

BIOLOGICAL SCIENCES CAREERS

General Information

- The Biological Sciences major is a broad field that provides a basic scientific foundation for individuals to pursue a career in any science related field.
- Biologists study all living organisms and their relationships to their environment. Employment opportunities in biology exist in medical, dental, ecological, genetic, public health, research, teaching, administration, sales, service, and manufacturing fields in government agencies, educational institutions, private business, and industry.
- Most biological sciences jobs require a Bachelor's degree. Administrative, and university teaching & research positions generally require a graduate degree.
- It is critical to gain relevant work experience through internships, research, jobs, and volunteer work.

The following list provides a brief sample of responsibilities, employers, jobs, and industries for individuals with a degree in this major. This is by no means an exhaustive listing, but is simply designed to give initial insight into a particular career field that would employ the skills and knowledge gained through this major.

Areas	Employers
Environmental/Veterinary <ul style="list-style-type: none"> • Diagnose, treat, and research medical condition of pets, livestock, and wild animals. • Purify and treat water for safe consumption and use. • Identify and eliminate sources of pollutants that affect people, wildlife, and their environments. 	<ul style="list-style-type: none"> • BLM • EPA • NOAA • USDA • USFS • USFWS • USGS • Army Corp of Engineers • State Wildlife Agencies • Zoos/Aquariums
Industrial <ul style="list-style-type: none"> • Address the economic impacts of biological issues, such as species extinctions, forest protection, and pollution. • Create life sciences illustrations for textbooks and newspaper/magazine articles. • Develop ways to test, produce, preserve, process, package, store, and deliver food, beverages, and chemical compounds. 	<ul style="list-style-type: none"> • ERS • FDA • USDA • Food & Beverage Suppliers • Journals & Publicist • State Wildlife Agencies
Legal <ul style="list-style-type: none"> • Use knowledge of organisms and products to draft patents and technological transfer agreements. • Advise and create new legislation on biomedical research and environmental protection. • Serve as the public relations liaison to address conflict issues. 	<ul style="list-style-type: none"> • Law Firms • Gov't • Transfer Ofc.
Medical/Pharmaceutical <ul style="list-style-type: none"> • Examine how diseases and drugs affect the human body. • Assist in preventing the spread of disease by containing & treating it. • Test organisms for vaccine development or distribution of medicine. • Provide health care and rehabilitation services to the sick and injured. 	<ul style="list-style-type: none"> • NIH • Hospitals, Clinics, • Research Universities • Pharmaceutical Companies • Dept. of Health and Human Services
Research <ul style="list-style-type: none"> • Collect field and lab data to answer biological and health related 	<ul style="list-style-type: none"> • CDC • Hospitals

<p>questions using scientific methods.</p> <ul style="list-style-type: none"> • Apply mathematics to solve biological problems, such as modeling ecosystem processes and gene sequencing. • Develop and execute tests to detect disease, genetic disorders, or other abnormalities. 	<ul style="list-style-type: none"> • Private Companies • Research Universities & Institutions
<p>Safety/Homeland Security</p> <ul style="list-style-type: none"> • Combination of field and lab research working with biological agents to protect against bioterrorism. • Use forensic science to process evidence to solve crimes. 	<ul style="list-style-type: none"> • DOD • FBI/ Law Enforcement • NIH, NIAID • Military Services
<p>Teaching</p> <ul style="list-style-type: none"> • Lecture and conduct research on the advances of biology. • Develop science educational programs for national & state parks. • Use scientific writing to inform the public about emerging biological issues. 	<ul style="list-style-type: none"> • Primary/Secondary/Tech. School • Community Colleges • State/Federal Agencies • Universities, Med./Dental Schools

Job Titles		
Agriculturalist Animal scientist, trainer Biologist (Env., fisheries, plant, marine, wildlife) Botanist Chiropractor Clinical trials asst. or mgr. Dentist Dietician Ecologist Entomologist Epidemiologist Food microbiologist Genetic counselor Geologist Illustrator (biological or medical)	Immunologist Infection Control Lab analyst, coordinator, tech Lawyer (environ., patent) Medical research scientist Medical technologist Med. Tech. sales rep Microbiologist Museum curator Nurse Optometrist Park ranger Pathologist Phlebotomist Photographer Physician, asst.	Pharmacist Professor Public information officer Radiologist Research assistant Research tech Science writer Statistician Teacher Technician Therapist (occup., physical, speech) Toxicologist Wildlife biologist Veterinarian Virologist Zookeeper

Employment Areas		
Academia Consulting Contract Research Environmental Engineering Food Processing/Engineering Government Healthcare Hospitals	Journalism Law Enforcement Legal Medical Research Lab Manufacturing Military Museums Nature centers	Pest Management Parks, Preserves Pharmaceutical Private Quality Control/Safety Research & Development Sales and Marketing State & County Zoos/Aquariums

References:

- <http://www.careercornerstone.org/biology/biology.htm>
- <http://pages.jh.edu/~careers/students/explore/majors/biology/index.html>
- <http://www.bls.gov/ooh/life-physical-and-social-science/biological-technicians.htm>