Microbiology is the study of microorganisms, usually organisms that are too small to be seen with the naked eye. Microorganisms, including bacteria, viruses, parasites, yeasts and molds, impact many aspects of life on Earth to the extent that life would not be possible in the absence of microbes. Though a small percentage of microbes are capable of causing diseases in plants and animals, many perform beneficial functions and can also be used to manufacture chemicals and medical products. Microbiology is a large discipline with many different subspecialties that have applications in medicine, ecology, agriculture, pharmaceutical development, biotechnology, and the food industry, among others.

Typical interest and values of microbiology majors:
- Concern for the environment
- Desire for intellectual growth
- Interest in living organisms
- Precision and attention to detail

Knowledge and skills gained from studying microbiology:

Knowledge:
Microbiology students will develop skills valued by employers in a wide variety of industries. The microbiology emphasis is an excellent preparation for students who wish to enter medical, dental, veterinary, physician assistant, or other health care-related programs after graduation. Microbiologists focus on understanding biological processes leading to ways to improve our health and environment.

Skills:
- Ability to work independently and on a team
- Ability to operate scientific equipment
- Research, analyze, and organize information
- Works with accuracy and precision
- Critical observation skills
- Problem-solving skills
- Oral and written communication skills
- Defining needs and identifying resources
- Developing evaluation strategies
- Creating and initiating new ideas

Related student and professional organizations:

Student:
- Tri-Beta/Biology Club
- Conservationists
- Molecular Movement

Professional:
- Pre-Professional Health Club

Potential Employers:
Microbiologists work in a wide range of industries. You can find them working in industries from food, agriculture, and pollution control to biotechnology, pharmaceuticals, and health. They also work in government agencies and labs, such as the National Institutes of Health, the Environmental Protection Agency, water treatment facilities, and hospitals. The education sector employs microbiologists as teachers and researchers.

Potential Job Titles:

- Agronomist
- Aquatic Biologist
- Microbiologist
- Brewery Laboratory Assistant
- Coastal Resources Manager
- Dentist
- Ecologist
- Fish Hatchery Tech
- Genetic Researcher
- Horticulturist
- Naval Architect
- Paramedic
- Pharmacy Tech/Sales
- Animal Scientist
- Bio-Engineer
- Botanist
- Chiropractor
- Coroner
- Dietitian/Nutritionist
- Environ. Health
- Forester
- Geographer
- Marine Biologist
- Oceanographer
- Park Ranger
- Physical Therapist
Physician                  Public Health Worker
Science Lab Tech          Science Teacher
Soil Conservationist      Toxicologist
Veterinarian              Water Quality Tech
Wildlife Biologist        Zoologist

Jobs You Might Also Consider...
Food Science Technician    Pharmacist
Natural Scientist Manager  Anesthesiologist
Agricultural Technician   Plant Scientist
Chemical Technician       Epidemiologist
Invasive Species Specialist Forensic Scientist
Clinical Laboratory Scientist

Sample entry level jobs held by UW-Eau Claire microbiology graduates:
- Clinical Technician-Cytogenetics, Mayo Clinic, Rochester, MN
- Environmental Scientist, Cooper E. Engineering Co., Rice Lake, WI
- Genotyping Technician, Marshfield Clinic, Marshfield, WI
- Wildlife Biologist, Department of Natural Resources, Balsam Lake, WI

Learn more about microbiology:
Department:
- Contact UW–Eau Claire’s Department of Biology, Phillips 330, 836-4166

Getting started at Career Services:
- Meet with a career counselor
- Take interest inventory and self-assessment tests
- Utilize Blugold Career Success Network, a database of UW–Eau Claire alumni & friends available for informational interviewing
- Utilize Blugold CareerLink, an online job search database specifically for UWEC students and alum

Career Discovery Center:
Yellow Section-
  - Sigi3 handouts:
    - Biology
    - Forester
    - Botany
    - Geographer
    - Dentist
    - Oceanographer
    - Env. Health Specialist
    - Wildlife Biologist
  - Books sections
    - Environmental
    - Health Care General/Other
    - Physicians
    - Science

Orange Section-
  - “The Internship Series: The Big Green Internship Book-Internships and Summer Jobs for the Environment”

Blue Section-
  - Resume, cover letter, interviewing, networking, and job search worksheets, books, and other resources

Opportunities to enhance skills in microbiology:
Research
There are many opportunities for students to participate in Research Experience for Undergraduates (REUs) to enhance the breadth of knowledge learned in the classroom. For additional information about REU’s speak to a career associate in Career Services (Schofield 230). For additional information about research at UW-Eau Claire, contact the Department of Biology.

Internships
Internships are a way to gain hands-on experience in a position that you may be considering as a potential career. To find an internship in biology, speak with a career associate in Career Services or contact your adviser or the Department of Biology chair.

Directed Studies or Independent Study Class
By participating in a directed studies or independent study class, students will be able to research an area that they find particularly interesting. Speak with your adviser about enrolling in BIOL 395, 399, or 499.

What you can do now:
- Get a part-time job as a technician in a lab or at a local hospital or pharmacy.
- Gain research experience by teaming with a biology (or related field) professor and conducting research
- Get a summer job as an assistant park ranger, a zookeeper, or at a summer camp to work outdoors with wildlife or animals
- Get an internship at a conservatory, the DNR, the National Park Service, or the Bureau of Land Management
- If animals interest you, get a job at an animal hospital, a kennel, or a humane society