MASTER OF SCIENCE IN MICROBIOLOGY, PLAN B

The fully online non-thesis Master of Science in Microbiology program is designed to strengthen the scientific academic portfolio of those seeking professional degrees and provide differentiating preparation for those seeking careers in industry. Students work with one of the leading microbiology and immunology departments in the nation as they develop professional knowledge and skills.

With the growth of biotechnology and the increase in technology and specialization in applied microbiological sciences, there is a significant national need for additional educational opportunities for individuals wishing to pursue a career in these industries. In addition, many students wish to pursue additional post-baccalaureate studies due to a variety of interests such as improved preparation for professional (medical, veterinary, DO, etc.) schools or Ph.D. programs. The Department of Microbiology, Immunology, and Pathology's (https://vetmedbiosci.colostate.edu/mip/) Master of Science in Microbiology online program provides an excellent opportunity to meet these needs. As a recognized world leader in infectious disease basic and translational research (including over $144 million in active extramurally funded research programs, including a good variety of translational efforts that interface with industrial partners), the Department of Microbiology, Immunology, and Pathology is uniquely positioned to effectively provide high-quality advanced microbiology and immunology training.

The overall goal of the program is to build upon a student's undergraduate training in the life science to provide them with advanced knowledge – particularly in applied areas of the discipline – so that they achieve the skill set necessary to be competitive for future employment in the field or for admission to professional schools. This will be accomplished through:

1. A rigorous curriculum designed to provide cutting-edge knowledge in both theoretical and applied aspects of microbiology, virology, immunology, and molecular biology.
2. A strong emphasis on aspects of the discipline that are useful in real world employment scenarios.
3. A well-rounded curriculum that includes the development of vital professional skills such as verbal and written communication, responsible conduct of research, and biosafety/biosecurity.
4. Active communication with regional and national representatives from the pharmaceutical, biotech, government, and public health sectors to ensure that the program's curriculum remains pertinent and effective.
5. A high-level of communication in the program to facilitate active mentoring, networking and career discussions, and access to real-world research expertise within the Department of Microbiology, Immunology, and Pathology.

Learning Objectives

Upon successful completion, students will be able to:

1. Apply both theoretical and applied aspects of microbiology, virology, immunology and molecular biology.
2. Apply aspects of the discipline in real world employment scenarios.
3. Demonstrate vital professional skills such as verbal and written communication, and discuss policies/regulations in the discipline and biosafety.
4. Develop a high level of communication within the program through active mentoring, networking and career discussions.
5. Utilize cutting-edge facilities and expertise available in the department.

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