

Major Possibilities: Biology



Summary

- A major in biology can prepare you for further education, such as a PhD or health professions degree, but there are some jobs that don't require more than a bachelor's degree. For example, graduates with a bachelor's degree may start as biological scientists in testing and inspection or may work in jobs related to biological science, such as technical sales or service representatives.
- A PhD usually is required for independent research, but a master's degree is sufficient for some jobs in applied research or product development; temporary postdoctoral research positions are common.

Biology major synopsis

The courses offered by the department cover a broad range of topics within three main subdivisions of biology: cellular and molecular biology, organismal biology, and ecology and evolutionary biology. Most of the courses have a lecture component combined with a laboratory component. The Biology Department offers both BA and BS degrees, as well as the interdisciplinary major in Environmental Studies. By appropriate selection of course combinations, students can prepare for various options, such as entrance into graduate or professional schools (dental, medical, medical technology, nursing, optometry, pharmacy and veterinary) and acquisition of positions in industry, government, public health and teaching. The BS degree is recommended for students seeking entrance into professional schools, while the BA allows more flexibility. The capstone experience is fulfilled by successful completion of integrative upper-level courses in the three biological subdivisions and participation in the senior assessment.

Sample job titles

Arts, Media & Entertainment

Biological Illustrator
Biological Photographer
Media Specialist
Medical Illustrator
Science Writer

Government

Agricultural Scientist
Biochemist
Biological/Medical Scientist
Botanist
Combat Medic
Ecologist
Environmental Protection Specialist
Environmental Technician

Forester
Horticulturalist
Medical Scientist
Microbiologist
Natural Resources Specialist
Range Manager
Research Assistant
Social Scientist
Soil Conservationist
Statistician

Industry and Commerce

Analytical Chemist
Animal Breeder
Aquatic Biologist
Dietician

Engineer
Financial Analyst
LCMSMS Operator
Nutritionist
Petroleum Technician
Respiratory Therapist
Zoologist

Service and Education

Biological Technician
Chemical Technician
Chiropractor
Clinical Lab Technician
Dentist
Doctor
Electroneurodiagnostician

ER Scribe
GIS Analyst
Health Information Tech
Medical Assistant
Nuclear Technician
Optometrist
Patient Care Technician
Pharmacist
Physical Therapist
Podiatrist
Process Technician
Radiological Technician
Research Technician
Science Teacher
Speech Pathologist
Surgeon

Sample internship employers of SU students

Animal Hospital of Georgetown
Austin State Hospital
Cross Cultural Solutions
Bodega Marina Laboratory
El Ranchito
Federal Food and Drug Administration

FDA Office of Orphan Products Development
Georgetown Public Health Department
King's College Hospital (London)
REU with Cornell University
REU with NSF
Williamson County Department of Health Services

Possible internship sites

Alaska State Parks
Apple Health and Fitness
Associated Colleges of the South
Carnegie Institute - Washington, DC
Ceiba Foundation for Tropical Conservation
Chicago Botanic Garden
Clean Water Action
Cumberland Center for Conservation and Sustainable Development
Dallas Services for the Visually Impaired

Institute of Paper Science and Technology
Kewalo Basin Marine Mammal Laboratory
La Sima Foundation, Inc.
Leukemia Society of America
Lunar and Planetary Institute
Organic Botanicals, LLC.
Remedy Addiction Counselors, Inc.
Sea World Adventure Camp
Seasonal Field Botanist - The Nature Conservancy

