

Biology

Exploring the
science of life
from cells to
ecosystems



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COLLEGE OF SCIENCE
ACADEMIC BROCHURE



Highlights

- Biology majors have the flexibility to pursue a variety of interests in the biological sciences, or they can choose to focus their studies with one of these eight options: Ecology, Genetics, Marine Biology, Physiology and Behavior, Pre-Dentistry, Pre-Education, Pre-Medicine and Pre-Veterinary Medicine.
- Our Professional Development for Biologists courses help students acquire professional skills and learn about different careers and experiential learning opportunities to help them achieve their academic and career goals.
- The majority of Biology students conduct research or do an internship to further enhance their undergraduate experience and learning.
- Biology students benefit from specialized advising and other resources to prepare them for admission into health professions programs. 66% of students who used premed committee resources were accepted to medical school, well above the national average of 35%. Biology is also the home for pre-veterinary medicine students in the College of Science.
- More biology students study abroad and participate in international internships than any other major.



What kind of biologist will you be?

The biology major is housed in the nationally ranked Department of Integrative Biology in the School of Life Sciences. The Department offers Bachelor of Science degrees in Biology and Zoology with numerous curriculum options to suit students' interests and career goals. Students have the option to select from a wealth of introductory and advanced coursework in subjects, including ecology, genetics, physiology, behavior and marine biology.

Our students maximize their diverse coursework, which includes eight academic options, with hands-on, clinical, field and laboratory training that allows them to learn about careers while honing their scientific skills. Internships and research experiences in the United States and abroad help students further explore their interests and career goals.

Transformative experiences

The undergraduate experience is greatly enhanced by engaging in research and interacting one-on-one with faculty mentors who rank among the very best in their fields. In addition, students may apply for research funding from the University or the College of Science to support their own research projects.

Biology students are actively engaged in laboratory and field research, working alongside faculty in areas ranging from the impact of ocean acidification on marine organisms to the genetics of human parasite hosts. Past student research projects have included invasive species studies at the OSU Hatfield Marine Science Center, as well as cancer research at the prestigious OSU Linus Pauling Institute. Students may apply for departmental research credits to apply toward their major requirements.

Student success

Professional advisors help students make decisions that support their goals and abilities and guide their academic progress. Advisors can be tremendously helpful in interpreting and explaining university policies and procedures to keep students on track for graduation. Students can also consult with advisors to explore career options. For current course requirements, refer to the OSU Catalog (catalog.oregonstate.edu).



Sample curriculum

YEARS ONE & TWO

Professional Development I & II
Principles of Biology
Chemistry
Calculus
Organic Chemistry
General course: Genomes, Identities and Society

YEARS THREE & FOUR

Genetics
Cell and Molecular Biology
Ecology
Evolution
Biochemistry
Physics or Computer Science
Introduction to Statistical Methods
Microbiology
Elective credits for your Ecology, Genetics, Physiology and Behavior, Marine, Pre-Dentistry, Pre-Education, Pre-Medicine or Pre-Veterinary Medicine option

Research, study abroad or international internship

Recent graduates work as:

- Aquarists
- Veterinarians
- Ecologists at non-profits
- Federal agency biologists
- Genetics laboratory technicians
- Environmental consultants
- Science journalists
- Pharmaceutical sales representatives
- Environmental educators
- High school/ college teachers

Recent graduates have been accepted at:

- Medical schools
- Dental schools
- Health professional schools
- Graduate schools

What can you do with a degree in Biology?

Discover solutions to wildlife and human disease, lead change in marine conservation and policy, become a health professional or teacher.

Biology is the scientific study of life from individual cellular processes to how ecosystems function. Biological sciences are extremely diverse, spanning fields such as genetics, ecology, physiology and evolutionary biology. Our graduates pursue fascinating careers in genetic technologies, healthcare, environmental businesses, biological education in schools and museums and more. Our Biology major also provides outstanding preparation for graduate and professional schools.

Graduates who are career-ready

Biology students gain valuable scientific, technical and professional skills through a flexible and varied curriculum in addition to intensive field and laboratory experiences.

Professional activities that take students beyond the classroom include internships, undergraduate teaching, undergraduate research, and clinical work and clinical shadowing, which complement our curriculum and experiential coursework.

To gain a global perspective, many of our students participate in a focused education abroad program. Biology majors pursue international internships and field-based research experiences in a wide variety of areas that best align with their academic and career interests. Our students have made an impact around the world, working in medical clinics in India and Ecuador, conducting coral reef research in Turks and Caicos and working on biodiversity research in Panama.



The paleoecology lab studies fossils of small mammals to reconstruct how they have changed through time