

School of Public Health

Degrees Offered

MASTER

- Master of Health Administration (MHA)
- Master of Public Health (MPH)
- Master of Science (MS):
 - MS in Biostatistics
 - MS in Industrial Hygiene
 - MS in Population Health

DOCTORAL

- Doctor of Philosophy (Ph.D.) in Public Health Sciences
 - Epidemiology
 - Occupational and Environmental Health Sciences
 - Social and Behavioral Sciences

General Information

West Virginia University's School of Public Health has well-established faculty and successful programs that focus on education, research, and service.

West Virginia University and its academic programs are accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools. The School of Public Health is further accredited by the Council on Education in Public Health (CEPH). MPH Students from throughout the world who choose West Virginia University begin making a difference even before graduation. We truly believe in learning by doing. Students remain engaged in community health throughout their training and complete practicum/internship experiences in diverse settings. Our MHA students will work closely with WVU Medicine and other West Virginia health systems as they gain essential knowledge required for managerial, planning and implementation work in the health services and systems sectors. We are currently seeking Commission of Accreditation of Healthcare Management Education (CAHME). The school's portfolio of Master of Science programs (Biostatistics, Industrial Hygiene, and Population Health) offer students vital career pathways in rapidly growing professions. The Doctor of Philosophy in Public Health Sciences prepares graduates for future careers in academia and research in a variety of settings. School of Public Health faculty and staff involve students in their active research programs. Research efforts at the School often focus on the health of rural communities, consistent with our West Virginia roots. Students publish in leading peer-reviewed journals and present at national scientific conferences with their faculty mentors.

The *mission* of the West Virginia University School of Public Health is to improve the quality of life for West Virginians and all who call Appalachia home.

The *vision* of the School of Public Health is to attain healthy people in thriving communities.

The School of Public Health is guided by the following *values*:

- *Community Engagement*: we are proud of the communities we serve and recognize the importance of bidirectional participatory activities.
- *Collaboration*: we collaborate with partners who join us in improving the public's health.
- *Equity*: we promote equity and social justice in defining health and eliminating health disparities.
- *Integrity*: we adhere to the highest ethical standards of honesty and fairness and we recognize that integrity and ethical behavior are essential elements of our professions.
- *Respect*: we respect diverse points of view and the cultural heritage and traditions of all people.
- *Accountability*: we hold ourselves accountable to one another and to the many stakeholders who support the School of Public Health.

ADMINISTRATION

DEAN

- Jeffrey Coben - MD (University of Pittsburgh)
Professor, Department of Health Policy, Management and Leadership

SENIOR ASSOCIATE DEAN FOR ACADEMIC AND STUDENT AFFAIRS

- Erik Carlton - DrPH (University of Kentucky)
Associate Professor, Department of Health Policy, Management and Leadership

SENIOR ASSOCIATE DEAN FOR ADMINISTRATION

- Sarah Woodrum - DrPH (University of Illinois, Chicago)
Assistant Professor, Department of Health Policy, Management, and Leadership

ASSISTANT DEAN FOR STUDENT AFFAIRS

- Scot McIntosh - MS (Eastern Kentucky University)

DIRECTOR OF DOCTORIAL PROGRAMS

- Alfgeir Kristjansson - PhD (Karolinska Institute, Stockholm, Sweden)
Associate Professor, Department of Social and Behavioral Sciences

DIRECTOR OF GRADUATE STUDIES

- Erik Carlton - DrPH (University of Kentucky)
Associate Professor, Health Policy, Management and Leadership

DIRECTOR OF MS INDUSTRIAL HYGIENE

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

DIRECTOR OF PUBLIC HEALTH PRACTICE AND SERVICE LEARNING

- Diane Gross - DVM, PhD (The Ohio State University)
Associate Professor, Department of Epidemiology and Biostatistics

DIRECTOR OF UNDERGRADUATE STUDIES

- Audra Hamrick - MA (West Virginia University)
Assistant Professor, Social and Behavioral Sciences

CHAIRS

- Nicholas Castle - PhD (Pennsylvania State University)
Professor, Department of Health Policy, Management and Leadership
- Weimin Gao - PhD (University of Pittsburgh)
Professor, Department of Occupational and Environmental Health Sciences
- Bethany Barone Gibbs - PhD (Johns Hopkins University)
Associate Professor, Department of Epidemiology and Biostatistics
- Keith Zullig - PhD (University of South Carolina)
Professor, Department of Social and Behavioral Sciences

Accreditation

The WVU School of Public Health is fully accredited (<http://publichealth.wvu.edu/about/accreditation/>) by the Council on Education for Public Health (CEPH (<https://ceph.org/>)). The only accredited public health program in the state, the School is home to undergraduate and graduate programs in various public health disciplines at the BS, MPH, MS and PhD levels. The school's Master of Science in Industrial Hygiene program is accredited by the Applied Natural Sciences Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET-ANSAC (<https://www.abet.org/>)). The school is also seeking accreditation for the Master of Health Administration (MHA) program by the Commission on Accreditation of Healthcare Management Education (CAHME (<https://www.cahme.org/>)) and certification of the Bachelor of Science in Health Services Management and Leadership by the Association of University Programs in Health Administration (AUPHA (<https://www.aupha.org/home/>)).