Sample full-time employers of SU grads

Administrator (Dell Children's Medical Center of Central Texas)
Analytical Chemist (DHL Analytical)
Biological/Environmental Quality Site Tech (Hospira)
Clinical Research Assistant (TAMU Medical Center)
Combat Medic (United States Army)
Customer Service Rep (Bio TRUST Nutrition)
Database Management (Elfin Oil Inc.)
Data Coordinator (Mary Crowley Cancer Research Centers)
Enforcement Coordinator (TCEQ)
Engineer (Weatherford International)
Environmental Protection Specialist (Williamson County and Cities Health District)
ER Scribe (Metroplex Hospital)
Field Manager (The Fund for Public Internet Research)
Financial Advisor (AIG)
GIS Analyst (Oak Ridge Institute for Science and Education)
Infant Hearing Screener (UTMB, Dept. of Audiology and Speech)
Infectious Disease Technologist (VRL Labs)
Lab Assistant (ProPath Laboratories)
Medical Assistant (Plaza OB/GYN Associates)
Medical Lab (United States Army)
Optometric Assistant (Drs. Comoli and Ethridge)
Natural Resources Specialist (Texas Commission on Environmental Quality)
Pathology Lab Research Assistant (MD Anderson Cancer Center)
Patient Care Secretary (Lighthouse Hospice)
Pharmacy Technician (Northwest Hills Pharmacy)
Physical Therapy Technician (Texas Physical Therapy Specialists)
Professional Sales Rep. (Reliant Pharmaceuticals)
Radiation Therapist (MD Anderson Cancer Center)
Research Asst., Department of Pulmonary Pathology (UT Health Science Center)
Research Assistant (Start Center for Cancer Care)
Serum Technician (Allergy and Asthma Clinic of Central Texas)
Teacher (Teach for America)
Toxicology Lab Tech (Health Track RX)
WorkSTEPS/Physical Therapy Technician (Texas Physical Therapy Specialists)

Professional associations

American Association for the Advancement of Science: www.aaas.org
American Institute of Biological Sciences: aibs.org
American Society for Biochemistry and Molecular Biology: www.asbmb.org
American Society for Cell Biology: www.ascb.org
American Society for Clinical Laboratory Science: www.ascls.org
American Society for Microbiology Careers: www.asmcareerconnections.org
American Zoo and Aquarium Association: www.aza.org
Federation of American Societies for Experimental Biology: www.faseb.org
National Science Foundation: www.nsf.gov
National Science Teacher's Association: www.nsta.org
Society for Integrative & Comparative Biology: www.sicb.org
Society for Molecular Biology and Evolution: www.smbe.org

Additional Web resources

Biology Department- Southwestern University: www.southwestern.edu/departments/biology/forstudents.php
Biotechnology Employment Site: www.biospace.com/jobs/
Biotechnology Institute: www.biotechinstitute.org
Careers in Biology: <http://www.emporia.edu/biosci/general-information/careers-in-biology.html>
Environmental Jobs: www.environmentalcareer.com
Occupation Outlook Handbook: www.bls.gov/ooh/life-physical-and-social-science/biochemists-and-biophysicists.htm
Science Careers: sciencecareers.sciencemag.org
SICB Career Info: www.sicb.org/careers/index.php3
Undergraduate Research Experience: www.nsf.gov/crssprgm/reu/reu_search.jsp

Career Services' print resources

100 Jobs in the Environment
101 Careers in Public Health
Alternative Careers in Science
A Career in Statistics Beyond the Numbers
Careers in the Environment
Career Opportunities in Forensic Science
Career Opportunities in Science
Careers in Food Science
Career Opportunities in Agriculture, Food, and Natural Resources
Career Opportunities in Biotechnology and Drug Development
Career Opportunities in Conservation and the Environment
Careers for Animal Lovers and Other Zoological Types
Careers for Plant Lovers and Other Green Thumb Types
The Eco Guide to Careers that Make a Difference: Environmental Work for a Sustainable World
Exploring Health Care Careers
Great Jobs for Biology Majors
Great Jobs for Environmental Studies Majors
Green Jobs for a New Economy
Opportunities in Animal and Pet Care Careers
Opportunities in Biological Science Careers
Opportunities in Biotechnology Careers
Opportunities in Dental Care Careers
Opportunities in Eye Care Careers
Opportunities in Forensic Science Careers
Opportunities in Holistic Healthcare Careers
Opportunities in Nutrition Careers
Opportunities in Occupational Therapy Careers
Opportunities in Pharmacy Careers
Opportunities in Physical Therapy Careers
Opportunities in Speech-Language Pathology
Public Health
Top 20 Biotechnology & Pharmaceutical Firms
Vault Career Guide to Biotech
Winning the Games Scientists Play