

# Biology

## Typical Career Fields:

*Research & Development* (projected growth 8% - 14%)

- Basic
- Applied
- Quality Control
- Administration
- Grant Writing

*Organismal Biology* (projected growth 3% - 7%)

- Botany & Plant sciences
- Ecology & Wildlife
- Marine & Aquatic
- Systematic (Taxonomy)
- Zoology
- Entomology
- Genetics
- Microbiology

*Healthcare* (projected growth 8% - 14%)

- Medicine
- Dentistry
- Optometry
- Podiatry
- Pharmacy
- Veterinary Medicine
- Occupational Therapy
- Physical Therapy
- Medical Technology
- Nuclear Medicine

*Education* (projected growth 14% or higher)

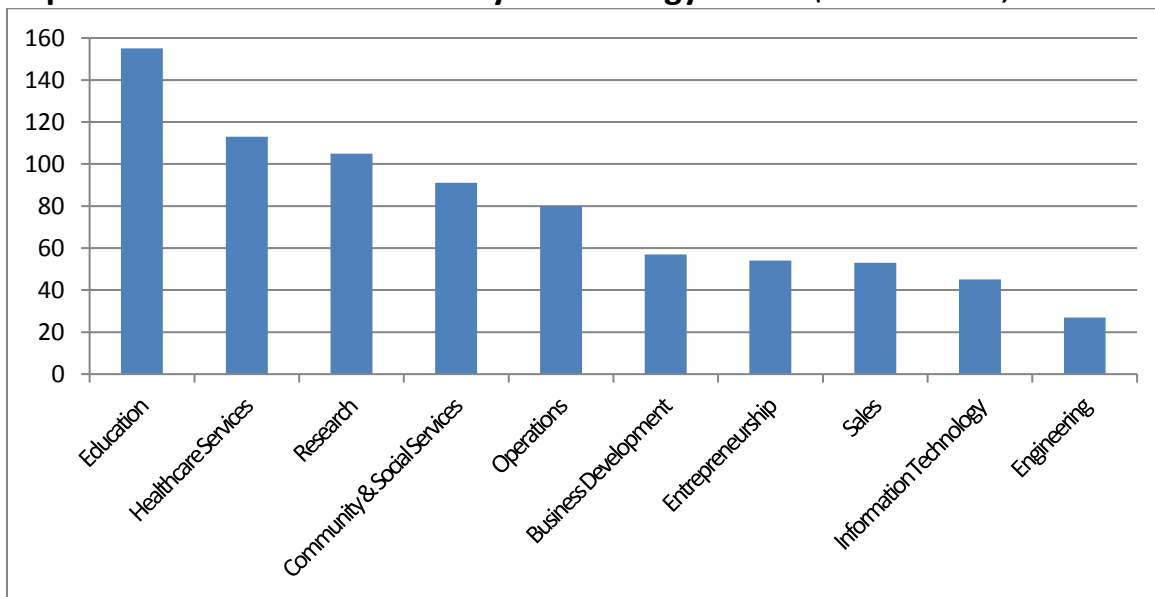
- Teaching (K-12)
- Non-classroom (nature sites, parks)



= Bright Outlook

Source: O\*NET

## Top Ten Career Fields Chosen by ESU Biology Grads: (Source: LinkedIn)



## Where Our Grads Go (top ten):

- University of Kansas
- Wolf Creek Nuclear Plant
- Shawnee Mission School District
- Olathe School District
- Newman Regional Health
- Hill's Pet Nutrition
- Pfizer
- US Army
- Westar Energy
- Blue Valley School District

View a list of required courses for this major at <http://www.emporia.edu/sac/list-of-majors.html>

Career Services

[career@emporia.edu](mailto:career@emporia.edu)

620-341-5407

[www.emporia.edu/careerservices](http://www.emporia.edu/careerservices)

## **Biology Majors**

Strategies to become more marketable at graduation

### **Research and Development** (Quality Control, Grant Writing, Applied)

- Learn to set up, operate, maintain laboratory instruments and equipment, and monitor experiments.
- Seek research experience with professors.
- Gain related experience through part-time jobs, internships, or volunteering.
- Complete a certificate training program, usually one year, to learn specialized laboratory techniques.
- Take a course in grant writing.
- A Bachelor's degree in biology qualifies one for laboratory technician or research assistant positions.
- Earn master's degree for better positions, advancement opportunities, more responsibility and higher pay.
- Obtain Ph.D. to direct research projects and lead research teams.
- Maintain a high grade point average and secure strong faculty recommendations to gain admittance into graduate school.

### **Organismal Biology** (Botany, Ecology, Zoology, Genetics, Microbiology)

- Seek related experience through coursework, part-time jobs, internships or volunteering.
- Conduct research or assist in research including the collection of information and samples of water, soil, plants, animals, etc.
- Join student chapters of professional organizations related to your area of interest.
- Obtain a Ph.D. for teaching and advanced research and management positions.

### **Healthcare** (Medicine, Dentistry, Optometry, Veterinary, Nuclear)

- Plan on attending medical school or other related graduate program.
- Maintain an outstanding grade point average, particularly in the sciences.
- Secure strong faculty recommendations.
- Meet with a pre-health advisor periodically.
- Join related student organizations, and demonstrate leadership abilities.
- Seek experiences in hospital or healthcare settings through volunteering, shadowing, part-time positions, or internships.
- Develop a backup plan in case medical/graduate school admission is denied.
- Consider alternative but related careers such as physician assistants.
- Research all of the various fields within medicine to determine career goals.

### **Education** (Public and Private Schools, Zoos, Museums, Secondary)

- Gain experience working with students through tutoring, part-time employment, or volunteering.
- Learn to work well with all types of people.
- Develop excellent interpersonal and public speaking skills.
- Certification is required for K-12 school teachers and varies by state.
- Master's degrees may be sufficient for teaching at community or two-year institutions.
- Ph.D. is needed for teaching opportunities at colleges and universities.

### **Communication** (Technical Writing, Illustrating, Editing, Photography)

- Acquire thorough knowledge of photographic procedures and technology.
- Take specific courses in biological, medical, and ophthalmic photography; courses in illustration and printing are also helpful.
- Take advanced courses in technical writing or journalism classes or consider a minor in either.
- Join professional associations like the National Association of Science Writers.