PH.D. IN MICROBIOLOGY

The Ph.D. in Microbiology provides training and preparation to pursue research and/or teaching careers in multiple areas in microbiology, including bacteriology, virology, mycobacteriology, infectious disease pathogenesis, vector-borne infectious disease, prion biology, immunology, computational microbiology, and science education in microbiology and immunology. This program provides opportunities for graduate training in fundamentals of modern investigative microbiology, immunology, and pathobiology with an emphasis on a multi-disciplinary approach to research problems. It involves research in progressive areas such as emerging infectious diseases, biosecurity, interdisciplinary/systems biology, and translational medicine.

The student's graduate committee guides the student in planning a program of study to meet their goals in their area of specialization and is based on their academic background. Goals for Microbiology Ph.D. students include successful completion of the preliminary exam, presentation of research at local, national and international meetings, publication of dissertation research in peer-reviewed journals, and successful completion and defense of a dissertation.

Students interested in graduate work should refer to the Graduate and Professional Bulletin.

Learning Objectives

Upon successful completion, students will be able to:

1. Design and execute research projects by devising hypotheses specific to the fields of microbiology and immunology.
2. Demonstrate detailed knowledge of their chosen area of study and how their hypothesis may contribute to the wider field of microbiology and immunology.
3. Critique and synthesize findings from scientific literature to enhance and inform their research proposals.
4. Interpret and justify their research findings through thorough analysis, discussion, and defense.