

Bachelor of Science: Biology/Molecular, Micro, and Cell
Bachelor of Science: Biology/ Pre-Medical and Other Health Careers
Bachelor of Science: Biology/Organismal/Ecology
Minor: Biology

Biology is the study of the science of life in all its forms. The KU Biology programs help students to develop an appreciation for and knowledge of fundamental biological principles, develop skills in biological techniques, and prepare for employment and graduate, medical, or other professional schools. The programs have strong lab components that emphasize student involvement and close student-faculty interaction. Employers recommend one or more research experience and/or internships to be successful and competitive when entering this field.

Career types associated with Biology

(Is this a good fit for you? Are you a...)

- Investigative - “Thinker”
- Artistic - “Creative”
- Realistic - “Doer”

Related skills, values, and qualities

- Proficiency in reading, writing, thinking, questioning, analyzing and problem solving
- Ability to make critical observations and appropriate decisions
- Good manual dexterity and ability to operate scientific equipment
- Aptitude for accuracy and detail
- Ability to organize and maintain accurate records
- Ability to conduct and explain scientific research
- Ability to concentrate for long periods of time
- Knowledge of basic biological principles
- Patience

Courses Biology majors typically enjoy

- Biology
- Chemistry
- Environmental Science
- Health/Nutrition
- Physiology
- Zoology

Common interests of Biology majors

- Attending science exhibits and visiting nature centers, zoos or museums
- Conducting research and participating in science fairs and competitions
- Participating in conservation, recycling, health, and science-related clubs and organizations
- Working part-time or volunteering in a greenhouse, nursery, animal sanctuary, hospital, veterinary clinic, or with an environmental conservation organization
- Reading science and health/fitness magazines, books and other publications

For more information about the major

Contact the Biology Department, 223 Boehm, 610-683-4307 or visit www.kutztown.edu/Biology

KU Majors related to Biology

Biochemistry, Chemistry, Environmental Science, and Marine Biology, Secondary Education— Science

Investigative students may also be interested in: Anthropology, Computer Science, Criminal Justice, Economics*, Geography, Geology, German Studies, History, International Studies*, Mathematics, Multicultural Studies*, PA German Studies*, Physics, Political Science, Psychology, Sociology, Spanish, and Women’s Studies*

* minor only

FOUR STEPS TO SUCCESS

EXPLORE

DISCOVER

EXPERIENCE

IMPLEMENT

1ST YEAR

- Enroll in the Career Exploration Certificate.
- Attend info sessions to learn about career development and personal branding.
- Take a career assessment to identify and confirm interests.
- Get involved in campus clubs and organizations.
- Develop basic workplace skills through jobs or volunteer work.
- Talk with professors, family, and friends about career ideas.
- Conduct informational interviews with professionals working in fields of interest.
- Develop a relationship with your professors and faculty advisor.

2ND YEAR

- Meet with CDC career coach.
- Attend info sessions to learn about resume writing, and externships.
- Confirm your choice of major and consider options for double major or minor.
- Research careers of interest.
- Complete a job shadowing (externship) experience.
- Seek meaningful employment or volunteer work in a field related to your major.
- Explore options for undergraduate research and study abroad.
- Write a resume and have it reviewed by the CDC.
- Manage your online presence.

3RD YEAR

- Enroll in the Career Success Certificate.
- Complete an internship and/or undergraduate research.
- Attend info sessions about internships, interviewing, job search strategies, and grad school.
- Build a LinkedIn profile and continue to monitor your online presence.
- Complete a mock interview.
- Build skills through research projects, part-time employment, and volunteer work.
- Participate in employer panels, site visits & networking events.
- Attend internship & job fairs.
- Take on a leadership role in a student organization or work.
- Consider graduate school options and prepare for admissions tests.

