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
Animal Scientist
Aquaculture Farmer
Aqua culturist
Aquarium & Museum
Aquarium Technician
Aquatic Biologist
Barrier Beach Mgr
Bio-Engineer
Bio-Technologist
Biochemist
Biometrician
Boat Builder & Repair
Botanist
Chem. Oceanographer
Chiropractor
Coastal Resources Mgr.
Commercial Fish. Eng.
Coroner
Dentist
Dietitian & Nutritionist
Ecologist
Pharmacy Technician
Science Lab Tech.
Zoologist
Wildlife Resources Mgr.
Technical Writer
Underwater Technician
Geophysicist/Physicist
Water Quality Technician

Environmental Engineer
Environmental Health
Environmental Protection
Ergonomist
Fish Hatchery Tech
Fisheries Conservation
Florist
Food Scientist-Tech
Forester
Genetic Eng. Research
Geographer
Health Officer
Horticulturist
Hospital Administrator
Hydrographic Surveyor
Industrial Hygienist
Industrial Marine Econ.
Limnological Technician
Marine-Coastal Consult
Marine Bacteriologist
Marine Biologist
Marine Ecologist
Physical Therapist
Public Health Worker
Science Teacher
State Parks & Recreation
Test-Inspection Tech.
Veterinarian
Wildlife Biologist
Seafood Processor-Researcher
Marine Engineering Tech
Marine Fisheries/Worker
Marine Geologist
Marine Sales
Marine Tourist Worker
Market Research Analyst
Medical Illustrator
Medical Laboratory Tech
Medical Librarian
Medical Technologist
Meteorologist
Microbiologist
Molecular Biologist
Mortician
Museum/Aquarium Admin.
Mycologist
Naval Architect
Net Designer
Neurobiologist
Oceanographer
Paramedic
Parasitologist
Pharmaceutical Sales
Physician
Salt Marsh Manager
Science Writer
Soil Conservationist
Systems Analyst
Toxicologist
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.)

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/

Bio-Tech
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!

<table>
<thead>
<tr>
<th><strong>BIOLOGY</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>American Institute of Biological Sciences</td>
<td><a href="http://www.aibs.org">www.aibs.org</a></td>
</tr>
<tr>
<td>American Society for Photobiology</td>
<td><a href="https://photobiology.org/">https://photobiology.org/</a></td>
</tr>
<tr>
<td>American Society for Gravitational &amp; Space Biology</td>
<td><a href="http://www.asgsr.org">www.asgsr.org</a></td>
</tr>
<tr>
<td>American Society of Plant Biologists</td>
<td><a href="http://www.aspb.org">www.aspb.org</a></td>
</tr>
<tr>
<td>Association for Tropical Biology and Conservation</td>
<td><a href="http://www.tropicalbiology.org">www.tropicalbiology.org</a></td>
</tr>
<tr>
<td>Association of Biomolecular Resource Facilities</td>
<td><a href="http://www.abrf.org">www.abrf.org</a></td>
</tr>
<tr>
<td>Biophysical Society</td>
<td><a href="http://www.biophysics.org">www.biophysics.org</a></td>
</tr>
<tr>
<td>Biotechnology Industry Organization</td>
<td><a href="https://www.bio.org/">https://www.bio.org/</a></td>
</tr>
<tr>
<td>Federation of American Societies for Experimental Biology</td>
<td><a href="http://www.faseb.org/">www.faseb.org/</a></td>
</tr>
<tr>
<td>International Society of Ethnobiology</td>
<td><a href="http://www.ethnobiology.net">www.ethnobiology.net</a></td>
</tr>
<tr>
<td>Intl Soc for Molecular Electronics and Biocomputing</td>
<td><a href="http://mebc.elte.hu/mebc">http://mebc.elte.hu/mebc</a></td>
</tr>
<tr>
<td>International Society of Arboriculture</td>
<td><a href="http://www.isa-arbor.com">www.isa-arbor.com</a></td>
</tr>
<tr>
<td>Marine Conservation Biology Institute</td>
<td><a href="https://marine-conservation.org/">https://marine-conservation.org/</a></td>
</tr>
<tr>
<td>Microscopy Society of America</td>
<td><a href="https://www.microscopy.org/">https://www.microscopy.org/</a></td>
</tr>
