

BIOLOGY... NOW WHAT?

What is Biology?

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 & abundant food supplies.

What Can I Do With A Bachelor's Degree In Biology?

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 Fish. 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	Seafood Processor-Researcher	Science Illustrator

Where Might I do an Internship?

UMass Amherst Biology Majors Have Done Internships at The Following Sites:

Walt Disney World
Northampton VA Medical Ctr
Cooley Dickinson Hospital
Baystate Health Systems
Beth Israel Deaconess Medical Ctr
MASSPIRG
Shriners Hospitals for Children
Wyeth Biotech
Sanofi Group: Pasteur, & Genzyme
MA State House
Fitchburg State University
Beth Israel Deaconess Medical Ctr
Wyeth Biotech
UMass Amherst Aviary Field Research
Associates of Cape Cod
Biogen Idec Inc
UMass Amherst MA Pesticide Analysis Lab
UMass Amherst Student Legal Services
UMass Amherst Emergency Medical Services
University Health Services
MSM Protein Technologies
Methuen (City of)
Massachusetts State Police Crime Laboratory
All-Access Fitness Academy

PrO Unlimited
PRIMA Pediatrics
Principle Profits Asset Management
Centocor
Dr. Hauschka Skin Care Inc.
Venilia Gardens
MIT Lincoln Laboratory
Richard B. Simches Research Ctr
Yonsei University (S. Korea)
Vision Showcase
Whale Ctr of New England
US Dept. of Agriculture
MIT Lincoln Laboratory
Richard B. Simches Research Ctr
Novartis Pharmaceuticals
Dakin Pioneer Valley Humane Society
Zoo in Forest Park (The)
National Aquarium in Baltimore
Dakin Pioneer Valley Humane Society
Boston Biomedical Research Institute
UMass Amherst Environmental Health & Safety
UMass Amherst Campus Sustainability Initiative
UMass Amherst Ctr for Health Promotion
UMass Amherst Peer Health Educators
Northampton Area Pediatrics, LLP
Craig's Doors- A Home Association
Gimhae Saint Mary's Hospital (S. Korea)

New York Sports Club
Neighborhood Physical Therapy

Harvard University
Baystate Medical Ctr
American Cancer Society
AVEO Pharmaceuticals
UMass Amherst Biology Dept
Douglas Treyz DDS
Peabody (City of)
Children's Hospital Boston
Cell Signaling Technology, Inc.
Harvard University
Joslin Diabetes Ctr
UMass Amherst
Cell Signaling Technology, Inc.
All-Access Fitness Academy
PrO Unlimited
PRIMA Pediatrics
Hunt and Piech Dental Group
Differential Proteomics, Inc.
Massachusetts General Hospital
Target
World Parrot Trust
Centocor
Springborn Smithers Laboratories
World Wide Opportunities on Organic Farms (WWOOF)
Red Cross Children's Hospital
MA Environmentally Preferable Products Procurement Program
Dana-Farber Cancer Institute
Massachusetts State Police
Crime Laboratory
Amherst Regional Public Schools
Amgen Inc.
Amherst (Town of)

Who Could I Work For?

Some of the larger companies, government agencies, and industries that hire biology majors include:

Air Pollution Control
Center for Disease Control
Department of Agriculture
Fish and Wildlife Service
Dept of Health and Human Services
Land Use Planning Commission

Environmental Protection Agency
Food and Drug Administration
National Park Service
U.S. Forest Service
Peace Corps
Bio-medical device makers
Chemical manufacturers

Health clinics
Schools and Universities
Pharmaceutical companies
Public utilities
Research foundations
Testing labs
Scientific Journals

Career Planning Resources & Websites

UMass Amherst Career Services Events Calendar www.umass.edu/careers
FOCUS2 Career and Education Planning www.umass.edu/careers/planning for sign-in button
What Can I Do With This Major? <https://www.umass.edu/careers/planning>

(Click on "What Can I do with this Major" icon on the right-hand column.)

