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

  - American Board of Medical Microbiology
  - American Board of Medical Laboratory Immunology
  - American Board of Medical Laboratory Science
  - American Board of Medical Microbiology
  - American Board of Medical Laboratory Immunology

  - International Society for Clinical Laboratory Technology
  - American Board of Medical Microbiology
  - American Board of Medical Laboratory Immunology
  - American Board of Medical Laboratory Science

  - Certificate in Bioinformatics
### AREAS OF SPECIALIZATION

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### CAREER PATHS

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

#### ...in Microbiology

##### Sample Job Titles
- Agricultural microbiologist
- Industrial microbiologist
- Public Health microbiologist
- Research Associates
- Veterinary microbiologist

##### Possible Work Settings
- Agriculture industry
- Biotechnology firms
- Non-profit orgs.
- Colleges & univ.
- Pharmaceutical co.

- Research laboratories & foundation
- Hospitals and public health facilities
- Environmental & pollution control agencies
- Government agencies

##### Professional Organizations
- The American Society for Microbiology, [http://www.asm.org/](http://www.asm.org/)

#### ...in Botany

##### Sample Job Titles
- Agronomists
- Conservationists
- Crop scientist
- Horticulturists
- Plant breeder
- Plant pathologists
- Research botanist
- Senior botanist
- Arborist
- Forest economist
- Topiary trainer
- Wood technologist

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

*What can I do with this degree?*
Possible Work Settings
Agricultural companies  Food processing plants  Pharmaceutical companies
Botanical gardens and  Forestry centers  Research institutes and
arboretums  Government agencies  laboratories
Bureau of land mgt.  National park services  Research orgs.
Conservation orgs.  Non-profit orgs.  Seed companies
Ecological consulting firms  Nurseries  State & national parks

Professional Organizations
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/
Mycological Society of America, http://www.msafungi.org/
Phycological Society of America, http://www.psaalgae.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
Association for Biology Laboratory Education, http://ableweb.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 State Colleges and Universities, http://aascu.org/
Association for Childhood Education International, http://www.acei.org/
National Association for the Education of Young Children, http://naeyc.org/

...in Aquatic Biology

**Areas of Interest**
- Marine biology
- Biological oceanography
- Limnology
- Benthology
- Aquatic invertebrate
- Zoology
- Aquatic botany
- Aquaculture
- Ichthyology
- Oceanography

**Sample Job Titles**
- Research Aquatic Biologist
- Senior Aquatic Biologist
- Stream biologist

**Possible Work Settings**
- Research institutes
- Zoological parks
- Government agencies
- Environmental orgs.
- Aquariums & fisheries
- Environmental co.

**Professional Organizations**
- American Cetacean Society, http://www.acsonline.org/
- American Geophysical Union, http://www.agu.org/
- American Society of Limnology and Oceanography, http://aslo.org/lo/
- European Association for Aquatic Mammals, http://www.eaam.org
- Society of Wetland Scientists, http://www.sws.org/
- Women’s Aquatic Network, http://www.womensaquatic.net
...in Zoology

**Areas of interest**
- Taxonomy
- Physiology
- Genetics
- Animal behavior
- Animal ecology
- Phylogeny

- Entomology
- Ornithology
- Parasitology
- Toxicology
- Protozoology
- Invertebrate

- Herpetology
- Primatology
- Wildlife biology
- Limnology
- Animal husbandry
- Ethology

**Sample Job Titles**
- Animal breeder
- Park naturalist
- Dairy scientists
- Food technologists
- Wildlife forensic scientists
- Agricultural researcher

- Animal behaviorist
- Population biologist
- Animal biologist
- Caretaker/trainer
- Aquatic animal care
- Biological surveyor

- Marine biologist
- Zoologist
- Zookeeper & curator
- Goodwill ambassador

**Possible Work Settings**
- Agricultural co.
- Clinics and hospitals
- Conservation co.
- Fish hatcheries
- Laboratories
- Museums

- Pharmaceutical ind.
- Research orgs.
- Veterinary hospitals
- Wildlife preserves and parks

- Zoological gardens
- Pest mgmt firms
- Environmental orgs.
- Pest control co.
- Government agencies

**Professional Organizations**
- American Boarding Kennel Association, [http://www.abka.com](http://www.abka.com)
- American of Zoo and Aquarium Docents, [http://www.azadocents.org](http://www.azadocents.org)
- American Zoo and Aquarium Association, [http://www.aza.org](http://www.aza.org)
- Animal Caretakers Information, [http://www.hsus.org](http://www.hsus.org)

...in Healthcare

**Sample Job Titles & Areas of Interest**

- Biomedical
- Dentist

- Food technologist
- Medical doctor

- Pharmaceutical sales
- 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](http://www.aazv.org)
American Veterinary Medical Association, [http://www.avma.org/](http://www.avma.org/)
Association of American Veterinary Medical Colleges, [http://www.aavmc.org](http://www.aavmc.org)

...in Other Areas

Sample Job Titles
Biotechnologist  Bioinformatics  Food safety expert
Clinical laboratory technician  Lawyer & patent law  Regulatory affairs manager
Histologic technician  Administration  Painters & Photographers
Cytotechnologist  Molecular Visualization  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](http://www.aabb.org)
American Association of Immunologists, [http://www.aai.org](http://www.aai.org)
American Medical Technologists, [http://www.amt1.com](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

What can I do with this degree?
What can I do with this degree?

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
Whale Museum
Whale Research Group

Additional Resources
MicrobeWorld, http://www.microbeworld.org/
LakeNet, http://worldlakes.org
Aquatic Networks, http://aquanet.com
Iowa State Entomology Index, http://ent.iastate.edu/list
“What can I do with a major in ... biology” by Career Center at Hofstra University.

Professional Organizations
American Institute of Biological Sciences, http://www.aibs.org/core/index.html
American Society for Clinical Laboratory Science, http://www.ascls.org
American Society for Clinical Pathology, http://www.ascp.org
Association for Computing Machinery, http://www.acm.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 Wildlife Rehabilitation Council, http://www.iwrc-online.org
Natural Resources Council of America,
Sierra Club, http://www.sierraclub.org
Society of Integrative and Comparative Biology, http://www.sicb.org/
The Nature Conservancy, http://www.nature.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/

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