<tr>
<td>National Association of Biology Teachers</td>
<td><a href="http://www.nabt.org">www.nabt.org</a></td>
</tr>
<tr>
<td>Society for Conservation Biology</td>
<td><a href="http://www.conbio.org">www.conbio.org</a></td>
</tr>
<tr>
<td>Society for Cryobiology</td>
<td><a href="http://www.societyforcryobiology.org">www.societyforcryobiology.org</a></td>
</tr>
<tr>
<td>Organization</td>
<td>Website</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Society for Developmental Biology</td>
<td><a href="http://www.sdbonline.org">www.sdbonline.org</a></td>
</tr>
<tr>
<td>Society for Integrative and Comparative Biology</td>
<td><a href="http://www.sicb.org">www.sicb.org</a></td>
</tr>
<tr>
<td>Society for Industrial Microbiology</td>
<td><a href="https://www.simbhq.org/">https://www.simbhq.org/</a></td>
</tr>
<tr>
<td>Society for Mathematical Biology</td>
<td><a href="http://www.smb.org">www.smb.org</a></td>
</tr>
<tr>
<td>BIO-ETHICS</td>
<td></td>
</tr>
<tr>
<td>American Society for Bioethics and Humanities</td>
<td><a href="http://www.asbh.org">www.asbh.org</a></td>
</tr>
<tr>
<td>American Society for Law, Medicine, and Ethics</td>
<td><a href="http://www.asime.org">www.asime.org</a></td>
</tr>
<tr>
<td>International Association of Bioethics</td>
<td><a href="https://iab-website.iab-secretariat.org/">https://iab-website.iab-secretariat.org/</a></td>
</tr>
<tr>
<td>Public Responsibility in Medicine and Research</td>
<td><a href="http://www.primr.org">www.primr.org</a></td>
</tr>
<tr>
<td>Sigma Xi Scientific Research Society</td>
<td><a href="http://www.sigmaxi.org">www.sigmaxi.org</a></td>
</tr>
<tr>
<td>Society for Medical Decision Making</td>
<td><a href="http://www.smdm.org">www.smdm.org</a></td>
</tr>
<tr>
<td>BIO-TECHNOLOGY</td>
<td></td>
</tr>
<tr>
<td>Biotechnology Industry Organization</td>
<td><a href="http://www.bio.org">www.bio.org</a></td>
</tr>
<tr>
<td>Massachusetts Biotechnology Council</td>
<td><a href="http://www.massbio.org">www.massbio.org</a></td>
</tr>
<tr>
<td>Society for Industrial Microbio and Biotech</td>
<td><a href="http://www.simbhq.org">www.simbhq.org</a></td>
</tr>
<tr>
<td>BOTANY</td>
<td></td>
</tr>
<tr>
<td>Society for Economic Botany</td>
<td><a href="http://www.econbot.org">www.econbot.org</a></td>
</tr>
<tr>
<td>CELL BIOLOGY</td>
<td></td>
</tr>
<tr>
<td>American Physiological Society</td>
<td><a href="http://www.the-aps.org">www.the-aps.org</a></td>
</tr>
<tr>
<td>American Society for Biochemistry and Molecular Bio</td>
<td><a href="http://www.asbmb.org">www.asbmb.org</a></td>
</tr>
<tr>
<td>American Society for Cell Biology</td>
<td><a href="http://www.ascb.org">www.ascb.org</a></td>
</tr>
<tr>
<td>Cell Death Society</td>
<td><a href="http://www.celldeath-apoptosis.org">www.celldeath-apoptosis.org</a></td>
</tr>
<tr>
<td>Microbiology Society</td>
<td><a href="http://www.microbiologysociety.org">www.microbiologysociety.org</a></td>
</tr>
<tr>
<td>Society for In Vitro Biology</td>
<td><a href="http://www.sivb.org">www.sivb.org</a></td>
</tr>
<tr>
<td>GENERAL SCIENCES</td>
<td></td>
</tr>
<tr>
<td>American Association for the Advancement of Science</td>
<td><a href="http://www.aaas.org">www.aaas.org</a></td>
</tr>
<tr>
<td>American Institute of Biological Sciences</td>
<td><a href="http://www.aiibs.org">www.aiibs.org</a></td>
</tr>
<tr>
<td>Natl Academies of Sciences Engineering Medicine</td>
<td><a href="https://www.nationalacademies.org/home">https://www.nationalacademies.org/home</a></td>
</tr>
<tr>
<td>National Geographic Society</td>
<td><a href="http://www.nationalgeographic.com">www.nationalgeographic.com</a></td>
</tr>
<tr>
<td>National Institutes of Health</td>
<td><a href="http://www.nih.gov">www.nih.gov</a></td>