Degree Designation Learning Outcomes

MASTER OF HEALTH ADMINISTRATION (MHA)

MHA Competencies

- Interpersonal Communication: Students will build collaborative and productive relationships.
- Relationship Management: Students will demonstrate negotiation and conflict resolution skills.
- Writing Skills: Students will prepare effective business communications.

- Presentation Skills: Students will demonstrate professional oral communication and presentation skills.
- Leading & Managing Others: Students will hold self and others accountable for team and/or organizational goal attainment.
- Change Management: Students will show the ability to promote and manage change.
- Honest Self-Assessment: Students will exhibit self-awareness through active reflection and self-assessment.
- Systems Thinking: Students can assess the potential impacts and consequences of decisions in a broad variety of situations.
- Problem-Solving & Decision-Making: Students are able to apply evidence-based techniques to health services decisions.
- Personal & Professional Ethics: Students will exhibit honesty, integrity, and ethical behavior.
- Personal Responsibility: Students will fulfill their commitments and demonstrate accountability.
- Professional & Community Contribution: Students demonstrate a commitment to community engagement and service.
- Working in Teams: Students will demonstrate the capacity to work in and lead teams.
- Health Services Issues & Trends: Students can examine important issues in health services, including circumstances causing major changes and reform in U.S. health systems and services
- Health Services Legal Principles: Students are able to discuss and analyze health-related legal principles, including compliance standards, regulations, and risk management
- Health Policy: Students are able to articulate the impact of health policies on the delivery of health services.
- Public & Population Health: Students understand and explain the major factors in population health status.
- Financial Management: Students are able to compile, analyze, and interpret financial information for health services decision making.
- Human Resources: Students will apply methods and techniques related to the management of health services organizations, employees and professional staff.
- Organizational Dynamics & Governance: Students can articulate the roles, responsibilities, structures, and influence of governing bodies in health services organizations.
- Strategic Planning: Based on environmental analysis, development of strategic alternatives, and discernment of a competitive strategy, students will formulate an evidence-based business strategy appropriate for health services and systems.
- Marketing: Students will analyze and assess markets, market segmentation, strategy, change, and innovation related to health systems and services.
- Information Management: Students will demonstrate proficient technology skills and understanding of information technology in health services environments.
- Quality/Performance Improvement: Students will discern relevant problems and apply principles and concepts of quality/performance improvement of health services and systems.
- Data Analytics: Students can analyze and interpret quantitative information.
- Planning and Managing Projects: Students will design, plan, implement and assess health services projects, including developing appropriate timelines related to performance, structure and outcomes.
- Health Economic Analysis and Application: Students will analyze and apply health economics theories and concepts to decision making.

MASTER OF PUBLIC HEALTH (MPH)

MPH Foundational Competencies

- Apply epidemiological methods to the breadth of settings and situations in public health practice.
- Select quantitative and qualitative data collection methods appropriate for a given public health context.
- Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate.
- Interpret results of data analysis for public health research, policy or practice.
- Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings.
- Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels.
- Assess population needs, assets and capacities that affect communities' health.
- Apply awareness of cultural values and practices to the design or implementation of public health policies or programs.
- Design a population-based policy, program, project or intervention.
- Explain basic principles and tools of budget and resource management.
- Select methods to evaluate public health programs.
- Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence.
- Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes.
- Advocate for political, social or economic policies and programs that will improve health in diverse populations.
- Evaluate policies for their impact on public health and health equity.
- Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making.

- Apply negotiation and mediation skills to address organizational or community challenges.
- Select communication strategies for different audiences and sectors.
- Communicate audience-appropriate public health content, both in writing and through oral presentation.
- Describe the importance of cultural competence in communicating public health content.
- Perform effectively on interprofessional teams.
- Apply systems thinking tools to a public health issue.

MASTER OF SCIENCE (MS)

MS Biostatistics Program Competencies

- Assess foundational concepts of probability and statistical inference.
- Analyze clinical and public health data using descriptive biostatistical methods.
- Distinguish appropriate basic inferential statistical analyses and summarize their results.
- Manage standard statistical software to efficiently manage data structures.
- Summarize the central concepts of statistical theory and inference.
- Develop appropriate plans to analyze standard continuous data in order to make valid inferences.
- Develop appropriate plans to analyze standard categorical data in order to make valid inferences.
- Communicate effectively, in writing and verbally, with substantive investigators and members of the community when assisting in the design of research studies as well as the results of statistical analyses.
- Weigh a public health problem in terms of magnitude, person, time, and place.
- Explain each of the five core disciplines in public health and illustrate the ways each of the core disciplines have contributed to the historical evolution of public health.

