Microbiology

Bring your curiosity about microbiology and immunology to the U of M. Microbiologists study the structure, function, and interaction of microbes, which make up 60 percent of the earth's biomass. Regarded by many as the foundation of the biosphere, microbes were likely the first form of life on earth, predating plants and animals by more than three billion years. Microbiologists study the role of microbes, such as bacteria, fungi, and viruses in our world and aim to understand how microbes positively and negatively impact human health.

As a student studying microbiology, you will have the opportunity to work alongside faculty and engage in a collective effort to research the enigmas of modern biology and, in that pursuit, learn the technologies that have emerged in the past decade. The community that is the Department of Microbiology is made up of scholars committed to discovering and disseminating knowledge about the microbial world. A key goal of microbiologists is to find new ways to use microbes to our advantage, such as engineering bacteria to synthesize cancer drugs or clean up toxic waste sites, so the work you do as a microbiology student can have a real, positive impact on the world we live in.

The microbiology major will prepare you for advanced work in graduate programs in microbiology and related fields and serves as preparation for careers in the health sciences. Microbiologists find employment in a variety of governmental, industrial, and pharmaceutical fields.
Student Experiences

Student Groups

University of Minnesota Microbiology Club

Microbiota in Health and Medicine Interest Group

Study Abroad Options

Learn about study abroad options for Microbiology majors at http://umabroad.umn.edu/students/maps/non-major/medicine.

Meet Our Alumni

Feature: Jon Strong

Here’s one thing you can be sure of about Jon Strong (B.S. Microbiology): His passport will always get plenty of use. His interest in improving the public health of the planet is evidenced by the passport stamps he’s been receiving the past few years. As he puts it: “I’ve been working toward a dual M.D.-M.P.H. degree, with several stops along the way to pursue my interests in global health.” Those stops include Kenya, Switzerland, Lebanon and the Democratic Republic of the Congo.

“Following my first year of medical school at the University of Wisconsin-Madison, I spent the summer in Geneva, taking courses at the World Health Organization and working at the GAVI Alliance, a public-private partnership that finances vaccine programs in developing countries,” he says. “Last year, I completed a M.P.H. at the Johns Hopkins School of Public Health, focusing on biostatistics and humanitarian emergencies. I also had the opportunity to travel to Lebanon to design and implement a health survey of elderly Syrian refugees."

“Today I’m leading efforts to evaluate the largest U.S.-funded nutrition program in
the Democratic Republic of the Congo, a country wracked by decades of conflict and malnutrition. When this research concludes, I’ll return to Wisconsin to complete my final year of medical school and pursue a residency in emergency medicine.

“Eventually, I plan to seek out a faculty position at an academic medical center that will allow me to practice clinical medicine, pursue research overseas, and perhaps teach the next generation of leaders in global health.”

You might also explore

Biology
Genetics Cell Biology and Development
Nursing

Associated Careers

Clinical Laboratory Technologists, Medical Scientists, Pathologists, Postsecondary Teachers, Science Technicians, Research, Education, Quality Assurance