

Biological Science (Composite Teaching), BS, BA

Department: Biology Department

College: College of Science

Overview

About This Degree

Biology educators teach how living things work, how they interact with one another, and how they evolve. The field develops constantly, and it is important for biological science teachers to stay current. The department helps students do this by incorporating recent research results into the classroom, providing research opportunities, and inviting them to participate in research seminars and presentations.

Students will receive a **BS** by completing all required courses in their major. To receive a **BA**, students must also gain proficiency in one or more foreign languages.

Distance Education

The BS in biological science (composite teaching) is available through USU's Regional Campuses.

Career Options

Students who graduate in biological science (composite teaching) are qualified to teach biological science in middle schools and high schools.

Additionally, students who do not wish to pursue teaching upon graduation have enough biology education to pursue the same types of careers as a student graduating with a bachelor's in biology, which include the following:

- Research and development for pharmaceutical companies
- Pharmaceutical sales representative
- Environmental educator
- Research technician

[Career Services](#) provides counseling and information on hundreds of job and internship opportunities and even helps students apply and interview.

What it takes

Admissions Requirements

In addition to Utah State University's [admissions requirements](#), the biology science (composite teaching) program has additional requirements:

- **Freshmen:** New freshmen admitted to USU in good standing qualify for admission to this major.
- **Transfer students:** Transfer students from other institutions and students transferring from other USU majors need a 2.75 total GPA for admission to this major.
- **STEP Requirements:** In order to be accepted into STEP, students must go through an application process, which includes the following:
 - Complete 60 semester credits with a minimum GPA of 2.75
 - Complete certain core courses (see department for more information)
 - Complete a speech and hearing test
 - Pass the Teacher Education Writing Exam
 - Provide an unofficial copy of your transcript
 - Pass a criminal background check (this should be done one semester before submitting the application)

International students have [additional admissions requirements](#).

Major Requirements

[Click here](#) to see course requirements for the **Bachelor of Science**.

[Click here](#) to see course requirements for the **Bachelor of Arts**.

Contact

Advising

All new USU students participate in a [New Student Orientation](#) program, where they receive detailed information about major requirements, registering for classes, and other important advising information.

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Get Involved

Professional Organizations, Honor Societies, and Clubs

National Association of Biology Teachers: NABT has been recognized as the leader in life science education since 1938. It recognizes that the true focal point for learning on critical issues is the classroom, and its members enhance the learning experience for millions of students each year. Thousands of educators have joined NABT to share experiences and expertise with colleagues from around the world, keep up with trends and developments in the field, and grow professionally.

Biology Club: This USU club provides information to students interested in majors associated with the Department of Biology. The club hosts guest speakers and other activities designed to educate students about academic and career possibilities.

Beta Beta Beta National Honor Society: Beta Beta Beta (TriBeta) is a society for students, particularly undergraduates, dedicated to improving the understanding and appreciation of biological study and extending boundaries of human knowledge through scientific research.

Labs, Centers, Research

With the second oldest [undergraduate research](#) program in the nation, USU offers students a wide range of opportunities to gain hands-on research experience. The [Undergraduate Research and Creative Opportunities](#) program allows students to apply for grants and receive funding. USU's [Honors Program](#) prepares students for excellent graduate programs by helping them build relationships with professors, participate in research projects, take smaller, more intensive classes, and develop leadership skills.

Center for Advanced Nutrition: The CAN provides a multi-disciplinary venue for the discussion, discovery, and dissemination of information about the biological, physiological, and psychological mechanisms of proper nutrition. The scope of discovery is broad and falls into four distinct but overlapping focus areas: bioactive foods, nutrition and the brain, ingestive behavior, and personalized nutrition.

Center for Integrated BioSystems: The CIB leads a progressive, interdisciplinary effort in research, core services, and education serving agriculture and life sciences. The CIB is where the first hybrid animal, a mule, was cloned, and was named one of "30 Awesome College Labs" by Popular Science magazine. The CIB has a research program with several active projects in diverse areas of life science that encompass plant, animal, and microbe functional genomics.

Energy Dynamics Laboratory: EDL bridges the gap between academia and industry, confronting the challenges of prototyping, deployment, and commercialization of enabling technologies for renewable and advanced energy systems. USU researchers originate projects to derive energy from non-fossil fuels, such as biofuels, wind, and solar power. With EDL's collaboration, research develops through pilot projects to commercial application.

Energy Laboratory: This lab seeks to develop solutions to America's most intractable energy problems through scientific and technological innovation. It provides a cohesive framework permitting faculty, students, and partnering institutions to focus on contemporary energy-related research issues.

Environmental Quality Laboratory: The EQL is located at the Utah Water Research Lab and is equipped for analyses of organic and inorganic constituents in air, water, and soil. The EQL consists of chemistry, microbiology, radiological and analytical instrumentation laboratories, two constant-temperature rooms, and research project areas.

Institute for Antiviral Research: The IAR is comprised of a recognized team of scientists representing a spectrum of disciplines, who are researching ways to control viral diseases. The IAR has been involved with the pre-clinical development of several FDA-approved drugs, including Tamiflu, which was recently used to combat H1N1. The main areas of emphasis are respiratory diseases such as influenza and infections caused by emerging viruses, including West Nile virus.

Institute for Natural Systems Engineering: The INSE is a recognized leader in the development, testing, and application of multi-disciplinary assessment methods for aquatic ecosystems and instream flow assessment methodologies.

Intermountain Herbarium: The Intermountain Herbarium serves as a primary source of information on the flora and fungi of the Intermountain region, both native and introduced, and fosters increased understanding and appreciation of the floristic diversity of the area.

Metabolic Engineering Laboratory: Research areas in this lab include the discovery and identification of bioactive natural products, biosynthetic mechanisms of pharmaceutically important compounds, characterization and development of biocatalysts for structural modification, as well as improvement of useful enzymes using protein-engineering approaches. Combinatorial biosynthesis of novel biologically significant compounds for drug discovery is also being investigated.

Synthetic Biomanufacturing Center: SBC uses the chemical makeup present in single-cell organisms to transform raw materials into environmentally friendly products, such as low-cost bioplastics, biodiesel, light energy, and pharmaceuticals.

Utah Botanical Center: The UBC, located in Kaysville, Utah, is home to research and demonstration projects focused on sustainable living in the Intermountain West. Studies of water conservation, horticulture, water quality enhancement, wetland ecology, integrated pest management, urban forestry, agriculture, fish and wildlife, highway enhancement, and storm-water management combine to make the center a living laboratory.

Water Initiative: Utah State University supports a broad community of students and faculty engaged in water education, research, and outreach. The USU Water Initiative provides an overarching umbrella for the activities of this community aimed at fostering interdisciplinary collaboration and collegial sharing of ideas related to water across the departments and colleges of USU.