EPIDEMIOLOGY (GRADUATE MINOR FIELD)

Graduate School

Program Website (https://www.human.cornell.edu/dns/academics/graduate/epidemiology)

Program Description

This minor field offers a graduate program in conjunction with several areas of specialization, including nutrition, biometry, environmental toxicology, sociology, statistics, animal science, and veterinary medicine. Students may pursue an M.S., an M.A., or a Ph.D. degree with a minor in epidemiology. Graduate students enrolled in the program conduct their research in the departments of their major advisors. Applicants should have a sound background in mathematics and in the sciences that are consistent with the requirements of their proposed major field of interest.

The study of epidemiology at Cornell (https://www.human.cornell.edu/dns/academics/graduate/epidemiology) is a minor field, and application for admission is made only to the major fields. After matriculation, a student may select to study epidemiology at Cornell by choosing to minor in epidemiology. As per Graduate School procedures, the student choosing to minor in epidemiology will add an epidemiology field member to their special committee to represent the minor field.

Graduate Minor Field Requirements

Epidemiology is an academic discipline that requires training in the specific principles of the design and analysis of epidemiologic studies, statistical methods appropriate for such studies, and an area of substantive specialization (such as genetics/genomics, animal science, demography, environmental sciences, nutrition, toxicology, or veterinary medicine).

In accordance with the general guidelines for graduate education at Cornell University, the Field of Epidemiology has no specific course requirements beyond the residence units required by the Graduate School. There is one concentration available in Epidemiology, namely 'human and animal epidemiology'. However, all students will be expected to be familiar with the subject matter covered in three areas.

Code	Title	Hours
Basic Statistical Methods		
Required Courses		
Epidemiology Methods		
Select one of the following:		
NS 6520 & NS 6580	The Foundations of Epidemiology and Advanced Epidemiology: Theory and Practice	
VTPMD 6640 & VTPMD 6650	Introduction to Epidemiology and Study Designs	
Quantitative Methods		
Select one of the following:		
VTPMD 6660	Advanced Methods in Epidemiology	
A course appropriate to your interests and with permission of your Epidemiology minor advisor in consultation with the DGS.		

These courses will provide a broad overview of epidemiology and the knowledge essential for the design and analysis of epidemiologic research. Additional courses related to the student's area of intended specialization may also be necessary. In particular, students should be aware that there may be additional course requirements if a statistician represents the Minor Field of Epidemiology on the student's committee. In this case, there usually will be the presumption of a highly statistical thesis, and the student usually will be expected to take STSCI 4090 Theory of Statistics in addition to the courses listed above.

Faculty

James G. Booth (http://cals.cornell.edu/james-g-booth)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Epidemiology:* human and animal epidemiology
- **Research Interests:** computer intensive methods, generalized linear models, Monte Carlo simulation

Casey Lu Cazer (http://www.vet.cornell.edu/about-us/people/casey-cazer-dvm-phd)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Epidemiology:* human and animal epidemiology
- **Research Interests:** antimicrobial resistance, One Health, zoonotic diseases, machine learning

Andrew G Clark (http://cals.cornell.edu/andrew-g-clark)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Epidemiology:* human and animal epidemiology
- **Research Interests:** human and animal epidemiology

Julia L. Finkelstein (http://human.cornell.edu/people/julia-finkelstein)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Epidemiology:* human and animal epidemiology
- **Research Interests:** Infectious disease, nutritional, and reproductive epidemiology; GIS methods; public health

Marshall J Glesby (http://directory.weill.cornell.edu/person/profile/mag2005)

- **Campus:** Weill Cornell Medicine - (Minor Member)
- **Concentrations:** *Epidemiology:* human and animal epidemiology
- **Research Interests:** Co-morbidities and aging-related complications in people living with HIV. Clinical epidemiology of infectious diseases.

Renata Ivanek Miojevic (http://www.vet.cornell.edu/about-us/people/renata-ivanek)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Epidemiology:* human and animal epidemiology
- **Research Interests:** infectious disease epidemiology including the transmissibility of agents with intermittent shedding and environmental persistence, contamination of produce with zoonotic infectious agents of relevance to food safety

Sabine Mann (http://www2.vet.cornell.edu/research/faculty/sabine-mann)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Epidemiology:* human and animal epidemiology
- **Research Interests:** Research focuses on the mechanism that links metabolism and inflammatory response in transition dairy cows with an interest to identify nutritional intervention strategies to help

optimize the magnitude and duration of inflammation to improve health and productivity in this agriculturally important species.

Jessica McArt (http://www.vet.cornell.edu/about-us/people/jessica-mcart-dvm-phd-dabvp-dairy-practice)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Epidemiology:* human and animal epidemiology
- **Research Interests:** Dr. McArt's research focuses on the identification, epidemiology, and economics of periparturient diseases in dairy cattle. Her research group is interested in identifying methods that accurately and quantitatively measure energy-related metabolites and important biological markers cow-side in order to improve detection of specific disorders.

Saurabh Mehta (http://mehta.human.cornell.edu/)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Epidemiology:* human and animal epidemiology
- **Research Interests:** global health; infectious disease; maternal and child health; nutritional epidemiology

Jason G. Mezey (http://cals.cornell.edu/people/jason-mezey)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Epidemiology:* human and animal epidemiology
- **Research Interests:** genetics, development, and evolution of complex phenotypes, including research on development of Bayesian approaches for pedigree inference; Bayesian mixture prior approaches for identifying pathway relationships underlying gene expression variation

Daryl Van Nydam (http://www.vet.cornell.edu/about-us/people/daryl-nydam)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Epidemiology:* human and animal epidemiology

Rulla May Tamimi (http://directory.weill.cornell.edu/person/profile/rmt4001)

- **Campus:** Weill Cornell Medicine - (Minor Member)
- **Concentrations:** *Epidemiology:* human and animal epidemiology
- **Research Interests:** As a cancer epidemiologist, she works closely with an interdisciplinary group of investigators to study cancer risk and survival with the goal of reducing morbidity and mortality. Her research focus is to understand breast cancer risk and prognosis by utilizing molecular and imaging markers in epidemiologic studies.

Lorin D Warnick (http://www2.vet.cornell.edu/research/faculty/lorin-d-warnick)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Epidemiology:* human and animal epidemiology
- **Research Interests:** veterinary epidemiology; epidemiology of dairy cattle disease; zoonoses and public health

Martin Timothy Wells (http://bowers.cornell.edu/people/martin-t-wells)

- **Campus:** Ithaca - (Minor Member)
- **Concentrations:** *Epidemiology:* human and animal epidemiology
- **Research Interests:** applied and theoretical statistics, inference questions in areas including epidemiology, theoretical research on Bayesian statistics, biostatistics, conditional inference, evidence assessment, functional data, hypothesis testing, saddle point approximations, shrinkage estimation