

SOUTHWESTERN UNIVERSITY

**Center for Career & Professional Development** 

### **CENTER FOR CAREER & PROFESSIONAL DEVELOPMENT**

# Major Possibilities: Biology

# **Quick Facts**

- 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.
- Internships (including research experiences and healthcare shadowing) help shape professional identities, develop 21<sup>st</sup> century career-readiness skills, and make meaning of the academic experience.

# **Biology Major Synopsis**

The Biology Department presents students with the challenge and excitement of learning about living organisms and their relationships to their environment. 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 courses have a lecture component combined with a laboratory component. The Biology Department offers both BA and BS degrees as well as a minor while also supporting 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. Students should consult with their academic advisers and other members of the department for assistance in making proper course selections that will prepare them for their chosen career directions. The BS degree is recommended for students seeking entrance into professional schools, graduate schools, or technician positions in industry, while the BA degree allows more flexibility.

# Sample Job Titles

ARTS, MEDIA, AND 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 Horticulturist 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/Possible Internship Employers of SU Students

Alaska State Parks Animal Hospital of Georgetown - Georgetown, TX Apple Health and Fitness - Austin, TX Austin State Hospital - Austin, TX Cambrian Environmental - Georgetown, TX Bodega Marine Laboratory - Bodega Bay, CA Carnegie Institute - Washington, DC Ceiba Foundation for Tropical Conservation - Madison, WI Chicago Botanic Garden - Chicago, IL Clean Water Action - Austin, TX Clinica San Jose - Arica, Chile Cumberland Center for Conservation & Sustainable Development Federal Food and Drug Administration - Washington, DC FDA Office of Orphan Products Development - Washington, DC Georgetown ISD - Georgetown, TX

# 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 Crawley 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)

Georgetown Public Health Department - Georgetown, TX Institute of Paper Science and Technology - Atlanta, GA Kewalo Basin Marine Mammal Laboratory - Honolulu, HI King's College Hospital - London, England Leukemia & Lymphoma Society - Rye Brook, NY LIVEstrong Foundation - Austin, TX Lunar and Planetary Institute - Houston, TX Remedy Addiction Counselors, Inc. - Mesquite, TX REUs with Cornell University and NSF - Cornell, NY Sea World Adventure Camp - San Antonio, TX The Nature Conservancy - Austin, TX St. David's Georgetown Hospital - Georgetown, TX Texas Physical Therapy Specialists - Georgetown, TX The Wesleyan at Scenic - Georgetown, TX Williamson County Department of Health Services - Georgetown, TX

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 American Institute of Biological Sciences American Society for Biochemistry and Molecular Biology American Society for Cell Biology American Society for Clinical Laboratory Science American Society for Microbiology Careers Association of Zoos and Aquariums Federation of American Societies for Experimental Biology National Science Foundation National Science Teachers Association Society for Integrative & Comparative Biology

Society for Molecular Biology and Evolution