

BIOLOGICAL SCIENCES

What can I do with this degree?

AREAS

EMPLOYERS

STRATEGIES

BIOTECHNOLOGY

Research and Development
Laboratory Testing
Teaching

Colleges and universities
Pharmaceutical companies
Agricultural industry including fertilizer manufacturers and animal and plant breeding and production
Federal and state government laboratories and agencies
Industry, particularly biotechnology firms

Develop excellent laboratory skills.
Acquire a Ph.D. for college and university teaching and advanced positions in research, development, and management.
Take additional courses in science and mathematics.
Learn to problem solve.
Develop work habits that are systematic, precise, and patient.

GENETICS

Research and Development related to:
Animals
Plants
Humans
Genetic Counseling

Colleges and universities
Pharmaceutical companies
Large producers of seed, livestock, and poultry
Large fur breeding farms
Government laboratories
Department of Agriculture
Fish and Wildlife Service
National Institutes of Health
Biotechnology industry
Hospitals and medical centers

Acquire a broad background in sciences, mathematics, and computer technology.
Obtain a Ph.D. for advanced positions in research and management.
Earn a master's degree from an accredited program for genetic counseling.

MICROBIOLOGY

Research
Teaching
Production
Quality Control

Colleges and universities
Professional schools of medicine, dentistry, public health, nursing, pharmacy, veterinary medicine, and agriculture
Private research foundations
Government research laboratories and service agencies
Hospitals and public health facilities
Agricultural experiment stations
Food, chemical, pharmaceutical, and cosmetic companies
Industry including wood products, paper, textiles, optical equipment, leather, and electrical equipment
Environmental and pollution control agencies

Obtain a Ph.D. for teaching and advanced research and management positions.
Take additional courses in chemistry, biology, mathematics, and physics.
Take courses related to your field of interest such as botany, plant pathology, etc.
Obtain specialized certification for some medical areas.
Develop necessary eye-hand coordination.
Learn to work well with others.

AREAS	EMPLOYERS	STRATEGIES
<p><u>MYCOLOGY</u> Teaching Research</p>	<p>Colleges and universities Professional schools of medicine, forestry, and agriculture Medical research laboratories Private research institutes Pharmaceutical industry Public Health Service Industries and laboratories involved in production of food, leather, textiles, and forestry products Chemical manufacturers State and federal government laboratories</p>	<p>Acquire knowledge and skills in specialized areas; knowledge of industrial chemistry is especially helpful. Take courses in organic chemistry, biochemistry, and physics. Acquire a graduate degree for more opportunities. Obtain a Ph.D. for teaching and advanced positions in research and management.</p>
<p><u>SYSTEMATIC BIOLOGY</u> Teaching Research Field and Laboratory Taxonomy Toxicology Consulting Medicine</p>	<p>Private and public schools Colleges, universities, and agricultural colleges Federal agencies including Departments of Agriculture and Interior Private research foundations Museums Botanical gardens and arboretums Zoos and aquariums State and local agencies Public health laboratories Hospitals Oil companies Organizations involved in ecological studies National and international environmental research programs</p>	<p>Become certified/licensed for public school teaching. Earn a Ph.D. for college and university teaching and advanced research and management positions. Develop excellent laboratory skills.</p> <p>Develop foreign language abilities for international opportunities.</p>
<p><u>ENTOMOLOGY</u> Teaching Research Biological Control Toxicology Biological Survey Extension Inspection</p>	<p>Colleges and universities, especially colleges of agriculture and veterinary medicine Industry including food producers and processors, chemicals for insect control, and lumber and pulp Chemical companies Pest control companies Federal and state government Health agencies Agricultural experiment stations Inspection agencies and control boards Conservation agencies Museums</p>	<p>Acquire a Ph.D. for college and university teaching and advanced research and management positions. Specialize in a particular area.</p>

