



Study the rich diversity of life in all its forms

Bachelor of Science (B.S.) in Biology

Bachelor of Science (B.S.) Biology-Biotechnology

Career Opportunities in the Biological Sciences

A degree in Biology from CSUB can be a stepping stone to many fascinating and rewarding careers. Opportunities for Biology majors abound in research, government, education, industry, and the medical professions. These are just some examples of the many exciting fields open to graduates in Biology, Biotechnology, Human Biological Sciences, Pre-Professional, or Natural Science:

Contact Information:

Phone: (661) 654-3089

Email: biology@csub.edu

Web: www.csub.edu/biology/

Office: Science I, Room 114

- Advanced Education
- Agricultural and Pest management
- Biochemistry
- Biotechnology
- Botany
- Clinical Lab Sciences
- Dentistry
- Ecology
- Environmental Consulting
- Environmental Research
- Forestry
- Health Care
- Marine biology
- Optometry
- Pharmaceutical Industry
- Physical Therapy
- Secondary School Science Education
- Veterinary medicine
- Water quality management
- Wildlife biology

Scholarships

- Fairie A. Decker Memorial Scholarship
- John Reed Memorial Scholarship
- Friends of Biology Scholarship
- Math and Science Teacher Initiative

Faculty

Tenured and Tenure-Track

- Thibault Alain, Assistant Professor (Host-Parasite interactions, Microbiology)
- Isolde Francis, PhD, Associate Professor (Plant Pathology, Microbiology)
- Jeroen Gillard, PhD, Associate Professor (Microbial Physiology and Genomics)
- Lucas Hall, PhD, Associate Professor (Ecology, Conservation Biology)
- Anna L. Jacobsen, PhD, Professor (Plant Anatomy, Plant Structure-Function)
- Kane Keller, PhD, Associate Professor (Community Ecology, Evolutionary Ecology)
- Carl T. Kloock, PhD, Professor (Behavioral Ecology, Science Education)
- Antje Lauer, PhD, Professor (Environmental Microbiology, Marine Biology)
- Rae McNeish, PhD, Associate Professor (Aquatic Ecosystem Ecology)
- R. Brandon Pratt, PhD, Professor (Plant Physiological Ecology)
- Paul Smith, PhD, Professor & Department Chair (Entomology, Molecular Systematics)
- Amber Stokes, PhD, Professor (Chemical Ecology, Animal Physiology)
- Kathleen Szick, PhD, Associate Professor (Molecular and Cellular Biology)

Full-Time Lecturers

- Danielle Dodenhoff, PhD
- Michele Engel, PhD
- Michell Thomey, PhD.
- Jordan Mead Vaughn, MS
- Catherine Robles, MS
- Robert Stark, PhD



CSU Bakersfield
School of Natural Sciences,
Mathematics, and Engineering

www.csub.edu/nsme

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Bachelor of Science in Biology:

Biology Courses

50 units with a minimum GPA of 2.0

a. Core requirements

BIOL 2010 Intro Biology- Cells*
 BIOL 2110 Intro Biology- Animals
 BIOL 2120 Intro Biology- Plants
 BIOL 3010 General Genetics
 BIOL 3020 General Physiology
 BIOL 3110 General Ecology
 BIOL 3120 Research Design & Analysis
 BIOL 4100 Evolution
 BIOL 4918 Senior Seminar

b. Electives

At least 20 units of additional upper division coursework in Biology. At least three of these courses must be 4-unit courses with lab and at least one must be at the 4000-level with a lab.¹

Cognates: 24 units with a minimum GPA of 2.0

CHEM 1000 Found. Chem
 CHEM 1001 Found. Chem Lab
 CHEM 1100 Found. Analytical Chem
 CHEM 1600 Found Physical chem
 CHEM 2300 Found. Organic Chem
 MATH 2010 Calculus for the Biological & Chemical Sciences or equiv..
 PHYS 2110 College Physics I
 PHYS 2110 College Physics II

A minimum GPA for these 74 units is 2.0

*Note: A grade of C- or better in BIOL 2010 is required to advance into upper division biology courses.

Bachelor of Science in Biology with a Concentration in Biotechnology:

Biology Courses

46 units with a minimum GPA of 2.0

a. Core requirements

BIOL 2010 Intro Biology- Cells*
 BIOL 2110 Intro Biology-Animals
 BIOL 2120 Intro Biology- Plants
 BIOL 3010 General Genetics
 BIOL 3020 General Physiology
 BIOL 3110 General Ecology
 BIOL 3120 Research Design & Analysis
 BIOL 4100 Evolution
 BIOL 4918 Senior Seminar

b. Concentration specific requirements:

BIOL 3410 Microbiology
 BIOL 4440 Molecular Genetics

c. Electives

8 units of additional upper division coursework in Biology: two 4-unit 4000- level classes with a lab.

Cognates: 32 units with a minimum GPA of 2.0

CHEM 1000 Found. Chem
 CHEM 1001 Found. Chem Lab
 CHEM 1100 Found. Analytical Chem
 CHEM 1600 Found Physical Chem
 CHEM 2300 Found. Organic Chem
 CHEM 2400 Found. Biochem
 CHEM 3300 Organic Chem
 CHEM 3301 Organic Chem Lab
 MATH 2010 Calculus for the Biological & Chemical Sciences or equiv.
 PHYS 2110 College Physics I
 PHYS 2120 College Physics II

A minimum GPA for these 78 units is 2.0

General Education (GE) Information

Students should read the CSUB catalog and be familiar with the GE curriculum. Faculty advisors are available to consult for specific questions related to the major. Specific information related to general education requirements is available in the catalog.

Biology-specific general education information

General education Area 2, and Area 5 (A, B, & C) are satisfied by required courses within the biology major.

Biology students are recommended to take ENGL 3119, which satisfies both the JYDR and GWAR requirements

Total General Education: 30 units
 Other University requirements (American institutions, FYS) – 8 units

Additional Elective Units required for the degree.

The biology department advises that additional units are best completed by taking additional cognate math & science coursework or upper division biology coursework

8 units for BS in Biology

4 units for BS in Biology with Biotech Concentration

