

SCIENCE PATHWAYS

WSU Zoology



Education Requirements

Bachelor's	May lead to entry-level positions in natural resources, government, and industry.
Licensing	Some work environments require special licensing or certification. A teaching certificate is usually required for teaching in public schools (explore teaching majors). Alternative licensure options may be available in some science fields.
Graduate Degree	Required for specialization in most science fields.
Master's	Qualifies for applied research positions, administrative positions, and some community college teaching.
Doctorate	Required for advanced research, upper-level administrative positions, independent research, and most university-level teaching.
Professional	Advanced professional degrees may be required in some areas and can be combined with a science degree (e.g., MD/DO/DDS for medicine, JD for environmental law, MLS for librarian, MBA for upper management, etc.

Specialty Fields

Anatomy/Physiology	Bodily structure and functions in living organisms
Aquatic Biology	Study of plant and animal life in marine, brackish, and fresh waters.
Biochemistry	Chemistry of living organisms.
Biological Science Education	Secondary, college, or university.
Biomimetics	Imitation of natural biological systems in designing products and materials.
Biophysics	Use of the methods of physics to study biological systems.
Entomology	Study of insects
Epidemiology	Causes, patterns, and possible control of diseases in populations.
Evolutionary Biology	Evolutionary processes that produced the diversity of life on earth.
Forensic Science	Application of the sciences to crime scene investigation.
Herpetology	Study of amphibians and reptiles.
Human/Animal Genetics	Heredity and variation.
Immunology	Study of the immune system
Medical Laboratory Science (MLT, MT)	Performs medical analyses on bodily fluids and other specimens.
Medical Research (MS, PhD, MD/PhD)	Advanced research in areas such as epidemiology, immunology, toxicology, serology, medical genetics, etc.
Natural Resource Management	Responsible management and use of our natural resources.
Neuroscience	Multidisciplinary branch of science that studies the brain and nervous system.
Oceanography/Marine Science	Ocean and coastal process (multidisciplinary)
Serology	Study of serum and other bodily fluids (especially antibodies)
Systematics	Evolutionary history and relationships among plants.
Systems Ecology	Using mathematical models to demonstrate ecological concepts.
Taxonomy	Identification, naming, and classification of plants.
Toxicology	Adverse affects of the adverse effects of chemical substances (and other agents) on living organisms.
Wildlife Biology	Study and management of wildlife

Strategies

Academics

-- Read journals, magazines, and other literature to stay current in your field.

- Choose appropriate coursework to specialize in an area that interests you.
- Undergraduate research projects are great to decide on specific areas of interest, gain hands-on experience, and prepare for graduate school. Publishing and presenting research is ideal. Contact faculty in your department or the WSU Undergraduate Research Office for details.
- Consider electives in relevant fields such as computer science, business, public speaking, and writing.
- Obtain a minor that is compatible with your career goals can be helpful (e.g., neuroscience, business, criminal justice, etc.)
- Take courses and gain experience with geographic information systems (GIS)
- Maintain excellent grades, especially if you are considering graduate school.

Extracurricular

- Join professional organizations related to your field (low-cost student memberships are typically available). Consider attending professional conferences.
- Join related student organizations and consider holding leadership positions.

Skills

- Develop excellent mathematics, verbal, and written communication skills.
- Become proficient with computers and software related to your field (including desktop publishing).
- Develop strong interpersonal, teamwork, and presentation skills.
- Develop excellent verbal and written communication skills. Consider taking technical writing courses to aid in authoring proposals, obtaining grants, etc.
- Develop excellent laboratory skills.

Experience

- Obtain retail or other sales experiences for positions in pharmaceutical and biomedical sales.
- Post-doctoral experience is preferred for research positions in industry, universities, and government.
- Gain hands-on field experience for natural resources work.
- Build your resume through part-time, volunteer, internship, and summer work related to your major.

Technology

- Become proficient with high-tech scientific equipment.

Professional

- Develop physical stamina in order to do field research in remote areas under demanding conditions.
- Have a love of the outdoors, an interest in nature, and a desire to travel.

Network

- Develop an effective resume (or CV), interviewing skills, and job search strategies.
- Develop a network of professional relationships in your field.
- Learn the federal and state government application process.

Other

- Develop a broad background that includes other science subjects such as chemistry, physics, math and statistics.

Related Employers By Industry

Biotechnology

Biomedical Engineering	CR Bard	Salt Lake City	UT	www.crbard.com
Medical Devices	Biofire Diagnostics	Salt Lake City	UT	www.biofiredx.com
Pharmaceuticals	Advanced Research Institute	Ogden, Sandy, Logan	UT	www.advresearch.org

