
BIOLOGY

What can I do with this degree?

According to the Occupational Outlook Handbook, biological scientists study living organisms and their relationship to the environment. They perform research to gain a better understanding of fundamental life processes or apply that understanding to developing new products or processes.

Biology Skills

Communication

Operate scientific equipment

Information handling & org.

Statistical awareness

Analytical and problem solving

Technical report writing skills

Teamwork

Critical thinking

Precision, thoroughness, and detail attentiveness skills

Government Work Settings

Armed Services

Geological Survey

Bureau of Indian Affairs

Bureau of Land Management

Bureau of Reclamation

Center for Disease Control

Corps of Health Personnel

Environmental Protection Agency

Federal Bureau of Investigation

Federal Drug Administration

US Forest Service

Marine Mammal Commission

Department of Defense

Department of Interior

Minerals Management Service

National Aeronautical Space Agency

National Arboretum

National Institute of Health

Department of Agriculture

National Marine Fisheries Service

National Oceanic and Atmospheric

Administration

National Park Service

National Science Foundation

Naval Oceanographic Office

Naval Research Laboratory

Office of Naval Research

Public Health Service

Smithsonian Institution

US Army Corps of Engineers

US National Biological Service

US Fish and Wildlife Service

US Food and Drug Administration

Licensure/Certificates/Advanced Degrees

Professional Boards:

American College of Microbiology

American Medical Technologists

American Society of Clinical

Pathologists

American Society for Clinical

Laboratory Science

Certificate in Bioinformatics

International Society for Clinical

Laboratory of Technology

American Board of Medical

Microbiology

American Board of Medical

Laboratory Immunology

AREAS OF SPECIALIZATION

Anatomy	Ecology	Physiobiology
Aquatic Biology	Genetics	Taxonomy
Biochemistry	Marine biology	Wildlife Biology
Botany	Microbiology	Zoology

CAREER PATHS

(Some of the occupations outlined in this brochure may require additional education or training)

...in Microbiology

Sample Job Titles

Agricultural microbiologist	Public Health microbiologist	Technicians
Industrial microbiologist	Research Associates	Veterinary microbiologist

Possible Work Settings

Agriculture industry	Research laboratories & foundation	Environmental & pollution control agencies
Biotechnology firms	Hospitals and public health facilities	Government agencies
Non-profit orgs.		
Colleges & univ.		
Pharmaceutical co.		

Professional Organizations

The American Society for Microbiology, <http://www.asm.org/>
American Society of Virology, <http://asv.org/>

...in Botany

Sample Job Titles

Agronomists	Plant breeder	Arborist
Conservationists	Plant pathologists	Forest economist
Crop scientist	Research botanist	Topiary trainer
Horticulturists	Senior botanist	Wood technologist

Areas of Interest

Bryology	Natural res. Mgt.	Plant pathology
Cytology	Paleobotany	Agronomy
Lichenology	Paleobotany	Food science
Medical botany	Phycology	Forestry
Mycology	Plant genetics	Horticulture

Possible Work Settings

Agricultural companies	Food processing plants	Pharmaceutical companies
Botanical gardens and arboretums	Forestry centers	Research institutes and laboratories
Bureau of land mgt.	Government agencies	Research orgs.
Conservation orgs.	National park services	Seed companies
Ecological consulting firms	Non-profit orgs.	State & national parks
	Nurseries	

Professional Organizations

American Forests, <http://www.americanforests.org/>
American Forest and Paper Association, <http://www.afandpa.org/>
American Phytopathological Society, <http://www.apsnet.org/>
American Society for Horticulture Science, <http://www.ashs.org/>
American Society of Agronomy, <https://www.agronomy.org/>
American Society of Plant Physiologists, <http://www.aspb.org/>
American Society of Plant Taxonomists, <http://www.aspt.net/>
Botanical of Society, <http://www.botany.org/>
Mycological Society of America, <http://www.msafungi.org/>
Phycological Society of America, <http://www.psaalgae.org/>
Society of American Foresters, <http://www.safnet.org/>

...in Education

Sample Job Titles

Science teacher	Elementary teacher	Zoo educator
Environmental educator	Middle school teacher	Naturalist
Animal trainer	High school teacher	Wildlife rehabilitator
Aquarium educators	College and University	Guide
Botany educator	professor	Nature writers

Possible Work Settings

Adult education centers	Community colleges	Recreational centers
Aquariums	Universities	Rehabilitation centers
Botanical gardens	Private schools	Zoos
Community centers	Public schools	

Professional Organizations

National Marine Educators, <http://www.marine-ed.org>
Association for Biology Laboratory Education, <http://ableweb.org/>
National Science Teachers Association, <http://www.nsta.org/>
American Federation of Teachers, <http://aft.org/>
National Education Association, <http://www.nea.org/>
American Association for Higher Education and Accreditation, <http://aahea.org/>
American Association of Christian Schools, <http://aacs.org/>

American Association of Colleges for Teacher Education, <http://aacte.org/>
 American Association of State Colleges and Universities, <http://aascu.org/>
 Association for Childhood Education International, <http://www.acei.org/>
 Council for American Private Education, <http://capenet.org/>
 National Association for the Education of Young Children, <http://naeyc.org/>
 National Association of Independent Schools, <http://nais.org/>

...in Aquatic Biology

Areas of Interest

Marine biology	Aquatic invertebrate	Ichthyology
Biological oceanography	zoology	Oceanography
Limnology	Aquatic botany	
Benthology	Aquaculture	

Sample Job Titles

Research Aquatic Biologist	Senior Aquatic Biologist	Stream biologist
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Possible Work Settings

Research institutes	Zoological parks	Aquariums & fisheries
Government agencies	Environmental orgs.	Environmental co.

