

ECOL 151, 152; M SCI 103**	
<i>At least one botany (BOT) or microbiology (MICRO) course must be selected from the following categories B-E.</i>	
B. <i>Physiology:</i> Select one course from the following (4) BOT 130; MICRO 161; PHYAN 151	
C. <i>Morphology and Classification:</i> Select one course from the following (3-4) BOT 131, 132, 142, 144; ECOL 174; MICRO 140; ZOOL 120, 132, 141, 150; M SCI 124**, 131**	
D. <i>Autecology and Population Ecology:</i> Select one course from the following (3-4) ECOL 162, 171, 172; ZOOL 152; M SCI 110**, 161**	
E. Biological Science Electives (9-11) Select sufficient Biology Department courses, including those listed in categories A, B, and C, to complete the option. Only one elective course may be lower division.	
Additional requirements 21-22	
1. CHEM 3A, 8, and 150 ... (10)	
2. MATH 70 or 75 (4)	
3. MATH 101 or PSYCH 42 (4)	
4. Consult your adviser to select one course from the following (3-4) PHYS 2A; M SCI 142**, 143**; GEOL 1, 112; SW 100	
General Education 51	
Electives and remaining degree requirements 4-14	
(See <i>Degree Requirements</i>); may be used toward a dual major or minor.	
Total 124*	

* See *Advising Note 1* on this page.

** M SCI courses are offered only at Moss Landing Marine Laboratory.

Advising Notes for All Options within the Bachelor of Science in Biology
1. The total of 124 units assumes biology majors in this option will maximize the 9

units of General Education requirements that also may be applied to major and additional required courses as follows: 3 units of CHEM 3A (Organismic and General Biology Option and Ecology and Evolutionary Biology Option) or CHEM 1A (Molecular, Cellular, and Developmental Biology Option and Physiology and Anatomy Option) in G.E. Breadth B1; 3 units of BIOSC 1A in G.E. Breadth B2; and 3 units of MATH 75 in G.E. Foundation B4. Consult your major academic adviser for details.

2. B.S. biology majors who have taken introductory sequences other than BIOSC 1A and 1B must consult with their faculty adviser or department chair for equivalency evaluation prior to beginning their upper-division coursework.

3. CHEM 1A may be taken as a substitute for CHEM 3A, and CHEM 128A and 128B may substitute for CHEM 8. The reverse substitutions are not permissible. Premedical students should take CHEM 1A and 1B and 128A and 128B instead of CHEM 3A and 8.

4. B.S. biology majors selecting options in Molecular and Cellular Biology or in Physiology can complete a Minor in Chemistry with the addition of CHEM 105. Consult the chemistry department chair for details (see *Chemistry Minor*).

5. No General Education Integration course offered by the Department of Biology may be used to satisfy the General Education requirements for biology majors.

6. CR/NC grading is not permitted in the biology major.

7. General Education, additional, and elective requirements may be used toward a dual major or minor (see *Dual Major* or *departmental minor*). Consult the appropriate department chair, program coordinator, or faculty adviser for additional information.

Suggested Sequence of Courses for B.S. Degree in Biology

The following comments on timing and sequence are intended for full-time students who plan to complete the B.S. degree in four years. Students with extensive extracurricular obligations should make appropriate timing adjustments to avoid overloads. See your adviser for assistance.

A total of 124 units must be completed for all biology B.S. degree options. In addition to courses required for the major, full-time students should add General Education

requirements and electives to bring semester totals to 15-17 units. Electives may include minor and credential requirements. (See *Degrees and Credentials*.)

During the first two years, both resident and transfer students should complete most General Education requirements, BIOSC 1A and 1B, all lower-division additional requirements for the option they have selected, and any lower-division electives that might be selected within that option. BIOSC 130, 140A-B, and statistics should be completed as early as possible but no sooner than the term in which 60 units of coursework are completed and preferably no later than the end of the third year. The remainder of the third and fourth years should be spent completing requirements for the selected option, for General Education, and for the electives in biology and other fields. BIOSC 180 is a senior requirement and must be taken during the fourth year.

Biology Minor

The Minor in Biology may be earned by completing the 22-unit biology core: BIOSC 1A, 1B, 130, 140A-B, 180.

Note: The Biology Minor also requires a 2.0 GPA and 6 upper-division units in residence.

Bachelor of Arts in Natural Sciences

Teaching Credential — Biology Option

The B.A. in Natural Sciences serves as a waiver program for the Single Subject Teaching Credential in Science. This degree program is designed for students who wish to become high school science teachers. The full program is described in the Natural Science section in this catalog. The program consists of two parts. The Core requirements are courses required of all natural science students and the Emphasis provides training in biology, chemistry, earth science, or physics. Students may also earn the credential while obtaining a degree in biology. The B.A. in Natural Sciences with the Biology Emphasis is as follows.

Units

Core requirements 37-38

Biology¹ (12-13)
BIOSC 1A or BIOL 15¹, BIOSC 1B, BIOSC 130