Business

Technical Sales	National Geographic Society	Washington, DC	Nationwide	www.nationalgeographic.com
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Communications				
Science News	American Association for the Advancement of Science	Washington, DC	National	www.aaas.org
Science Publishing/Illustration	American Association for the Advancement of Science	Washington, DC	National	www.aaas.org
	John Wiley and Sons	Hoboken	New Jersey, Nati	www.wiley.com
	National Geographic Society	Washington, DC	Nationwide	www.nationalgeographic.com
	Nature Publishing Group	London	England, Internat	www.nature.com
	Pearson Education	New York	NY, National, Int	www.pearsoned.com
Environmental				
Conservation/Research	American Conservation Experience (ACE)	South Lake Tahoe	CA	www.usaconservation.org
	Friends of the Great Salt Lake	Salt Lake City	UT	www.fogsl.org
	National Ecological Observatory Network	Boulder	CO	www.neoninc.org
	National Geographic Society	Washington, DC	Nationwide	www.nationalgeographic.com
	Nature Conservancy - Utah Field Office	Salt Lake City	UT, Nationwide	www.nature.org
	Ocean Mammal Institute (OMI)	Reading	PA, HI	www.oceanmammalinst.com
	Round River Conservation Studies	Salt Lake City	UT	www.roundriver.org
	U.S. Bureau of Land Management	Salt Lake City	UT	www.blm.com
	University of California - Center for Watershed Sciences	Davis	CA	watershed.ucdavis.edu
Consulting	SWCA Environmental Consultants	Salt Lake City	UT, Nationwide	www.swca.com
Education	Ogden Nature Center	Ogden	UT	www.ogdennaturecenter.org
Regulation	U.S. Bureau of Land Management	Salt Lake City	UT	www.blm.com
	U.S. Forest Service	Ogden	UT, Nationwide	www.fs.fed.us
Government				
City	Salt Lake City Corporation	SLC	UT	www.slcgov.com/jobs
Federal	U.S. Bureau of Land Management	Salt Lake City	UT	www.blm.com
	U.S. Federal Bureau of Investigation (FBI)	Salt Lake City	UT	www.fbi.gov
	U.S. Fish and Wildlife Service (FWS)	West Valley City	UT, Nationwide	www.fws.gov
	U.S. Forest Service	Ogden	UT, Nationwide	www.fs.fed.us
	U.S. National Park Service	Various	UT, Nationwide	www.nps.gov
	U.S. Secret Service	SLC	UT	www.secretservice.gov
Military	Hill Air Force Base	Layton	UT	www.hill.af.mil
State	Utah Department of Natural Resources	SLC	UT	naturalresources.utah.gov
	Utah Division of Parks and Recreation - Antelope Island State Park	Syracuse	UT	stateparks.utah.gov/park/east-canyon-state-park
	Utah Division of Parks and Recreation - East Canyon State Park	Morgan	UT	stateparks.utah.gov/park/east-canyon-state-park
	Utah Division of Wildlife Resources - Farmington Bay	Farmington	UT	www.wildlife.utah.gov
	Utah Division of Wildlife Resources - Northeastern Region	Salt Lake City	UT	wildlife.utah.gov
	Utah, State of	Salt Lake City	Utah	dhrm.utah.gov
Manufacturing				
Household Products	Sun Products Corporation	Salt Lake City	UT, Nationwide	www.sunproductscorp.com

Nutraceuticals & Bioactives	Nuskin	Ogden	UT	www.nuskin.com
Medical				
Hospitals and Clinics	University of Utah Healthcare (Hunstmans Cancer Institute)	Salt Lake City	UT	healthcare.utah.edu/hunstmancerinstitute
Insurance	UnitedHealth Group	Salt Lake City	UT, International	www.unitedhealthgroup.com
Public Health	U.S. National Institutes of Health	Bethesda	MD	www.nih.gov
Research	University of Utah Healthcare	Salt Lake City	UT	healthcare.utah.edu
	University of Utah Healthcare (Hunstmans Cancer Institute)	Salt Lake City	UT	healthcare.utah.edu/hunstmancerinstitute
Mining/Exploration				
Metals	Rio Tinto	Magna	UT	www.riotinto.com
Natural Resources				
Forests	U.S. Forest Service	Ogden	UT, Nationwide	www.fs.fed.us
	Utah Department of Natural Resources	SLC	UT	naturalresources.utah.gov
Landscape and Hazards	Utah Department of Natural Resources	SLC	UT	naturalresources.utah.gov
Water	Utah Department of Natural Resources	SLC	UT	naturalresources.utah.gov
Wildlife	HawkWatch International (HWI)	Salt Lake City	Utah, International	www.hawkwatch.org
	U.S. Fish and Wildlife Service (FWS)	West Valley City	UT, Nationwide	www.fws.gov
	Utah Department of Natural Resources	SLC	UT	naturalresources.utah.gov
	Utah Division of Wildlife Resources - Farmington Bay	Farmington	UT	www.wildlife.utah.gov
	Utah Division of Wildlife Resources - Northeastern Region	Salt Lake City	UT	wildlife.utah.gov
Other				
Funding/Grants	HawkWatch International (HWI)	Salt Lake City	Utah, International	www.hawkwatch.org
Nonprofit	Nature Conservancy - Utah Field Office	Salt Lake City	UT, Nationwide	www.nature.org
	Ocean Mammal Institute (OMI)	Reading	PA, HI	www.oceanmammalinst.com
Professional Organizations/Journals	American Association for the Advancement of Science	Washington, DC	National	www.aaas.org
Recreation				
Parks	Hogle Zoo	Salt Lake City	UT	www.hoglezoo.org
	Natural History Museum of Utah (U of U)	Salt Lake City	UT	www.nhmu.utah.edu
	U.S. National Park Service	Various	UT, Nationwide	www.nps.gov
	University of Utah - Utah Museum of Natural History	Salt Lake City	UT	nhmu.utah.edu
	Utah Division of Parks and Recreation - Antelope Island State Park	Syracuse	UT	stateparks.utah.gov/park/east-canyon-state-park
	Utah Division of Parks and Recreation - East Canyon State Park	Morgan	UT	stateparks.utah.gov/park/east-canyon-state-park
Research & Development				
Government	U.S. National Institutes of Health	Bethesda	MD	www.nih.gov
University	University of California - Center for Watershed Sciences	Davis	CA	watershed.ucdavis.edu
Technology				

Educational Software Consulting	Pearson Education	New York	NY, National, Int	www.pearsoned.com
Testing and Analysis				
Medical Lab	ARUP Laboratories	SLC	UT	www.aruplab.com

Sources

- Specialty definitions compiled from a variety of public web sources.
- Weber State University Graduate Survey
- What Can I Do With This Degree? Adapted from material prepared by Career Services at the University of Tennessee, Knoxville. (Online; Licensed by WSU)