4TH YEAR

- Attend your Senior Kick-off and other info sessions to prepare for job search/grad school.
- Update your resume and LinkedIn profile.
- Create cover letter drafts.
- Gain experience through internships and/or undergraduate research.
- Secure references for job/grad school applications.
- Create your "30 second" commercial/elevator pitch.
- Meet with CDC to develop job search strategies.
- Research employers.
- Network with professionals through events and social media.
- Join a professional organization in your discipline.
- Attend the senior etiquette luncheon or dinner.
- Participate in job fairs and on-campus interviewing.

Sample Career Titles

Biology majors can be found working in a wide variety of career fields. Here are just some career titles that may be of interest. Please note that some jobs may require further education and training. To learn more about these careers, visit <http://online.onetcenter.org> or www.bls.gov/oco.

- Animal Scientist
- Aquaculture Farmer
- Aquaculturist
- Aquarium & Museum Worker
- Aquarium Technician
- Aquatic Biologist
- Barrier Beach Manager
- Biochemist
- Bio-Engineer
- Biometrician
- Bio-Technologist
- Bioterrorism Expert
- Botanist
- Brewery Laboratorian
- Coastal Resources Worker
- College Professor
- Commercial Fishing Engineer
- Commercial Inland Water
- Coroner
- Dentist
- Dietitian & Nutritionist
- Ecologist
- Ergonomist

- Fisheries Conservationist
- Forester
- Funeral Director
- Genetic Engineering Researcher
- Health Officer
- Horticulturist
- Hospital Administrator
- Hydrographic Survey Technician
- Industrial Hygienist
- Limnological Technician
- Marine Bacteriologist/Biologists
- Marine Fisheries Worker
- Marine Geologist/Geophysicist/ Physicist
- Marine Tourist Worker
- Medical Librarian
- Medical Technologist
- Merchant Marine
- Meteorologist
- Microbiologist Mining & Petroleum Industry Worker
- Museum/Aquarium Administrator
- Mycologist

- Neurobiologist
- Pharmaceutical Salesperson
- Pharmacist
- Physical Therapist
- Physician
- Public Health Worker
- Research Assistant
- Science Laboratory Technician
- Science Teacher
- Seafood Processor-Researcher
- State Parks & Recreation Worker
- Test and Inspection Technician
- Toxicologist
- Underwater Technician
- Veterinarian
- Water Quality Technician
- Wildlife Biologist
- Wildlife Resources Worker

Common Internship Sites and Employers

Biology majors often find internships and employment in the following fields/industries.

- Agricultural Chemical Companies
- Biological Book/Journal Publishers
- Biological Testing Laboratories
- Business and Industry
- College/Universities
- Consulting Engineering Firms
- Ecological Organizations
- Hospitals/Medical Centers
- Medical Corporations
- Pharmaceutical Companies
- State/Federal Government

Handshake

Handshake is the primary online resource for preparing and connecting students and alumni with employers.
www.kutztown.edu/handshake

Useful Websites for Biology Majors

Whether you are researching related career fields, applying for internships or jobs, or planning to join a professional association, these websites are for you!