MS Industrial Hygiene Program Competencies

- 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
- Formulate or design a system, process, procedure, or program to meet desired needs
- Develop and conduct experiments or test hypotheses, analyze and interpret data and use scientific judgment to draw conclusions
- Communicate effectively with a range of audiences
- Understand ethical and professional responsibilities and the impact of technical and/or scientific solutions in global, economic, environmental, and societal contexts.
- Function effectively on teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty.

MS Population Health Program Competencies

- Identify determinants of population health that impact health outcomes in a community.
- Describe methods for assessing the health needs of a population.
- Demonstrate how to collect, analyze and use data to inform decisions and improve health outcomes of targeted populations.
- Communicate effectively about population health issues to constituencies both within and outside of the health system.
- Apply population health principles and concepts to develop and implement healthcare and/or public health strategies.
- Integrate clinical care and public health practice around an identified community need.

DOCTOR OF PHILOSOPHY (PH.D.)

Program Competencies

- Develop effective strategies for teaching in higher education
- Review and synthesize pertinent literature and formulate focused research questions that address identified knowledge gaps
- Design and conduct original research that uniquely contributes to the public health scientific knowledge
- Disseminate research findings through appropriate peer-reviewed publications and presentations, and to other public health community audiences

Major-specific competencies can be found under each major's Learning Goals tab.

In this section:

- Master (p. 5)
- Doctoral (p. 6)

Master of Public Health (MPH)

Welcome to the West Virginia University School of Public Health. Our mission is to improve the health of West Virginians through innovation and leadership in education, research, and service. Each day, the affiliates and centers within the School of Public Health conduct research on today's pressing public health issues. Diabetes, obesity, substance abuse, and tobacco use top the list of health disparities faced by West Virginians. Public health strategies are typically focused on broad, societal, and population levels; for example, environmental regulations, water quality control, immunization programs, and health education initiatives.

The Master of Public Health program seeks students with a strong, genuine commitment to a career in public health. This degree is appropriate for health professionals, as well as individuals with bachelors' degrees from a wide range of disciplines, who have a strong interest in community/population health and preventive medicine. Our faculty and staff look forward to your decision to become a public health practitioner, researcher, and educator by enrolling in one of our master degree programs. Each department and major can be explored by visiting our website <http://publichealth.hsc.wvu.edu>.

Program Description

Public Health is shaped by our nation's public health agencies via health assessment, policy development, and public health services. The WVU School of Public Health addresses the core functions of public health by offering the MPH with areas of emphasis in:

- Applied Biostatistics and Epidemiology
- Public Health Practice and Leadership
- Social and Behavioral Science

All MPH programs are accredited by the National Council for Education for Public Health (CEPH). For more information about the MPH program, please contact:

Office of Student Services
West Virginia University
School of Public Health
P.O. Box 9190
64 Medical Center Drive
Morgantown, WV 26505-9190
Phone (304) 293-2502

Master of Health Administration (MHA)

A Master of Health Administration (MHA) is a professional degree focused on the organization, delivery and management of healthcare and public health systems and services. It is the premier professional program for those seeking to lead the healthcare organizations and health systems of the future.

The WVU MHA program prepares students for promising careers leading innovative, population health-oriented organizations and health systems. Graduates leave our program with the skills necessary to work in a variety of healthcare and public health settings such as hospitals, medical group practices, long-term and rehabilitation care, behavioral health systems, healthcare consulting firms, and health departments. Students will also be excellently prepared for post-graduate administrative fellowships.

The MHA program at WVU focuses on providing students with both a breadth and depth of knowledge in areas critical to success as an administrative leader in the health sector, including:

- Health Services & Operations Management
- Leadership & Organizational Behavior
- Health Finance & Economics
- Health Policy, Law & Ethics
- Strategic Planning & Managerial Decision Making
- Project Management
- Healthcare Quality & Outcomes Management

The program requires courses across these disciplines. Additionally, elective courses allow students to specialize in a variety of areas. Importantly, a robust practice-based internship requirement assures students experiential application of the competencies and skills learned in the classroom.

Master of Science (MS) Biostatistics

The Master of Science (MS) Program in Biostatistics is meant for college graduates with interest and background in mathematics and statistics who wish to learn both the methodology and the application of biostatistics in the health sciences. The goals of this program are similar to the current MPH in Biostatistics Program in learning objectives; however, MS students will receive a more extensive methodological foundation as well as be expected to take additional statistical courses instead of the “core” public health courses required for any MPH.

