

DEPARTMENT OF BIOLOGICAL SCIENCES

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The Department of Biological Sciences offers bachelor's degrees in biochemistry, biology, medical sciences, and microbiology. The core curriculum used for every major involves exposure to concepts fundamental to all living things at several levels of organization and emphasizes a broad cultural base and specific training in biology, chemistry, mathematics, and physics. A diverse range of upper-division electives are available to support each of the majors. Courses offered by the Department of Biological Sciences are available to students majoring in other disciplines who wish to increase their knowledge of science or obtain an academic minor.

Well-equipped laboratories are available, and students are encouraged to undertake research projects with the faculty. A wide variety of ongoing projects have produced a stimulating environment for graduate and undergraduate research. These projects include areas such as the pathophysiology of diseases that affect gastrointestinal functions; gene regulation changes in response to selection and the evolution of disordered proteins; behavioral development, play, sexual selection, and female mate choice; intraflagellar transport; the diversity and distribution of prokaryotes; mechanisms behind morbidity and mortality in infants congenitally infected with human cytomegalovirus; characterizing evolutionarily permissible ecological structures in microbial ecosystems and on developing bioinformatics for very large sequence datasets; molecular cues that promote development of the nervous system; patterns of species diversification across the tree of life; prokaryote motility system; the genomic architecture of evolving populations; protein structure and function; neuromuscular biomechanics of vertebrate organisms; models of adaptive evolution and experimental evolution in viruses; regulation of the immune response to coronavirus infection in the lung; effect of environmental factors on fish reproductive biology; cellular and molecular mechanisms of vertebrate retinal development and regeneration; phylogenetic methodology and comparative phylogeography; the ecology and evolution of prokaryotic organisms; adaptive evolution; and mammalian genome evolution.

For more complete information on research concentrations, please see faculty profiles on the departmental website (<http://www.uidaho.edu/sci/biology/>).

Graduates from the department enter a variety of fields, and many continue their education toward an advanced degree. Recent graduates have entered health-related professions, primary and secondary teaching, agribusiness, veterinary school, graduate school, law school, and state and national agencies that deal with biology (e.g., Idaho Department of Fish and Game, Environmental Protection Agency, United States Forest Service) as well as a variety of environmental consulting agencies and biotechnology companies.

Prospective students or students desiring more information may call (208-885-6280) or email the department (biosci@uidaho.edu).

Majors

- Biochemistry (B.S. Biochem) (<https://catalog.uidaho.edu/colleges-related-units/science/biological-science/biochemistry-bsbiochem/>)
- Bioinformatics (B.S.) (<https://catalog.uidaho.edu/colleges-related-units/science/biological-science/bioinformatics-bs/>)
- Biology (B.A. or B.S.) (<https://catalog.uidaho.edu/colleges-related-units/science/biological-science/biology-ba-bs/>)
- Medical Sciences (B.S.) (<https://catalog.uidaho.edu/colleges-related-units/science/biological-science/medical-sciences-bs/>)
- Microbiology (B.S. Microbiol.) (<https://catalog.uidaho.edu/colleges-related-units/science/biological-science/microbiology-bsmicrobiol/>)

Minors

- Bioethics Minor (See Department of Politics and Philosophy (<https://catalog.uidaho.edu/colleges-related-units/letters-arts-social-sciences/politics-philosophy/>))
- Biology Minor (<https://catalog.uidaho.edu/colleges-related-units/science/biological-science/biology-minor/>)
- Biochemistry Minor (<https://catalog.uidaho.edu/colleges-related-units/science/biological-science/biochemistry-minor/>)
- Microbiology Minor (<https://catalog.uidaho.edu/colleges-related-units/science/biological-science/microbiology-minor/>)
- Molecular Biology and Biochemistry Minor (<https://catalog.uidaho.edu/colleges-related-units/science/biological-science/molecular-biology-biochemistry-minor/>)

Biological Sciences Graduate Program

Candidates must fulfill the requirements of the College of Graduate Studies and of the Department of Biological Sciences. See the College of Graduate Studies (<https://catalog.uidaho.edu/colleges-related-units/graduate-studies/>) section for the general requirements applicable to each degree and the Department of Biological Sciences Graduate Student Handbook for required courses and procedures.

- Biology (M.S.) (<https://catalog.uidaho.edu/colleges-related-units/science/biological-science/biology-ms/>)
- Neuroscience (M.S.) (<https://catalog.uidaho.edu/colleges-related-units/science/biological-science/neuroscience-ms/>)
- Biology (Ph.D.) (<https://catalog.uidaho.edu/colleges-related-units/science/biological-science/biology-phd/>)
- Microbiology, Molecular Biology, and Biochemistry (Ph.D.) (<https://catalog.uidaho.edu/colleges-related-units/science/biological-science/biology-phd/>)
- Neuroscience (Ph.D.) (<https://catalog.uidaho.edu/colleges-related-units/science/biological-science/biology-phd/>)