Professional Organizations

Acoustical Society of America, <http://asa.aip.org/>
 American Cetacean Society, <http://www.acsonline.org/>
 American Fisheries Society, <http://www.fisheries.org/afs/index.html>
 American Geophysical Union, <http://www.agu.org/>
 American Society of Mammalogists, <http://www.mammalsociety.org/>
 American Zoo and Aquarium Association, <http://www.aza.org/>
 American Society of Limnology and Oceanography, <http://aslo.org/lo/>
 European Association for Aquatic Mammals, <http://www.eaam.org>
 European Cetacean Society, <http://www.europeancetaceansociety.eu/>
 IEEE Oceanic Engineering Society, <http://www.ieee.org>
 International Marine Animal Trainers Association, <http://www.imata.org>
 Marine Technology Society, <http://www.mtsociety.org>
 North American Benthological Society, <http://www.benthos.org/index.cfm>
 Oceanography Society, <http://www.tos.org>
 Society for Marine Mammalogy, <http://www.marinemammology.org>
 Society of Wetland Scientists, <http://www.sws.org/>
 Women's Aquatic Network, <http://www.womensaquatic.net>

...in Zoology

Areas of interest

Taxonomy	Entomology	Herpetology
Physiology	Ornithology	Primateology
Genetics	Parasitology	Wildlife biology
Animal behavior	Toxicology	Limnology
Animal ecology	Protozoology	Animal husbandry
Phylogeny	Invertebrate	Ethology

Sample Job Titles

Animal breeder	Animal behaviorist	Marine biologist
Park naturalist	Population biologist	Zoologist
Dairy scientists	Animal biologist	Zookeeper & curator
Food technologists	Caretaker/trainer	Goodwill ambassador
Wildlife forensic scientists	Aquatic animal care	
Agricultural researcher	Biological surveyor	

Possible Work Settings

Agricultural co.	Pharmaceutical ind.	Zoological gardens
Clinics and hospitals	Research orgs.	Pest mgt firms
Conservation co.	Veterinary hospitals	Environmental orgs.
Fish hatcheries	Wildlife preserves and parks	Pest control co.
Laboratories	Zoos & aquariums	Government agencies
Museums		

Professional Organizations

Amateur Entomologists' Society, <http://www.amentsoc.org/>
American Aquarium and Zoo Association, <http://www.aza.org/>
American Association of Zoo Keepers, <http://www.aazk.org/>
American Boarding Kennel Association, <http://www.abka.com>
American of Zoo and Aquarium Docents, <http://www.azadocents.org>
American Physiological Society, <http://www.the-aps.org/>
American Society of Animal Science, <http://www.asas.org/>
American Zoo and Aquarium Association, <http://www.aza.org>
Animal Behavior Society, <http://www.animalbehavior.org/>
Animal Caretakers Information, <http://www.hsus.org>

...in Healthcare

Sample Job Titles & Areas of Interest

Biomedical	Food technologist	Pharmaceutical sales
Dentist	Medical doctor	Genetics

Possible Work Settings

Clinics and hospitals	Private research	Government agencies
Laboratories & regulatory agencies	foundations	Drug companies
	Testing laboratories	

Professional Organizations

American Association of Zoo Veterinarians, <http://www.aazv.org>
American Medical Association, <http://www.ama-assn.org/>
American Physiological Society, <http://www.the-aps.org/>
American Veterinary Medical Association, <http://www.avma.org/>
Association of American Veterinary Medical Colleges, <http://www.aavmc.org>
Association of Genetic Technologists, <http://www.agt-info.org/>

...in Other Areas

Sample Job Titles

Biotechnologist	Bioinformatics	Food safety expert
Clinical laboratory technician	Lawyer & patent law	Regulatory affairs manager
Histologic technician	Marketing & Administration	Television producers
Cytotechnologist	Molecular Visualization	Painters & Photographers
		Technical writing

Possible Work Settings

Biological supply houses	Clinical Laboratories
Biotechnology firms	Hospitals & clinics

Professional Organizations

American Association of Blood Banks, <http://www.aabb.org>
American Association of Immunologists, <http://www.aai.org>
National Society for Histotechnology, <http://www.nsh.org/>
American Medical Technologists, <http://www.amt1.com>

RESOURCES

Texas State University-Student Organizations

Biology Graduate Student Organization
Society of Microbiology Students
Tri Beta Biological Society

