

BIOLOGY

What is Biology? (from <http://www.aibs.org/careers/>)

According to the American Institute of Biological Sciences, “Biologists learn how living things work, how they interact with one another, and how they evolve. They may study cells under a microscope, insects in a rainforest, viruses that affect human beings, plants in a greenhouse, or lions in the African grasslands. Their work increases our understanding about the natural world in which we live and helps us address issues of personal well being and worldwide concern, such as environmental depletion, threats to human health, and maintaining viable and abundant food supplies.”

What is this career like? (from <http://www.bls.gov/oco/ocos047.htm>)

“Many biological scientists work in research and development. Many research scientists must submit grant proposals to obtain funding for their projects. Colleges and universities, private industry and federal government agencies such as the National Institutes of Health and the National Science Foundation contribute to the support of scientists whose research proposals are determined to be financially feasible and to have the potential to advance new ideas or processes. Scientists usually conduct research in laboratories using a wide variety of other equipment. Some conduct experiments involving animals or plants. Scientists often work in teams, interacting with engineers, scientists of other disciplines, business managers, and technicians. Some biological scientists also work with customers or suppliers and manage budgets. Biological scientists typically work regular hours. While the 40-hour workweek is common, longer hours are not uncommon. Researchers may be required to work odd hours in laboratories or other locations (especially while in the field), depending on the nature of their research.”

Related Career Titles (from <http://www.uncwil.edu/stuaff/career/Majors/bio.htm>)

Agronomist	Environmental Engineer	Marine Engineering Tech
Animal Scientist	Environmental Health	Marine Fisheries/Worker
Aquaculture Farmer	Environmental Protection	Marine Geologist
Aqua Culturist	Ergonomist	Marine Sales
Aquarium & Museum	Fish Hatchery Tech	Marine Tourist Worker
Aquarium Technician	Fisheries Conservation	Market Research Analyst
Aquatic Biologist	Florist	Medical Illustrator
Barrier Beach Mgr.	Food Scientist-Tech	Medical Laboratory Tech.
Bio-Engineer	Forester	Medical Librarian
Bio-Technologist	Genetic Eng. Research	Medical Technologist
Biochemist	Geographer	Meteorologist
Biometrician	Health Officer	Microbiologist
Boat Builder & Repair	Horticulturist	Molecular Biologist
Botanist	Hospital Administrator	Mortician
Chem. Oceanographer	Hydrographic Surveyor	Museum/Aquarium Admin.
Chiropractor	Industrial Hygienist	Mycologist

Coastal Resources Mgr.	Industrial Marine Econ.	Naval Architect
Commercial Fishing Eng.	Limnological Technician	Net Designer
Coroner	Marine-Coastal Consult.	Neurobiologist
Dentist	Marine Bacteriologist	Oceanographer
Dietitian & Nutritionist	Marine Biologist	Paramedic
Ecologist	Marine Ecologist	Parasitologist
Pharmacy Technician	Physical Therapist	Pharmaceutical Sales
Science Lab Tech.	Public Health Worker	Physician
Zoologist	Science Teacher	Salt Marsh Manager
Wildlife Resources Mgr.	State Parks & Recreation	Science Writer
Technical Writer	Test-Inspection Tech.	Soil Conservationist
Underwater Technician	Veterinarian	Systems Analyst
Geophysicist/Physicist	Wildlife Biologist	Toxicologist
Water Quality Technician	Film Maker	Science Illustrator
Commercial Inland Water Transportation Worker	Seafood Processor-Researcher	

How do you get ready? (from <http://career.utk.edu/students/majors.asp>)

- 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 nontechnical 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.

Related Major Skills (from <http://www.uncwil.edu/stuaff/career/Majors/bio.htm>)

Operate scientific equipment	Independent worker
Information handling & organization	Curiosity and creativity
Biology theory & practical knowledge	Statistical awareness
Oral & written communication	Numerical computation
Analytical & quantitative abilities	Innovative talents
Problem solving	Technical skills
Teamwork	

What about the future? (from <http://www.bls.gov/oco/ocos047.htm>)

“Biological scientists can expect to face competition for jobs. Employment of biological scientists is projected to grow about as fast as the average for all occupations, as biotechnological research and development continues to drive job growth. The federal government funds much basic research and development, including many areas of medical research that relate to biological science. Recent budget increases at the National Institutes of Health have led to large increases in federal basic research and development expenditures, with research grants growing both in number and dollar amount.

In addition, efforts to discover new and improved ways to clean up and preserve the environment will continue to add to job growth. More biological scientists will be needed to determine the environmental impact of industry and government actions and to prevent or correct environmental problems such as the negative effects of pesticide use. Some biological scientists will find opportunities in environmental regulatory agencies, while others will use their expertise to advise lawmakers on legislation to save environmentally sensitive areas. New industrial applications of biotechnology, such as new methods for making ethanol for transportation fuel, also will spur demand for biological scientists.

There will continue to be demand for biological scientists specializing in botany, zoology and marine biology, but opportunities will be limited because of the small size of these fields. Marine biology, despite its attractiveness as a career, is a very small specialty within biological science.”

