Program Objectives

The Department of Biological Sciences offers a B.S. with the opportunity to concentrate in human biology, biotechnology, and ecology, as well as a two-year non-degree program in pre-pharmacy and post-baccalaureate certificates in premedical studies and pre-veterinary studies.

All programs of study provide students with a liberal arts education emphasizing the sciences. Students also get strong hands-on experience by taking at least 4-6 lab classes, and many students get enhanced practical experience through research positions (volunteer, work study, grant funded, and fellowships) in science research labs at USM and elsewhere.

The Department of Biological Sciences also offers a master’s degree in biology, with both thesis research and literature research options.

Degrees & Concentrations Offered

Graduation Planner: usm.maine.edu/advising/degreeplanning
Degree Offered: Bachelor of Science
Majors Offered: Biotechnology, Ecology, General Biology, Human Biology (Pre-Med), Teacher Certification in Life Sciences
Minor Offered: Biology
Master of Science: Biology
Concentrations Offered: Pre-pharmacy program (Non-degree)
Post-Baccalaureate Certificates: Pre-medical studies, Pre-veterinary studies

The Human Biology major is appropriate for students interested in Pre-med, pre-dental, pre-professional health sciences, and General Biology major is appropriate for Pre-vet.

Career Possibilities*

Animal Scientists
Bioinformatics Technicians
Biochemists and Biophysicists
Biochemical Engineers
Biological Technicians
Biological Science Teachers, Postsecondary Biologists
Biomedical Engineers
Conservation Scientists and Foresters
Dentists
Environmental Science Teachers
Environmental Restoration Planners
Geneticists
Molecular and Cellular Biologists
Optometrists
Pharmacists
Physicians
Veterinarians
Zoologists and Wildlife Biologists

* Additional education, training or experience may be required.

Acquired Transferable Skills

Complex Problem Solving
Critical Thinking
Creativity
Deductive Reasoning
Information Ordering
Judgment and Decision Making
Mathematical Reasoning
Oral & Written Communication
Reading Comprehension

For more information on transferable skills go to: usm.maine.edu/community-engagement-career-development/career-tools
## What can I do with this major?*

<table>
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<tr>
<th>AREA</th>
<th>EMPLOYERS</th>
<th>INFORMATION/STRATEGIES</th>
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| Research & Development | Industry and laboratories  
Basic or Applied Quality Control Administration | • Learn to set up, operate, maintain laboratory instruments and equipment, and monitor experiments.  
• Seek research experience with professors.  
• Gain experience through part-time jobs, internships, or volunteering.  
• Earn a MS for advancement, more responsibility and higher pay. |
| Biomedical | Colleges and universities  
Biophysics  
Biochemistry  
Cellular/Molecular Bio. Genetics, Immunology Pathology  
Pharmacology | • Join related student organizations & demonstrate leadership abilities.  
• Gain laboratory experience through coursework and through faculty-led research projects.  
• Learn to set up, operate, maintain laboratory instruments and equipment, and monitor experiments.  
• Seek internships, part-time employment and volunteer opportunities in the biomedical field. |
| Organismal/Ecological | Colleges and universities  
Veterinary hospitals  
NIH, CDC, FDA, EPA, Dept. of Ag  
Independent laboratories  
Zoos and aquariums  
Wildlife preserves and parks  
Conservation agencies  
Botanical gardens and arboretums | • Hone your ability to gather, assess, evaluate, interpret, and share technical and scientific information.  
• Pursue extensive laboratory and research experience by working with faculty, through independent research classes, as a student employee, or through other departmental programs.  
• Gain related part-time jobs, internships, or volunteer experiences.  
• Join student chapters of professional organizations related to your area of interest. |

*To learn about these areas and much more visit: [whatcanidowiththismajor.com/major](http://whatcanidowiththismajor.com/major) • © 2011 What Can I Do With This Major

### Enrichment Opportunities

**Internships**

BIO 441 Problems in Biology (Indep. Study)  
Various Research Opportunities:  
[usm.maine.edu/cecd](http://usm.maine.edu/cecd)

**Study Abroad**

For more information contact the USM Office of International Programs.  
[usm.maine.edu/international/study-abroad](http://usm.maine.edu/international/study-abroad)

**Clubs & Organizations**

Biology Club, [Biology Club Listserv](http://bioloclublistserv.usm.maine.edu/)

**USM Corporate Partners**

The USM Corporate Partners are over 350 business people, from nearly 100 companies.  
[usm.maine.edu/corporatepartners](http://usm.maine.edu/corporatepartners)

### Helpful Career Links

**USMCareerConnections:**

USM’s career network for job and internship searches.  
[usm.maine.edu/community-engagement-career-development/usmcareerconnections](http://usm.maine.edu/community-engagement-career-development/usmcareerconnections)

**O*NET OnLine:**

Learn more about a career opportunity by researching it with O*NET.  
[onetonline.org](http://onetonline.org)

**Occupational Outlook Handbook:**

Learn more about a career opportunity by researching it with OOH.  
[bls.gov/ooh](http://bls.gov/ooh)

**PROFESSIONAL ASSOCIATIONS To name a few...**

- American Institute of Biological Sciences  
- American Society for Cell Biology  
- American Society for Microbiology  
- Biotechnology Institute  
- American Society of Human Genetics  
- Biotechnology Industry Organization  
- Association for the Sciences of Limnology and Oceanography