUT LAB CAREERS

Do you...

Enjoy science?

Prefer a health care career with variety?

Want to make a difference in your community?



WE CAN HELP
GET YOU ON THE
RIGHT PATH

The field of public health is anything but routine, offering continued learning and ever evolving challenges. Public health laboratory science professionals are critical to ensuring the safety of the communities served.

Educational pathways to a career in public health laboratory science can include:

- **HS – High school diploma; work experience or on the job training** (0-2 years)
- **AS – Associate of Science degree** (2 years)
- **BS – Bachelor of Science degree** (4 years)
- **MS – Master of Science degree** (5-6 years)
- **MPH – Master of Public Health degree** (6+ years)
- **DrPH – Doctor of Public Health degree** (6+ years)
- **PhD – Doctor of Philosophy degree** (7-8+ years)
- **MD – Doctor of Medicine degree** (8-10 years)

- Health Promotion • Leadership
- Communication • Compassion
- Technical • Initiative • Teamwork



PUBLIC HEALTH LAB RESOURCES

Many public health laboratories offer internships, other educational opportunities, and resources to support the need for a competent and engaged laboratory workforce.

Check out the links below for more information and opportunities!

City of Milwaukee Health Department
milwaukee.gov/health/studentplacements

American Society for Clinical Laboratory Science – WI
ascls-wi.org

Association of Public Health Laboratories
aphl.org

American Society for Microbiology
asm.org



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HEALTH DEPARTMENT

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Laboratory Careers In Public Health



CITY OF MILWAUKEE
HEALTH DEPARTMENT

Laboratory

PUBLIC HEALTH LAB CAREERS

In a world where communicable diseases are just a plane ride away and the impact of the environment on health is continually evolving, public health laboratory professionals are critical to protecting the health of the public. One Health is an approach that recognizes that the health of people is closely connected to the health of plants, animals and our shared environment.

Public health laboratories specialize in providing both clinical and environmental testing services that impact communities. Examples include performing respiratory pathogen surveillance for infectious diseases such as influenza or COVID-19, testing for lead or allergens in homes, and monitoring drinking and recreational water for pathogens and other contaminants.



Public health lab professionals come from diverse educational backgrounds, can specialize in an array of fields, and act as leaders that can meet the challenges of protecting the public's health on a local, regional, national and even international level.

Public health laboratories are structured to meet the needs of the individual state or local that they serve. These are some of the main positions within a public health lab.

Lab & Environmental Technician/Assistant

Performs basic lab procedures such as collecting and preparing samples for testing, operating analyzers and performing manual tests according to detailed instructions. Handles samples that are clinical or environmental in nature, such as blood, bodily fluid swabs, soil and water.

Education: Associate degree is often required; on the job training may be provided



Chemist

Conducts chemical analyses for environmental and health-related contaminants, such as lead and other heavy metals in soil, water and blood, bacteria, fat and/or salt content in food, and allergens from household samples. Routinely uses methods such as atomic absorption spectrometry, ion chromatography and acid extraction.

Education: Associate, Bachelors, or Masters in Chemistry or Biochemistry

Microbiologist

Prevents and/or monitors pathogens by identifying and characterizing disease-causing microorganisms (such as bacteria, viruses, fungi & parasites), using molecular and biochemical techniques such as culture, antibody detection, nucleic acid amplification testing, PCR and sequencing.

Education: Associate, Bachelor, or Masters degree in Microbiology, Molecular or Biological Sciences



Informatics

For those interested in data and technology, this category of careers offers a variety of options. Laboratory Information System (LIS) coordinators manage, test and build software systems that store testing data. Data specialists utilize data gathered to tell a meaningful story about populations and test results. Bioinformaticians decipher information about microbial genetics. Data is also shared with Epidemiologists for tracking infectious disease patterns/trends, and policy makers to aid implementation of health regulations.

Education: Bachelor, Masters or Doctoral degree in Computer Science, Information Technology, Data Management, Statistics, Medical Technology, or Bioinformatics

Biosafety Professional

Biological hazards, such as highly contagious viruses, are of major concern in the public health lab. Designated Biosafety Professionals or Officers work to educate, prevent and respond to hazardous exposures that could negatively affect lab staff, as well as the public.

Education: Bachelor or Masters degree in Microbiology or Biomedical Sciences; certificate or training in biological safety may be needed



Laboratory Director

All public health laboratories require administrative and operational oversight in order to perform lab testing and services. A director's role is to assure quality practices, safety and regulatory guidelines are met. Laboratory directors are involved in policy, education and leadership in the communities they serve.

Education: Masters or Doctoral degree; specialized certifications may also be required