What Can I Do With A Degree in Biology

Research & Development Areas
- Basic
- Applied
- Quality Control
- Administration
- Grant Writing

Employers
- Industry and laboratories
- Private research institutions
- Public health departments
- State and federal government
- State and local governmental laboratories/agencies
- Colleges and universities

Strategies
- Learn to set up, operate, and maintain laboratory instruments and equipment, and monitor experiments. Select courses with laboratory components.
- Seek research experience with professors. Gain related experience through part-time jobs, internships, or volunteering. Complete a certificate training program, usually one year, to learn specialized laboratory techniques.
- Take a course in grant writing. A bachelor’s degree in biology qualifies one for laboratory technician or research assistant positions. Earn master’s degree for better positions, advancement opportunities, more responsibility and higher pay.
- Obtain Ph.D. to direct research projects and lead research teams. Maintain a high grade point average and secure
strong faculty recommendations to gain admittance into graduate school.

**Organismal Biology**

**Areas**
- Botany and plant sciences
- Ecology and wildlife
- Marine and aquatic
- Systematic (Taxonomy)
- Zoology
- Entomology
- Genetics
- Microbiology: bacteria, algae, fungi, molds, yeasts, viruses, protozoa

**Employers**
- Colleges and universities
- Veterinary hospitals
- State and federal government
- Independent laboratories
- Zoos and aquariums
- Fish hatcheries
- Wildlife preserves and parks
- Conservation agencies
- Botanical gardens and arboretums
- Museums
- Agricultural experiment stations
- Inspection agencies and control boards
- National and international environmental organizations
- Private recreation organizations

**Strategies**
- Seek related experience through coursework, part-time jobs, internships or volunteering. Conduct research or assist in research including the collection of information and samples of water, soil, plants, animals, etc. Join student chapters of professional organizations related to your area of interest. Obtain a Ph.D. for teaching and advanced research and management positions.

**Biomedical Sciences**

**Areas**
- Biophysics
- Biochemistry
- Cellular and Molecular Biology
- Cytology
- Genetics
- Immunology
- Pathology
- Pharmacology
- Physiology
- Virology

**Employers**
- Colleges and universities
- Professional schools including colleges of pharmacy, dentistry, medicine, veterinary medicine, and agriculture
- Federal laboratories and regulatory agencies
- Clinics and hospitals
- Private research foundations
- Independent laboratories
- Pharmaceutical companies

**Strategies**
- Gain laboratory experience through coursework and/or research projects with professors. Learn to set up, operate, and maintain laboratory instruments and equipment, and monitor experiments. Seek internships, part-time employment and volunteer opportunities in the biomedical field. Join student chapters of professional organizations related to your area of interest. Take courses in area(s) of specialization and/or consider an advanced degree. Obtain a Ph.D. for teaching and advanced research and management positions.
Healthcare
Areas
- Medicine
- Dentistry
- Optometry
- Podiatry
- Pharmacy
- Veterinary medicine
- Allied Health: occupational therapy, physical therapy
- Medical technology
- Nuclear medicine

Employers
- Hospitals
- Medical centers and clinics
- Nursing homes
- Private practice
- Armed services
- Government agencies

Strategies
- Plan on attending medical school or other related graduate program. Maintain an outstanding grade point average, particularly in the sciences. Secure strong faculty recommendations. Meet with a pre-health advisor periodically. Join related student organizations and demonstrate leadership abilities. Seek experiences in hospital or healthcare settings through volunteering, shadowing, part-time positions, or internships. Develop a back-up plan in case medical/graduate school admission is denied. Consider alternative but related careers such as physician assistants. Research all of the various fields within medicine to determine career goals.

Education
Areas
- Teaching: elementary, secondary, post-secondary
- Non-classroom Education

Employers
- Universities and colleges
- Medical and other professional schools
- Public and private schools, K-12
- Museums
- Zoos
- Nature centers and parks

Strategies
- Gain experience working with students through tutoring, part-time employment, interning, or volunteering. Learn to work well with all types of people. Develop excellent interpersonal and public speaking skills. Certification is required for K-12 schoolteachers and varies by state. Master’s degrees may be sufficient for teaching at community or two-year institutions. Ph.D. is needed for teaching opportunities at colleges and universities.

Communication
Areas
- Technical Writing
- Editing
- Illustrating
- Photography

Employers
- Publishing companies
- Newspapers
- Educational and scientific software companies
- Zoological and environmental societies
- Medical, dental and veterinary colleges
- Research centers
- Federal government agencies
Related nonprofit organizations
Museums

Strategies
- Acquire thorough knowledge of photographic procedures and technology. Take specific courses in biological, medical, and ophthalmic photography; courses in illustration and printing are also helpful. Develop strong writing skills and command of the English language. Take advanced courses in technical writing or journalism classes or consider a minor in either. Join professional associations like the National Association of Science Writers. Seek related volunteer or paid experiences with student/local publications to increase marketability. Obtain an advanced degree in scientific journalism.

