

Biology

Department Office

Darwin Hall, Room 121
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Programs Offered

Bachelor of Arts in Biology
Bachelor of Science in Biology
Master of Arts in Biology
Minor in Biology
Teaching Credential Preparation

The Biology Department offers undergraduates two broadly based Bachelor's degree programs within which there are opportunities for selecting special concentrations. The department also offers a Master of Arts degree in Biology. A congenial atmosphere allows students to develop a close relationship with peers, graduate students, and faculty. Heavy emphasis is placed on laboratory and field work to give students practical experience.

The Biology curriculum is designed to provide students with strong backgrounds in the principles of biology and with rigorous upper-division instruction in a number of basic areas. This combination of breadth and in-depth instruction allows students to develop the intellectual foundations and skills necessary to deal with the specific biological concerns of today and the flexibility to meet the needs of the profession. A number of concentrations may be pursued.

Field courses draw upon an unparalleled diversity of habitats: streams, lakes, estuaries, bays, open coast, marshes, grasslands, vernal pools, oak woodlands, redwood groves, thermal springs, and geothermal stream fields, all close to the campus. In addition, the department maintains extensive museum collections of local plants (North Coast Herbarium of California), insects, and vertebrates. Excellent laboratory and greenhouse facilities, such as the Raymond Burr Greenhouse and orchid collection, exist for maintaining live material for classroom use and research. A twenty-one foot Boston Whaler is also available for aquatic research and teaching.

Laboratory courses focus on structure and development, physiology, microbiology, genetics, and cellmolecular biology. Laboratory instruction provides students with hands-on opportunities with physiological equipment, ultracentrifugation, PCR, DNA sequencing, electrophoresis, immunofluorescence microscopy, and microbiological techniques. A radioisotope laboratory and a darkroom are also available.

Career Alternatives

Biology graduates are prepared to enter the job market in a variety of careers, including biotechnology government service, park service, research, teaching, or medical technology. Students seeking a teaching credential may elect Biology as their major: SSU Biology graduates have an outstanding record of acceptance in advanced degree programs at technical, dental, veterinary, medical, and graduate schools, as well as in hospital traineeships in medical technology.



Bachelor of Arts Degree

Preparation for Degree Program

There are no prerequisites for matriculation in biology, but it is recommended for high school students interested in biology to take biology, chemistry, mathematics through trigonometry, and physics. Students transferring from community colleges should have completed a year of chemistry and introductory courses for biology majors.

Bachelor's Degrees in Biology	B.A.	B.S.
Degree Requirements	Units	Units
General Education	51	51
Biological Sciences (beyond GE)	39	44
Physical Sciences	13-19	27
General Electives	15-21	10
Total units needed for graduation	124	132

You may refer to the current SSU Catalog for details. The department has developed approximately 20 separate advisory plans leading to specific career alternatives. Within the guidelines of these plans are numerous options to allow students, in consultation with their advisors, to tailor the curriculum that will best suit their interests. It is the department's philosophy that all students should be broadly trained in general biology.

Biology Degree Concentrations

Biology majors may select, in consultation with advisor, one of the following concentrations for their B.A. or B.S. degree. The lower-division core is structured so that switching between the B.A. and B.S. programs during the first two years will not cause a delay in completing either degree. Upon completion of specified course work, that concentration will be designated on their transcript and diploma. Students should contact the Biology Department for specific requirements.

Bachelor of Arts	Bachelor of Science
Botany	Aquatic Biology
Marine Biology	Molecular and Cell Biology
Medical Laboratory Technology*	Ecology and Evolution
Microbiology	Physiology
Zoology	

* Requires an internship arranged by the student at a local cooperating medical laboratory.

Biology Advisory Plans

In addition to the above degree concentrations, the following curricular areas have developed advisory plans for the B.A. degree in Biology. Students should contact the Biology Department for specific advisory plans.

General Biology
Molecular Biology
Pre-Dentistry
Pre-Genetic Counseling
Pre-Medical
Pre-Pharmacy
Pre-Veterinary
Park Naturalist
Teaching Credential

Master of Arts in Biology

Sonoma State University has offered a program leading to the Master of Arts in Biology since 1966. The degree requires completion of original thesis research. The program is explained fully in a brochure available from the Biology Department. The department's graduate coordinator will assist in admissions and other aspects of the program.

Teaching Credential Preparation

A major in Biology is acceptable preparation for an elementary or secondary teaching credential. Biology majors seeking a teaching credential are encouraged to consult with the department's credential advisor, and review the University's special bulletin on Programs in Teacher Education.

Minor in Biology

The minor consists of a minimum of 20 units in biology with a grade point average of 2.0 or higher. The purpose of the minor is to provide the student with an understanding of general biology and to supplement the student's major with pertinent biology courses. Since there are general requirements that must be met for every minor program, students should consult with the departmental minor advisor early in their academic careers.

Faculty

James Christmann, Daniel Crocker, Hall Cushman, Nicholas Geist, Derek Girman, David Hanes, Chris Kjeldsen, Philip Northen, Murali Pillai, Nathan Rank, Judy Sakanari, Eileen Thatcher, Richard Whitkus

We hope this information will be helpful. Official requirements of all majors and programs are published in the Sonoma State University catalog. Sonoma State University is an Affirmative Action/Equal Opportunity Institution and has a strong commitment to the principal of diversity. A member of the California State University