AREAS	EMPLOYERS	STRATEGIES
<p><u>MARINE AND AQUATIC BIOLOGY</u> Food Research Inspection Teaching</p>	<p>Federal, state, and local agencies International agencies Inspection organizations Private recreation organizations Research laboratories Colleges and universities Zoos Armed services Shipping industry Manufacturing Fish hatcheries and organizations raising fish</p>	<p>Develop a good foundation in mathematics, computer science, statistics, and humanities. Acquire a Ph.D. for college and university teaching and advanced research and management positions. Obtain experience related to fishing and boating. Specialize in fisheries science.</p>
<p><u>ZOOLOGY</u> Animal Care/Training Animal Behavior Research Curator Teaching</p>	<p>Wildlife preserves and parks Zoos, aquariums, and other collections of animals Museums Research organizations Pharmaceutical, chemical, and agricultural service industries Federal and state agencies Colleges and universities</p>	<p>Acquire excellent communication skills. Obtain experience working with animals and various related laboratory equipment. Develop a broad background in biology and other related subjects such as chemistry, physics, mathematics, and statistics. Acquire a graduate degree for advancement and specialized positions. Obtain a Ph.D. for teaching and advanced research and management positions. Complete a related internship at a zoo or aquarium.</p>
<p><u>BIOMEDICAL</u> Physiology Biophysics Biochemistry Pharmacology Nutrition Immunology Pathology Research Teaching Quality Control Engineering</p>	<p>Colleges and universities Professional schools including colleges of pharmacy, dentistry, medicine, veterinary medicine, and agriculture Clinics and hospitals Private research foundations Drug companies Federal laboratories and regulatory agencies Independent testing laboratories Public health departments Agricultural experiment stations Industrial laboratories including chemical, petroleum, food processing, drug, and cosmetic manufacturers Armed services</p>	<p>Obtain a Ph.D. for college and university teaching and advanced research positions. Acquire a background in physics, organic and physical chemistry, mathematics, and anatomy. Take courses in area(s) of specialization. Acquire advanced degrees in areas of specialization; some may require an M.D.</p> <p>Obtain a degree in biomedical engineering or engineering technology.</p>

AREAS

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STRATEGIES

BIOINFORMATICS

Biotechnology industry
Pharmaceutical companies
Government research laboratories
Universities

Double major or minor in computer science.
Learn to work well in teams and acquire the ability to interface with scientists.
Develop in-depth programming and relational database skills.
Learn molecular biology packages, web design, and programming skills.

EDUCATION

Teaching
Non-classroom education

Public and private schools, K-12
Museums
Zoos
Nature centers
Parks

Certification is required for public school teaching positions.
Gain experience working with students through tutoring or volunteering.
Learn to work well with all types of people.
Develop excellent interpersonal and public speaking skills.

TECHNICAL WRITING

Editing
Writing

Newspapers
Publishing companies including scientific magazines, professional journals, periodicals, textbooks, and online publishers

Take technical writing classes or minor in it.
Develop strong writing skills and command of the English language.
Minor in journalism.
Acquire word processing and desktop publishing skills.

ILLUSTRATION

Publishing companies of textbooks and scientific magazines or books
Medical and veterinary colleges

Double major or minor in graphic illustration.
Find a part-time, summer, co-op or internship position with a publisher.

TECHNICAL AND PHARMACEUTICAL SALES

Manufacturing firms including pharmaceuticals, animal pharmaceuticals, laboratory equipment, medical supplies and prostheses

Develop excellent communication and interpersonal skills.
Take courses in anatomy, pharmacology, and chemistry.
Obtain retail or sales experience.
Acquire a minor in business.
Hold leadership positions in campus organizations.
Join the student American Marketing Association.

AREAS

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STRATEGIES

BIOLOGICAL PHOTOGRAPHY

Major medical, dental and veterinary schools
 Research centers
 Federal government
 Museums
 Zoological societies
 Publishing houses
 Free-lance

Acquire thorough knowledge of photographic procedures and technology.
 Become skilled with medical and scientific instruments including microscopes.
 Take specific courses in biological, medical and ophthalmic photography; courses in illustration and printing are also helpful.

LEGISLATION/LAW

Lobbying
 Regulatory Affairs
 Science Policy
 Congressional Fellows

 Patent Law
 Environmental Law

Federal and state government

 Law firms
 Large corporations

Acquire internships in federal or state government. Develop excellent communication and interpersonal skills.
 Acquire a Ph.D for more opportunities.

 Earn a law degree.

GENERAL INFORMATION

- A bachelor's degree will qualify you for work as a laboratory assistant, technician, technologist, or research assistant. These individuals work as part of a team performing practical operations, e.g., operating laboratory equipment, designing and constructing new equipment, making drawings, building models and assisting in the interpretation of results.
- The biological sciences are good preparation for a career in healthcare including medicine, dentistry, nursing, etc.
- An undergraduate degree can be used for nontechnical work in writing, illustration, sales, photography, and legislation.
- Graduate degrees will allow for more responsibility and advancement.
- Some work environments, particularly medical, require special certification.
- Learn laboratory procedures and become familiar with equipment.
- Obtain summer, part-time, volunteer, co-op, or internship experience.
- Complete various training courses working with laboratory equipment and procedures to enhance job skills and abilities.
- Join professional associations and community organizations to enhance knowledge, abilities and contacts in the field.
- Read scientific journals.
- Maintain a high grade point average to improve chances of graduate school admission.
- Complete an undergraduate research project.
- Secure strong personal recommendations from professors or employers.
- Plan on completing a post doctoral experience after graduate school.
- Learn federal, state, and local government job application process. The federal government is the largest employer of biologists.