Legislation/Law
Areas
Lobbying
Regulatory Affairs
Science Policy
Patent Law
Environmental Law

Employers
Federal and state government
Law firms
Large corporations

Strategies
- Develop excellent communication and interpersonal skills. Demonstrate a high energy level. Take courses in anatomy, pharmacology, and chemistry. Obtain sales experience and/or a business minor. Join related student associations and hold leadership positions. Consider an MBA or Professional Science Master's for advanced management and consulting opportunities.

Business/Industry
Areas
Technical and pharmaceutical sales
Management
Consulting
Marketing

Employers
Manufacturing companies
Marketing firms
Consulting firms

Strategies
- Develop excellent communication and interpersonal skills. Demonstrate a high energy level. Take courses in anatomy, pharmacology, and chemistry. Obtain sales experience and/or a business minor. Join related student associations and hold leadership positions. Consider an MBA or Professional Science Master's for advanced management and consulting opportunities.

General Information
- A Bachelor's degree will qualify one for work as a laboratory assistant, technician, technologist, or research assistant in education, industry, government, museums, parks, and gardens.
- An undergraduate degree can also be used for non-technical work in writing, illustration, sales, photography, and legislation.
- Master's degrees allow for more opportunities in research and administration. Some community colleges will hire Master's level teachers.
- Doctoral degrees are necessary for advanced research and administrative positions, university teaching, and independent research.
- An advanced degree provides the opportunity to specialize in fields of interest.
The biological sciences are good preparation for a career in healthcare such as medicine, dentistry, and veterinary science, but professional degrees and licenses are also necessary to practice in these fields.

- Learn laboratory procedures and become familiar with equipment.
- Obtain summer, part-time, volunteer, co-op, or internship experience to test the fields of interest and gain valuable experience. Take independent research classes if possible.
- Participate in summer research institutes. Submit research to local poster competitions or research symposiums.
- Develop strong analytical, computer, mathematics, and communications skills.
- Join professional associations and community organizations to stay abreast of current issues in the field and to develop networking contacts.
- Read scientific journals related to your area of interest.
- Maintain a high grade point average to improve chances of graduate and professional school admission.
- Become familiar with the specific entrance exam for graduate or professional schools in your area of interest.
- Secure strong relationships and personal recommendations from professors and/or employers.
- Consider 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.
- Gain experience with grant writing and fundraising techniques. Often research must be funded in this manner.

Career Exploration

Science Careers
http://recruit.sciencemag.org

UC Berkeley - Exploring Career fields
http://career.berkeley.edu/Infolab/CareerFields.stm

Search Science Jobs
http://scjobs.sciencemag.org/JobSeekerx/

California Occupational Guides
Occupational Index (Alphabetical)
http://www.labormarketinfo.edd.ca.gov/OccGuides/AlphaList.aspx?Geography=0601000000

Career & Job Search Advice
http://www.jobweb.com/students.aspx?id=188

Guides for Careers in Health and Science
http://jobstar.org/tools/career/spec-car.php

Occupational Outlook Handbook
http://www.bls.gov/oco/ocoia.htm#B

O’Net-
http://online.onetcenter.org/find/stem?t=2&g=Go

Wetfeet.com

Science Central
www.scicentral.com/

Exploring Majors in Biology

UC Berkeley Career Center
http://career.berkeley.edu/Major/Major.stm

What Can I Do With a Major in
http://www.k-state.edu/acic/majorin/biology.htm
What Can I do with a Major in...

Major Resource Kits
http://www.udel.edu/CSC/bio.html

Career Opportunities for Majors in
http://careerservices.rutgers.edu/mh/biological_sciences.shtml

Job Postings
SMC Student Job Search - www.stmarys-ca.edu/studentjobs

BioSpace
www.biospace.com

HireBio.com
www.hirebio.com

Marine Conservation Biology Institute
http://www.mcbi.org/resources/res_career.htm

Medzilla - www.medzilla.com/

Nature Jobs
http://www.nature.com/naturejobs/index.html

Sci Jobs
http://scijobs.org

New Scientist Jobs.com
http://www.newscientistjobs.com/jobs/default.aspx

International Pharma jobs
www.pharmajobs.com/

Professional Associations or Organizations

American Association for the Advancement of Science
www.aaas.org/

Hum-Molgen
http://hum-molgen.org/positions/

Life Science World
http://www.lifesciencesworld.com/job

American Institute of Biological Sciences
www.aibs.org/core/index.html

Association of Biomolecular Resource Facilities
www.abrf.org/

Society for Conservation Biology (SCB)
http://conbio.net/

Society for In Vitro Biology
www.sivb.org/

Society for Integrative and Comparative Biology
www.sicb.org/

Books

Alternative Careers in Science by Cynthia Robbins-Roth

Great Jobs for Biology Majors by Blythe Camenson

Opportunities in Biotechnology Careers by Sheldon S. Brown, Mark Rowh

Opportunities in Biological Science Careers (Opportunities in . . .) by Charles Winter, Kathleen Belikoff

Guide to Nontraditional Careers in Science by Karen Young Kreeger

Put Your Science to Work: The Take-Charge Career Guide for Scientists by Peter S. Fiske Ph.D.