Microorganisms are the oldest life forms on earth and impact our lives and the well being of the planet in innumerable ways. The field of microbiology has become even more prominent in recent years because of increased concerns about bioterrorism, infectious disease, and environmental manipulation. The microbiology major offered by the Department of Bacteriology provides training in broad aspects of microbiology with emphasis on 21st-century laboratory skills.

Core courses focus on the diversity, genetics, biochemistry, and physiology of microorganisms. A variety of elective courses provide the opportunity to study environmental microbiology, microbial ecology, food microbiology, host-parasitic interactions, microbial pathogenesis, immunology, virology, fermentation, and microbial biotechnology. Instructional laboratory courses provide hands-on experience with modern techniques and equipment. Students have many opportunities for independent research projects in faculty laboratories.

The bachelor’s degree provides a strong background in the biological sciences for students planning to enter medical, dental, veterinary or other professional schools, as well as those planning graduate studies in any branch of microbiology or other biological sciences such as molecular or cell biology.

Students who end their training with a bachelor’s degree are well prepared for a wide variety of career opportunities, including laboratory positions in pharmaceutical and biotechnology firms and in university and government laboratories. They also work as specialists in industrial quality testing and control, and as regulatory workers in government agencies and public health laboratories. Exposure to the scientific process and training in microbiology itself allow microbiology graduates to enter fields as diverse as business, technical service, sales, or technical writing.

The department also serves as the administrative home for the biology major in the College of Agricultural and Life Sciences.

DEGREES/MAJORS/CERTIFICATES

- Biology, B.S. (CALS) (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/bacteriology/biology-bs)
- Microbiology, B.S. (CALS) (http://guide.wisc.edu/undergraduate/agricultural-life-sciences/bacteriology/microbiology-bs)

PEOPLE

PROFESSORS

Ané, Currie, Donohue, Filutowicz, Forest, Gourse, Johnson, Kaspar (chair), McMahon (Civil and Environmental Engineering), Thomas, Wang, Wassarman, Yu