

# EPIDEMIOLOGY

## What is Epidemiology?

Epidemiologists study the cause and spread of diseases. It is one of the five core disciplines of public health. Students pursuing a degree in epidemiology may end up in a career that:

- Tracks the rate at which a disease spreads
- Develops risk assessments for potential epidemic and pandemic diseases
- Identifies the environmental causes of water and food-borne illnesses
- Uses statistical models to predict which types of influenza will be prominent in a given year

## What are examples of careers in Epidemiology?

A variety of careers exist for those interested in epidemiology. Below are just a sample of the professions related to this field:

### *Local*

- Epidemiology Foodborne Surveillance Response Coordinator, UNL
- Field Epidemiologist, Nebraska Department of Health
- Epidemiology Research Associate, UNMC Gretchen Swanson Center for Nutrition

### *National/International*

- AncestryHealth Epidemiologist, Ancestry.com
- Epidemic Intelligence Service Fellow, Centers for Disease Control and Prevention
- Research Associate, Cancer Genomics Research Laboratory

## Who might be interested in an Epidemiology career?

Students interested in epidemiology typically have strong backgrounds in natural sciences and mathematics. If you want to know answers to the following types of questions, you might want to explore epidemiology some more:

- What precautions can people take to reduce their risk of contracting air-borne illnesses?
- How does an economic recession impact the number of people with depressive symptoms?
- Who is most at risk of contracting Avian Influenza?
- How likely is it that the Ebola virus would spread through air travel?
- What genetic markers make people resistant to contracting the whooping cough?

## Where can I get a degree in Epidemiology?

All schools of public health should have graduate degrees in epidemiology. Students should consult each school they plan to apply to in order to know what coursework will be required for admission. These requirements may vary by school. UNMC has the following programs available:

### *Master of Public Health (Epidemiology Concentration)*

- Students must have received a B or better in Statistics (STAT 218, EDPS 459, SOCI 206, ECON 215, or CRIM 300) or a college level math course (MATH 101 or higher)

### *Doctorate of Philosophy (PhD) in Epidemiology*

Students pursuing a PhD in Epidemiology must first attain a master's degree in Epidemiology or a related field.

## **What other courses can I take to prepare for an Epidemiology program?**

See our Pre-Public Health sheet for courses that will broadly prepare you for a public health graduate program. Beyond those, specific courses that are relevant to epidemiology include those below. Please consult an academic advisor and the Undergraduate Bulletin to discuss these classes before enrolling.

Additional Biological Sciences courses including:

- Field Epidemiology: BIOS 452
- Genetics: BIOS 206 or AGRO 315
- Immunology: BIOS 443
- Parasitology: BIOS 385
- Virology: BIOS 326

Additional Chemistry and Biochemistry courses

## **What can I do to explore Epidemiology?**

- **Research:** Gain experience through a UCARE project or by working on any kind of research project on campus. Even if you aren't assisting in research design or data analysis, getting a first-hand look at what it takes to develop and implement a research project is a great background for an undergraduate student interested in a career related to Epidemiology.
- **Career Information:** Find a professional who you can do an informational interview with in order to learn more about career paths in the field.
- **Organizations:** Join the Pre-Public Health Club to gain exposure to the various career and academic opportunities for students interested in public health. Consider joining a professional organization to stay up to date with current trends in the areas that most interest you. Student memberships are generally affordable.

## **How do I apply?**

For admission to UNMC's MPH or PhD programs, students must apply through the centralized application process – SOPHAS. Information on SOPHAS can be found at [www.sophas.org](http://www.sophas.org) and on the UNMC admissions page at <http://unmc.edu/publichealth/admissions/index.html>.

Students can apply to start the MPH program in either the fall or spring semesters each year. The PhD program only admits students to the fall semester. Please see UNMC's admissions page for specific application dates.

The admissions committee reviews grade point average, letters of recommendation, knowledge of profession, service, and leadership experience. In addition to a GRE (or other acceptable entrance exam), students will need to provide a one page personal statement and a resume reflecting one or more years of work/volunteer history related to health and/or human services.

## **Where can I go for more information?**

UNMC College of Public Health

Department of Epidemiology

<http://www.unmc.edu/publichealth/departments/epidemiology/>

Associations of Schools and Programs of Public Health

<http://www.aspph.org/study/epidemiology/>

American Epidemiology Association

<http://americanepidemiologicalsociety.org/>