Internships

Aquarium for Wildlife Conservation	Center for Marine Conservation
Aquarium of Niagara Falls	Cetacean Research Unit
Belle Isle Zoo & Aquarium	Chicago Zoological Park
Center for Coastal Studies	Clearwater Marine Aquarium

Dolphins Plus
John G. Shedd Aquarium
Kewalo Basin Marine Mammal
Laboratory
Marine Mammal Research
Mote Marine Laboratory
Mystic Marinelife Aquarium
National Aquarium in Baltimore
National Museum of Natural History
New England Aquarium
The Oceania Project

Pacific Whale Foundation
Pinniped Learning and behavior
project
Marine Mammal Research Program
Tethys Research Institute c/o
municipal aquarium
Theater of the Sea
Waikiki Aquarium
Whale Museum
Whale Research Group

Additional Resources

SciCentral, <http://www.scicentral.com/>
MicrobeWorld, <http://www.microbeworld.org/>
LakeNet, <http://worldlakes.org>
Aquatic Networks, <http://aquanet.com>
Iowa State Entomology Index, <http://ent.iastate.edu/list>
Biology Career Resources, <http://www.cellbio.com/careers.html>
“What can I do with a major in ... biology” by Career Center at Hofstra University.
Career counseling: 101+ things you can do with a degree in biology by Kathleen M.
Eyster found in *Advances in Physiology Education*, 31: 323-328, 2007.

Professional Organizations

American Association of Anatomists, <http://www.anatomy.org>
American Institute of Biological Sciences, <http://www.aibs.org/core/index.html>
American Society for Biochemistry & Molecular Biology, <http://www.asbmb.org/>
American Society for Clinical Laboratory Science, <http://www.ascls.org>
American Society for Clinical Pathology, <http://www.ascp.org>
American Society of Cell Biology, <http://www.ascb.org/>
American Society of Cytopathology, <http://www.cytopathology.org>
Anaerobe Society of Americas, <http://www.anaerobe.org/>
Arbor Day Foundation, <http://www.arborday.org/>
Association for Computing Machinery, <http://www.acm.org/>
Bioinformatics Organization, <http://www.bioinformatics.org/>
Biotechnology Industry Organization, <http://www.bio.org/>
Entomology Society of America, <http://www.entsoc.org/>
Friends of the Earth, <http://www.foe.org/>
Friends of the National Zoo, <http://www.nationalzoo.si.edu>
Genetics Society of America, <http://www.genetics-gsa.org>
Information for Genetics Professionals, <http://www.kumc.edu/gec/geneinfo.html>
International Association for Aquatic Animal Medicine, <http://www.iaaam.org>
International Biometrics Society, <http://www.tibs.org/Interior.aspx>
International Society for Computational Biology, <http://www.iscb.org/>

International Wildlife Rehabilitation Council, <http://www.iwrc-online.org>
National Association of State Foresters, <http://www.stateforesters.org/>
National Science Foundation, <http://www.nsf.gov>
National Wildlife Federation, <http://www.nwf.org>
National Wildlife Rehabilitators Association, <http://www.nwrawildlife.org>
Natural Resources Council of America,
Natural Resources Defense Council, <http://www.nrdc.org>
Sierra Club, <http://www.sierraclub.org>
Society for Range Management, <http://www.rangelands.org>
Society of General Physiologists, <http://www.sgpweb.org/>
Society of Integrative and Comparative Biology, <http://www.sicb.org/>
Society of Natural Science, <http://snasc.com/>
Soil and Water Conservation Society, <http://www.swcs.org>
The European Federation of Biophysics Organization, <http://www.efb-central.org/>
The Nature Conservancy, <http://www.nature.org>
The Wilderness Society, <http://www.wilderness.org>
The Wildlife Society, <http://www.wildlife.org>
Western Forestry and Conservation Association, <http://www.westernforestry.org>
Wildlife Management Institute, <http://www.wildlifemanagementinstitute.org/>
World Resources Institute, <http://www.wri.org/wri>

Job Search

Biology jobs, <http://www.biologyjobs.com/>
Job watch, <http://centerwatch.com/jobwatch/>
Environmental careers organization, <http://www.eco.org/>
Ecoemploy, <http://www.ecoemploy.com/jobs/>
Medzilla, <http://www.medzilla.com/>
Bioplanet, <http://www.bioplanet.com/>
Biotechnology jobs, <http://www.bio-jobs.com/>
Science jobs, <http://www.newscientistjobs.com/jobs/default.aspx>
Nature jobs, <http://www.nature.com/naturejobs/index.html>
Science careers, <http://sciencecareers.sciencemag.org/>

Career Library Resources

Great Jobs for Biology Majors by Blythe Camenson
Career Opportunities in Science by Susan Echaore-McDavid
Careers in Horticulture and Botany by Jerry Garner
Opportunities in Forestry Careers by Christopher M. Wille
Working with Wildlife by Thane Maynard

Information for this handout compiled from:

Texas State University Career Services, The Career Center at Hofstra University, University Career Center at North Carolina State University, Career Services at The University of Montana-Missoula, Career Services at University of Louisville, Career Services at Oklahoma State University