Bureau of Labor Statistics Occupational Outlook Handbook www.bls.gov/ooh
Massachusetts Career Information System <http://masscis.intocareers.org>
(Click Mass Resident to login with "Amherst/01003" Then click "Occupations" or "Assessments")
Career Planning Resources for Science www.careercornerstone.org/biology

Biology Job Search Resources (* = of particular note)

UMass Amherst Specific Job Search Resources

* UMass Handshake Database of Internships & Jobs <https://umass.joinhandshake.com/>
* Finding Independent Lab Research On Campus www.umass.edu/biochem/undergraduate/lab
UMass Amherst BioScience Club <http://sites.google.com/site/biosciumass/home>
BioPharmGuy, entry level positions <https://biopharmguy.com/services/entrylevel.php>

Internships and Research Experiences

Columbia List of Summer Internships in Biology <http://www.columbia.edu/cu/biology/ug>

General Biology And Science Jobs

* Mass Bio www.massbio.org
* Mass Life Sciences Internship Program www.masslifesciences.com/programs
* Life Sciences Recruiters for multiple companies www.propelcareers.com
American Society for Microbiology www.asmcareerconnections.org
Bio Space www.biospace.com/jobs/homepage/
Biology Jobs www.BiologyJobs.com
Biostatistician Jobs <http://www.biostatisticianjobs.com/>
Hire Bio www.hirebio.com
* More sites for Life Science Jobs www.masslifesciences.com/resources
Forensic Science Jobs <http://webdata.aafs.org>
General Science Jobs (widely defined) <http://jobs.newscientist.com/>
General Science Jobs (widely defined) <http://jobs.sciencecareers.org/>
NatureJobs (widely defined) www.nature.com/naturejobs/science/
New York Bio Jobs <http://med.bio.ny.associationcareernetwork.com>

Bio-Tech

Mass BioTechnology Council <https://careers.massbio.org/>
Tiny Tech Jobs (BioTech/NanoTech) www.tinytechjobs.com
Mass Medical Device Industry Council <https://business.massmedic.com/jobs>

Government Agencies

National Institutes of Health www.jobs.nih.gov/vacancies/scientific/

Health and Human Services Jobs

<https://www.hhs.gov/careers/>

Pharmaceuticals

International Society of Pharmaceutical Engineers
UMass Amherst ISPE chapter!

<https://www.ispeboston.org/>
www.ecs.umass.edu/ispe

American Assoc of Pharma Scientists Jobs Board
GET YOUR \$40 AAPS STUDENT MEMBERSHIP!

www.jobs.aaps.org

Current jobs

<http://biopharmguy.com>

Sample (expired) entry level job descriptions,
and a list of New England pharma companies.

<http://biopharmguy.com/company-by-location>

Professional Organizations:

Many professional organization's websites have career information on them. You can often use them to search for networking events, meet a mentor in your field of study, find current research, search for internships or jobs, and gain insight into what direction within the field you may wish to pursue.

Career Services has additional lists of professional organizations and resources in specialty areas such as animal sciences, health services, ecology, science communication, and forensics. Ask your career advisor!

BIOLOGY	
American Institute of Biological Sciences	www.aibs.org
American Society for Photobiology	https://photobiology.org/
American Society for Gravitational & Space Biology	www.asgsr.org
American Society of Plant Biologists	www.aspb.org
Association for Tropical Biology and Conservation	www.tropicalbiology.org
Association of Biomolecular Resource Facilities	www.abrf.org
Biophysical Society	www.biophysics.org
Biotechnology Industry Organization	https://www.bio.org/
Federation of American Societies for Experimental Biology	www.faseb.org/
International Society of Ethnobiology	www.ethnobiology.net
Intl Soc for Molecular Electronics and Biocomputing	http://mebc.elte.hu/mebc
International Society of Arboriculture	www.isa-arbor.com
Marine Conservation Biology Institute	https://marine-conservation.org/
Microscopy Society of America	https://www.microscopy.org/
National Association of Biology Teachers	www.nabt.org
Society for Conservation Biology	www.conbio.org
Society for Cryobiology	www.societyforcryobiology.org