Available at Albright College Career Development Center’s Resource Library

- Great Jobs for Biology Majors, by Blythe Camenson
- Careers for Animal Lovers and Other Zoological Types, by Louise Miller
- Careers for Environmental Types and Others Who Respect the Earth, by Jane Kinney and Michael Fasulo

- [Careers for Nature Lovers and Other Outdoor Types](#), by Louise Miller
- [Careers for Plant Lovers and Other Green Thumb Types](#), by Blythe Camenson
- [Careers for Scientific Types and Others with Inquiring Minds](#), by Jan Goldberg
- [Opportunities in Biological Science Careers](#), by Charles A. Winter
- [Opportunities in Biotechnology Careers](#), by Sheldon S. Brown
- [Opportunities in Dental Care Careers](#), by Bonnie Kendall
- [Opportunities in Environmental Careers](#), by Odom Fanning
- [Opportunities in Eye Care Careers](#), by Kathleen Belikoff
- [Opportunities in Forestry Careers](#), by Christopher M. Wille
- [Opportunities in Horticulture Careers](#), by Jan Goldberg
- [Opportunities in Physical Therapy Careers](#), by Bernice R. Krumhansl
- [Opportunities in Physician Careers](#), by Jan Sugar-Webb
- [Opportunities in Public Health Careers](#), by George E. Pickett and Terry W. Pickett
- [Opportunities in Research and Development Careers](#), by Jan Goldberg
- [Opportunities in Sports Medicine Careers](#), by William R. Heitzmann
- [Opportunities in Veterinary Medicine Careers](#), by Robert E. Swope

Disclaimer

Links to Internet sites are provided for your convenience and do not constitute an endorsement by Albright College or the Career Development Center.

Links found at <http://www.uncwil.edu/stuaff/career/Majors/bio.htm>.

Job and Internship Search Links

- HireBio <http://www.hirebio.com>
- Medzilla <http://www.medzilla.com/>
- HireHealth <http://www.hirehealth.com>
- Pharmaceutical Jobs <http://hirerx.com>
- Health Care Job Store <http://www.healthcarejobstore.com>
- Health Care Job <http://healthcarejob.com>
- MedHunters.com <http://www.medhunters.com>
- Naturejobs <http://naturejobs.nature.com/js.php>
- Tiny Tech Jobs <http://www.tinytechjobs.com>
- The SciWeb Biotechnology Career Center
<http://www.biocareer.com/index.cfm>
- Science Careers <http://www.sciencecareers.org>
- The American Academy of Forensic Sciences <http://www.aafs.org>
- BioMedScientist Jobs <Http://careers.the-scientist.com>
- Pre-Med Internship Opportunities <http://people.rit.edu/gtfsbi/Symp/premed.htm>
- Careers with the Agricultural Research Service <http://www.ars.usda.gov/careers>
- Life Sciences World <http://www.lifesciencesworld.com/>
- BioSpace <http://www.biospace.com>
- BIOTECH Career Center
<http://www.biotechcareercenter.com/index.html>
- Sciencejobs.com: the best jobs from the leaders in bioscience <http://www.sciencejobs.com>

- Biology Jobs and other science jobs <http://www.scijobs.org>
- Biology Job Search Links <http://www.slic.wsu.edu/bios/jobsearch.html>
- Maritime Employment Opportunities <http://www.maritimeemployment.com>
- Publish and Perish: Guide to On-line Employment and Career Links for the Biomedical Scientist <http://www.his.com/~graeme/empco.html>
- CDC Jobs <http://www.cdc.gov/>
- Biology Jobs <http://www.BiologyJobs.com>
- U.S. Department of Health and Human Services <http://www.hhs.gov/jobs>
<http://www.hhs.gov/careers/students.html>
- National Institutes of Health <http://www.nih.gov>; for internships go to <http://www.training.nih.gov>
- New Scientist Jobs.com, www.newscientistjobs.com

Career Planning Links

- Careers in Genetic Counseling <http://www.nsgc.org/career/>
- What is an Animal Behaviorist?
<http://www.animalbehavior.org/ABS/Guides/Careers.pdf>
http://www.animalbehavior.org/ABS/Education/careers_brochure.html
- Health Management Careers <http://www.healthmanagementcareers.org/careers/cfm>
- Careers in Forensic Science <http://www.aafs.org>
- Medical/Health Exploration <http://www.nlm.nih.gov/services/medicaled.html#general>
- Center for Health Careers <http://chc.hcwp.org/occubull.htm>
- U.S. Geological Survey - Biological Resources <http://biology.usgs.gov/>
- Biological and Medical Scientists Occupational Outlook Handbook, U.S. Department of Labor
<http://stats.bls.gov/oco/ocos047.htm>
- Journal of Young Investigators Science Career Center <http://www.jyi.org/SCC/Index.php>

Professional Association Links

- The American Society for Cell Biology <http://www.ascb.org>
- American Association of Zoo Keepers <http://www.aazk.org>
- American Aquarium and Zoo Association <http://aza.org/>
- The American Institute of Biological Sciences <http://www.aibs.org>
- International Biometric Society <http://www.tibs.org/>
- The American Academy of Forensic Sciences <http://www.aafs.org>
- Federation of American Societies for Experimental Biology <http://www.faseb.org>
- The Botanical Society of America <http://www.botany.org>
- American Physiology Society <http://www.the-aps.org>