A typical student who graduates with an MS in Biostatistics from WVU would be qualified to work as a biostatistician or research coordinator in research organizations such as a pharmaceutical company, contract research organization (CRO), a university, or a health department. MS graduates also will be prepared to pursue doctoral education in biostatistics or similar disciplines.

Master of Science (MS) Industrial Hygiene

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.

Master of Science (MS) Population Health

The Master of Science in Population Health program at West Virginia University will prepare students for a variety of population-oriented leadership, clinical, and research-oriented positions in both healthcare and public health organizations. The design of the curriculum will reflect the program’s belief that both healthcare and public health must take more broader and more intentional perspective of how to identify and address pressing health issues while working for the health of the public. This includes concepts and skills that cover social determinants of health, the nature and process of public health, population health analytics, and population health management, as well as an emphasis management and leadership skills. Students will learn under a comprehensive, competency-driven curriculum constructed to address contemporary and emerging trends.

Doctor of Philosophy (Ph.D.) in Public Health Sciences

The mission of the **Ph.D. program in Public Health Sciences** is to provide high-quality doctoral education to motivated students who desire to positively impact the public’s health. We aim to train these students in a research-intensive curriculum that is guided by a distinguished faculty at the leading edge of effective public health science. The degree emphasizes both evidence-based primary prevention of disease and injury, and health promotion research and practice.

The Ph.D. program in Public Health Sciences is a degree for scientist-practitioners focused on prevention of premature mortality, morbidity, and disability from disease and injury. The Ph.D. program offers three discipline-specific majors of:

- Epidemiology
- Occupational and Environmental Health Sciences
- Social and Behavioral Sciences

Goals of the Ph.D. Program

- Educate and train the next generation of public health leaders who will help shape public health education, practice, and policy.
- Identify and address public health disparities.
- Improve the health of West Virginians and improve their access to quality health care.
- Provide trans-disciplinary teaching and research experience that prepares graduates for jobs in academia, research, and high-level practice settings.

Program Description

The early years of the program emphasize research and statistical methods complemented by theoretical and process-oriented coursework relevant to the student’s selected area of specialty. During the later years of the program, students are engaged in their dissertation research while given the freedom to further diversify their training by choosing electives.

Qualifying Examination

Once students complete the majority of their coursework, they are required to pass a comprehensive qualifying examination. This comprehensive exam is based on core public health and discipline-specific material and administered within the student’s home department.

Doctoral Dissertation

Upon passing the Qualifying Exam, the student begins the dissertation work, which includes:

- a written research proposal
- a defense of the research proposal
- original dissertation research
- a defense of the dissertation research

Dissertation Proposal

The dissertation proposal should include the following sections:

- **Specific Aims.** In this section, you will lay out the goals of your research.
- **Significance.** In this section, you will locate your research aims within the relevant literature to demonstrate the need for your proposed study.
- **Approach.** In this section, you will lay out your proposed research design and methods used to achieve your specific aims.
- **Literature Cited.** Here you will include a bibliography of the works cited in the proposal.
- **Human Subjects.** If the proposal involves human subjects you must include this section. Here you will summarize the measures you propose to protect the human subjects involved in your research project.

The proposal must be defended by the student in a forum that includes the student's *complete* Dissertation Committee.

Dissertation Research

The program will culminate in a research dissertation on a public health topic of interest to the student. The dissertation format can be either a traditional book format or the Journal Article Format (JAF) which consists of a series of three publishable papers on the students' dissertation research.

The Ph.D. program emphasizes peer-reviewed research publications as the dissertation product because of its positive impact on the student's skills and their post-graduation success.

Dissertation Defense

The dissertation will be defended in a forum that includes all Dissertation Committee members, who must sign the dissertation approval form in order for the dissertation to be complete.

The defense must be announced to the entire School of Public Health and the University, and students are required to post fliers that announce the details of the defense.

The written dissertation must be submitted in accordance with the WVU policy regulating the electronic submission of theses and dissertations. <https://etd.lib.wvu.edu/>

Program Delivery

Most courses in the program will be taught using the face-to-face, on-campus, small, or large group format. A small number of core courses and some electives may be delivered by web-based technology.

For more information contact:

Office of Student Services
West Virginia University
School of Public Health
P.O. Box 9190
64 Medical Center Drive
Morgantown, WV 26505-9190
Phone (304) 293-2502

Certificate Programs

- Applied Biostatistics (<http://catalog.wvu.edu/graduate/graduatecertificates/appliedbiostatistics/>)
- Health Data Science (<http://catalog.wvu.edu/graduate/graduatecertificates/healthdatascience/>)