Society for Developmental Biology	www.sdbonline.org
Society for Integrative and Comparative Biology	www.sicb.org
Society for Industrial Microbiology	https://www.simbhq.org/
Society for Mathematical Biology	www.smb.org
BIO-ETHICS	
American Society for Bioethics and Humanities	www.asbh.org
American Society for Law, Medicine, and Ethics	www.aslme.org
International Association of Bioethics	https://iab-website.iab-secretariat.org/
Public Responsibility in Medicine and Research	www.primr.org
Sigma Xi Scientific Research Society	www.sigmaxi.org
Society for Medical Decision Making	www.smdm.org
BIO-TECHNOLOGY	
Biotechnology Industry Organization	www.bio.org
Massachusetts Biotechnology Council	www.massbio.org
Society for Industrial Microbio and Biotech	www.simbhq.org
BOTANY	
Society for Economic Botany	www.econbot.org
CELL BIOLOGY	
American Physiological Society	www.the-aps.org
American Society for Biochemistry and Molecular Bio	www.asbmb.org
American Society for Cell Biology	www.ascb.org
Cell Death Society	www.celldeath-apoptosis.org
Microbiology Society	www.microbiologysociety.org
Society for In Vitro Biology	www.sivb.org
GENERAL SCIENCES	
American Association for the Advancement of Science	www.aaas.org
American Institute of Biological Sciences	www.aibs.org
Natl Academies of Sciences Engineering Medicine	https://www.nationalacademies.org/home
National Geographic Society	www.nationalgeographic.com
National Institutes of Health	www.nih.gov
National Science Foundation	www.nsf.gov
GENETICS	

American College of Medical Genetics	www.acmg.net
American Peptide Society	https://www.americanpeptidesociety.org/
American Society of Human Genetics	www.ashg.org
Genetics Society of America	www.genetics-gsa.org
International Federation of Human Genetics Societies	www.ifhgs.org
Protein Society	www.proteinsociety.org
MARINE SCIENCE	
Marine Life Alliance	https://worldcetaceanalliance.org/partners/
Marine Conservation Biology Institute	http://marine-conservation.org
Society for Marine Mammalogy	www.marinemammalscience.org
Society for Wetland Scientists	www.sws.org
MICROBIOLOGY	
American Microscopical Society	http://amicros.org
American Society for Microbiology	www.asm.org
Microscopy Society of America	https://www.microscopy.org/
Society for General Microbiology	https://socgenmicrobiol.org.uk/
Society for Industrial Microbiology	www.simbhq.org
PLANTS	
American Society for Horticultural Science	https://ashs.org/
American Society of Agronomy	www.agronomy.org
American Society of Plant Biologists	www.aspb.org
American Society of Plant Taxonomists	https://www.aspt.net/
Botanical Society of America	www.botany.org
International Society of Arboriculture	www.isa-arbor.com
National Arborist Association	www.natlarb.com
Phycological Society of America	www.psaalgae.org
Society of American Foresters	www.safnet.org
WOMEN IN BIOLOGY	
Women in Biology	https://www.womeninbio.org/
ZOOS/COLLECTIONS	
American Zoo and Aquarium Association	www.aza.org
Natural Science Collections Alliance	www.nscalliance.org

Important Transferable Qualities To Include On Your Resume

Analytical skills. Biologists need to be able to conduct scientific experiments and analyses with accuracy and precision.

Critical-thinking skills. Biologists draw conclusions from experimental results through sound reasoning and judgment.

Listening skills. Biologists must carefully follow the instructions of biochemists, microbiologists, and other scientists when carrying out experiments and analyses.

Observation skills. Biologists must constantly monitor their experiments. They need to keep a complete, accurate record of their work, such as the conditions under which the experiment was carried out, the procedures they followed, and the results they obtained.

Teamwork. Biologists work together on teams under the direction of biologists or other scientists.

Technical skills. Biologists must be able to set up and operate sophisticated equipment and instruments. They also may need to adjust equipment to ensure that experiments are conducted properly.

Writing skills. Biologists must write reports that summarize their findings and results clearly.

What Do Employers Look For? (NACE 2020 Job Outlook for Students)

