The Department of Biology offers the Bachelor of Science in Biology with or without a concentration in Biotechnology, the Bachelor of Arts in Human Biological Sciences, and the Master of Science in Biology. Throughout its curriculum the Department emphasizes evolution and the relationship between organisms and the environment. Classes include extensive field and laboratory investigations allowing students to observe and measure biological systems. Students are encouraged to select elective courses best suited to their interests. See Biology Tracks below. A detailed description of student learning goals and objectives can be found at http://www.csub.edu/biology/.

**Requirements for the Bachelor of Science Degree in Biology**

**Total Units Required to Graduate**: 180 units

**Major Requirements**: 90 units
- Biology Courses: 65
- Cognates: 25

**Minor Requirement**: 0 units

**Other University Requirements**: 67-77 units
- CSUB 101: 2
- American Institutions: 5
- Area A: 15
- Area B: 0-5*
- Area C: 15
- Area D: 15
- Theme 1: 0*
- Theme 2: 5
- Theme 3: 5
- GRE: 5
- GWAR (Exam) or Class: 0-5

* satisfies in major, minor or other university requirement

**Additional Units**: 13-23 units

See http://www.csub.edu/schedules.shtml for current list of courses satisfying university-wide requirements.

**Note**: One (1) quarter unit of credit normally represents one hour of in-class work and 2-3 hours of outside study per week.

**Requirements for the Major in Biology**

The Bachelor of Science in Biology curriculum includes a wide range of courses that allow for diverse student interests. Students seeking a Bachelor of Science degree with a major in Biology must complete the following:

1. **Biology courses**
   - a. BIOL 201, 202, and 203
   - NOTE: A grade of C- or better in BIOL 201 is required to advance into upper division Biology courses.
   - b. BIOL 301, 304, 305, 306, 470 and 490
   - c. At least 25 units of additional upper division elective coursework in Biology. At least three courses must be five units with lab and at least one must be a laboratory course at the 400-level. One course selected from the following may be substituted for an elective: CHEM 331, 332, 333 or 340, PEAK 404 or other by advisor’s approval.

   *A minimum GPA for these 65 units is 2.0

2. **Cognates**
   - a. CHEM 211, 211L, 212, 212L, 213 and 213L
   - b. MATH 191 or equivalent
   - c. At least 5 units in appropriate cognate areas subject to the approval of the advisor.

   + A minimum GPA for these 25 units is 2.0

**Requirements for the Bachelor of Science Degree in Biology (Biotechnology Concentration)**

**Total Units Required to Graduate**: 180 units

**Major Requirements**: 111 units
- Biology Courses: 61
- Cognates: 50

**Minor Requirement**: 0 units

**Other University Requirements**: 67-72 units
- CSUB 101: 2
- American Institutions: 5*
- Area A: 15
- Area B: 0*
- Area C: 15
- Area D: 15
- Theme 1: 0*
- Theme 2: 5
- Theme 3: 5
- GRE: 5
- GWAR (Exam) or Class: 0-5

* satisfies in major, minor or other university requirement

**Additional Units**: 0-2 units

* satisfies in major, minor or other university requirement
Requirements for the Major in Biology and a Concentration in Biotechnology

The Bachelor of Science in Biology and a concentration in Biotechnology curriculum include a specific set of courses designed to provide students with a foundation in Biotechnology related fields. Students seeking a Bachelor of Science degree with a major in Biology and a concentration in Biotechnology must complete the following:

1. **Biology courses**
   a. Core requirements: BIOL 201, 202, 203, 301, 304, 305, 470 and 490
      NOTE: A grade of C- or better in BIOL 201 is required to advance into upper division Biology courses.
   b. Concentration specific: BIOL 312, 330, 360, CHEM 340 and one of the following: BIOL 412, 414, 424, 430 or any 400 level course with lab (other than 440) by consent of advisor.

*A minimum GPA for these 61 units is 2.0*

2. **Cognates**
   a. CHEM 211, 211L 212, 212L, 213, 213L, 331, 332, 333
   b. PHYS 201, 202, 203
   c. MATH 201 or 211

+A minimum GPA for these 50 units is 2.0

Requirements for the Bachelor of Arts Degree in Human Biological Sciences

**Total Units Required to Graduate** 180 units

- **Major Requirements** 92-93 units
  - Biology Courses 67-68
  - Cognates 25

- **Minor Requirement** Not Required

- **Elective Units** 15-20 units

- **Other University Requirements** 67-72 units
  - CSUB 101 2
  - American Institutions 5*
  - Area A 15
  - Area B 0*
  - Area C 15
  - Area D 15
  - Theme 1 0*
  - Theme 2 5
  - Theme 3 5
  - GRE 5
  - GWAR (Exam) or Class 0-5

*satisfied in major, minor or other university requirement

Requirements for the Minor in Biology

A minor in Biology consists of 20 units, 10 of which must be upper division. Only courses applicable to the major will be accepted for the minor. Requests for approval are to be submitted to the Department Chair. A minimum grade point average of 2.0 is required for the units applied towards the Minor.

Science Teacher Preparation Program Leading to a Degree in Natural Sciences, Primary Concentration in Biology

CSUB has developed a degree program, the Bachelor of Arts in Natural Sciences, to prepare prospective science teachers for subject matter certification in California via the California Subject Matter Examinations for Teachers (CSET) in Science. See the catalog section under Natural Sciences for information about this degree program. Additional information may be obtained from the Biology Department office (661-654-3089).

CSUB has developed a degree program, the Bachelor of Arts in Natural Sciences, to prepare prospective science teachers for subject matter certification in California via the California Subject Matter Examinations for Teachers (CSET) in Science. See the catalog section under Natural Sciences for information about this degree program. Additional information may be obtained from the Biology Department office (661-654-3089).