</tr>
<tr>
<td>National Science Foundation</td>
<td><a href="http://www.nsf.gov">www.nsf.gov</a></td>
</tr>
<tr>
<td>GENETICS</td>
<td></td>
</tr>
<tr>
<td>American College of Medical Genetics</td>
<td><a href="http://www.acmg.net">www.acmg.net</a></td>
</tr>
<tr>
<td>American Peptide Society</td>
<td><a href="https://www.americanpeptidesociety.org/">https://www.americanpeptidesociety.org/</a></td>
</tr>
<tr>
<td>American Society of Human Genetics</td>
<td><a href="http://www.ashg.org">www.ashg.org</a></td>
</tr>
<tr>
<td>Genetics Society of America</td>
<td><a href="http://www.genetics-gsa.org">www.genetics-gsa.org</a></td>
</tr>
<tr>
<td>International Federation of Human Genetics Societies</td>
<td><a href="http://www.ifhgs.org">www.ifhgs.org</a></td>
</tr>
<tr>
<td>Protein Society</td>
<td><a href="http://www.proteinsociety.org">www.proteinsociety.org</a></td>
</tr>
<tr>
<td><strong>MARINE SCIENCE</strong></td>
<td></td>
</tr>
<tr>
<td>Marine Life Alliance</td>
<td><a href="https://worldcetaceanalliance.org/partners/">https://worldcetaceanalliance.org/partners/</a></td>
</tr>
<tr>
<td>Marine Conservation Biology Institute</td>
<td><a href="http://marine-conservation.org">http://marine-conservation.org</a></td>
</tr>
<tr>
<td>Society for Marine Mammalogy</td>
<td><a href="http://www.marinemammalscience.org">www.marinemammalscience.org</a></td>
</tr>
<tr>
<td>Society for Wetland Scientists</td>
<td><a href="http://www.sws.org">www.sws.org</a></td>
</tr>
<tr>
<td><strong>MICROBIOLOGY</strong></td>
<td></td>
</tr>
<tr>
<td>American Microscopical Society</td>
<td><a href="http://amicros.org">http://amicros.org</a></td>
</tr>
<tr>
<td>American Society for Microbiology</td>
<td><a href="http://www.asm.org">www.asm.org</a></td>
</tr>
<tr>
<td>Microscopy Society of America</td>
<td><a href="https://www.microscopy.org/">https://www.microscopy.org/</a></td>
</tr>
<tr>
<td>Society for General Microbiology</td>
<td><a href="https://socgenmicrobiol.org.uk/">https://socgenmicrobiol.org.uk/</a></td>
</tr>
<tr>
<td>Society for Industrial Microbiology</td>
<td><a href="http://www.simbhq.org">www.simbhq.org</a></td>
</tr>
<tr>
<td><strong>PLANTS</strong></td>
<td></td>
</tr>
<tr>
<td>American Society of Agronomy</td>
<td><a href="http://www.agronomy.org">www.agronomy.org</a></td>
</tr>
<tr>
<td>American Society of Plant Biologists</td>
<td><a href="http://www.aspbo.org">www.aspbo.org</a></td>
</tr>
<tr>
<td>American Society of Plant Taxonomists</td>
<td><a href="https://www.aspt.net/">https://www.aspt.net/</a></td>
</tr>
<tr>
<td>Botanical Society of America</td>
<td><a href="http://www.botany.org">www.botany.org</a></td>
</tr>
<tr>
<td>International Society of Arboriculture</td>
<td><a href="http://www.isa-arbor.com">www.isa-arbor.com</a></td>
</tr>
<tr>
<td>National Arborist Association</td>
<td><a href="http://www.natlarb.com">www.natlarb.com</a></td>
</tr>
<tr>
<td>Phycological Society of America</td>
<td><a href="http://www.psaalgae.org">www.psaalgae.org</a></td>
</tr>
<tr>
<td>Society of American Foresters</td>
<td><a href="http://www.safnet.org">www.safnet.org</a></td>
</tr>
<tr>
<td><strong>WOMEN IN BIOLOGY</strong></td>
<td></td>
</tr>
<tr>
<td>Women in Biology</td>
<td><a href="https://www.womeninbio.org/">https://www.womeninbio.org/</a></td>
</tr>
<tr>
<td><strong>ZOO/COLLECTIONS</strong></td>
<td></td>
</tr>
<tr>
<td>American Zoo and Aquarium Association</td>
<td><a href="http://www.aza.org">www.aza.org</a></td>
</tr>
<tr>
<td>Natural Science Collections Alliance</td>
<td><a href="http://www.nscalliance.org">www.nscalliance.org</a></td>
</tr>
</tbody>
</table>
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)