Industry/Employment Information

BioPharmGuy
<http://biopharmguy.com>

Biology Job Resources
www.biologyjobs.com

Biotechnology Industry Organization
www.bio.org

Careers in Biology
www.sicb.org/careers/index.php3

Environmental Careers World Job Bank
www.environmentaljobs.com

Medical Jobs
www.medicaljobs.org

MedZilla
www.medzilla.com

Science Careers
www.sciencecareers.org

Professional Associations

American Association of Cell Biology
www.ascb.org

American Institute of Biological Sciences
www.aibs.org

American Association for the Advancement of Science
www.aaas.org

American Society for Biochemistry and Molecular Biology
www.asbmb.org

American Society of Chemical Biology
www.ascb.org

American Society for Microbiology
www.asm.org

Biotechnology Industry Organization
www.bio.org

Counsel for the Advancement of Sci. Writing
www.casw.org

The National Academies
www.nas.edu

Related Area Employers

Aptagen
B. Braun
Berks Nature
DaVinci Science Center
East Penn Manufacturing
Eurofins Scientific
GlaxoSmithKline
Hawk Mountain Sanctuary
Health Network Laboratories
Johnson & Johnson
Lehigh Valley Health Network
Lehigh Valley Zoo
Mainline Health
Merck & Co., Inc.
Northumberland County Conservation District
Olympus Corporation
Patt Veterinary Associates LLC
Penn State Hershey Medical Center
Pfizer, Inc.
St. Luke's Health Network
Teva Pharmaceuticals
Tower Health Reading Hospital
Wildlands Conservancy

Building Your Resume for a Career in Biology

Building a strong resume for your career field starts long before you ever start your job search. Employers want to hire graduates who not only have the necessary educational background but also have experience applying that knowledge.

Brian Biology

bbiol000@live.kutztown.edu, www.linkedin.com/brian, 555-555-5555

PROFILE

Interested in working at a biological testing laboratory for Lehigh Valley Health Network.

COMPETENCIES & SKILLS

- Laboratory Equipment: Thin-layer chromatography, rotovap, micropipetting, electromyography, PCR
- Field Equipment: Surber sampler, sweep nets, sherman traps, light & pan traps
- Ability to work independently and in a team setting
- Strong research and critical thinking skills
- Excellent oral and written communication skills

EDUCATION

B.S. Kutztown University of Pennsylvania Kutztown, PA
Major: **Biology/Organismal Ecology**, Minor: **Environmental Geography** Dec 20xx
GPA: 3.67
Dean's List Fall 20xx-Spring 20xx

Study Abroad: Kutztown/University of Waikato Summer 20xx

Related Courses: Research Methods, Applied Environmental Biology, Invertebrate Biology, Entomology, Genetics, Ornithology, Animal Behavior, Comprehensive Animal Physiology, Environmental Conservation

RESEARCH & FIELD EXPERIENCE

Death of the American Bumble Bee: The Impact of Pesticides on Population & Pollination Levels Fall 20xx
Kutztown University, Dr. Bumble B.

- Conducted survey of American bumble bees in controlled location over 3 months
- Worked alongside advisor to track pesticide levels and bee activity
- Compiled results for submission to the *International Journal of Biological Sciences*

The Effects of Climate Change on Pennsylvania Hawk Migration Spring 20xx
Kutztown University, Dr. Hawk

- Utilized observational, photography and coding abilities to track hawk migration over 30-day period
- Recorded autumnal temperatures during observation period to discover potential migration relationship

INTERNSHIP EXPERIENCE

Philadelphia Zoo Philadelphia, PA
Education Ambassador Intern Summer 20xx

- Assisted with animal care and handling for educational programs
- Presented information on featured wildlife, natural habitats, and endangered species conservation efforts

Student Extern Sept 20xx

- Observed daily duties of zookeeper including animal diet adjustments and administration of medication

RELATED EXPERIENCE

Kutztown University Kutztown, PA
Biology Tutor Fall 20xx-Present

- Explain biological techniques and concepts (Principles of Biology, Intro to Zoology)
- Assist students with study skills and comprehension

CAMPUS INVOLVEMENT & PROFESSIONAL DEVELOPMENT

Member, Biology Club, Kutztown University Fall 20xx-Present

Recipient, Career Success Certificate, Kutztown University Career Development Center Fall 20xx

Recipient, Career Exploration Certificate, Kutztown University Career Development Center Fall 20xx

WORK EXPERIENCE

Starbucks Allentown, PA
Barista May 20xx-Present

- Train new employees on store policy/procedures, provide excellent customer service

Learn more about your field and develop the necessary skills for employment by gaining hands-on experience through internships & related experiences.

Utilize summer breaks to acquire valuable experience via volunteer or employment opportunities related to your major.

Develop professionally through campus involvement and professional memberships. This illustrates responsibility, leadership abilities and time management skills.