Epidemiology and population health seeks to identify the determinants of health, disease, disability and death in populations for the purposes of promotion, control and prevention. Thus, epidemiology is a core discipline for public health that provides much of the information necessary for the development, implementation and evaluation of public health interventions, policies and laws.

Modern epidemiology is a transdisciplinary science. Epidemiologists regularly integrate knowledge of disease biology and mechanisms with environmental and behavioral science and statistical methods in population-based studies. These investigations are designed to illuminate disease etiology and test preventive interventions. Epidemiologists also study outcomes of disease in patients and design clinical trials to test new treatments; this specialized area of clinical epidemiology is often called outcomes research.

The Department of Epidemiology and Population Health conducts innovative, interdisciplinary research on the causes and consequences of disease in populations using state-of-the-art methods. There is a focus on conducting translational research and helping to build epidemiologic capacity and infrastructure at local, state and federal levels. A primary aim is to be recognized as a major provider of education, research and service throughout the region.

The Department of Epidemiology and Population Health provides the highest possible quality education and training in the philosophy, principles and practice of modern epidemiology. The department offers a Master of Science (MS) degree and Epidemiology concentrations in the PhD in Public Health Science and the Master of Public Health (MPH) programs.

MPH Program
MPH students who choose a concentration in epidemiology receive advanced training in the theory and methods of epidemiology, with an emphasis on descriptive epidemiology, field methods, disease surveillance, and the use of various public health databases. This curriculum is designed to prepare students for careers in epidemiologic practice in local, state and federal health agencies.

MS Program
The MS program provides intensive training in the theory and methods of analytic epidemiology and disease biology, and prepares students for entry into the PhD program. The MS and PhD programs are designed for students interested in careers in epidemiologic research and teaching.

PhD Program
The PhD program provides advanced training in specialized methods and professional skills in grant and manuscript writing and oral presentation. PhD students select an area of emphasis, which may be disease-based (e.g. infectious disease or cancer) or methods-based (e.g. nutrition or genetics), and choose a minor field of concentration, such as biostatistics, health management, environmental science, behavioral science, or clinical research.