



The Articulation Office – Counseling Services & Special Programs

ADVISEMENT INFORMATION FOR TRANSFER MAJORS

BIOLOGY/BIOLOGICAL SCIENCES (CSUF, CSULB, CSUSM, SDSU, UCD, UCI, UCLA, UCSD, USC)

Biology is the scientific study of life (both plant and animal), its basis and processes. Biology is a useful major for students desiring to enter graduate and professional schools, prepare for secondary school teaching, or who are seeking careers in industry or governmental agencies.

Listed below are Saddleback College (SC) courses that have been articulated with selected example universities, and represents lower-division preparation for the major. In addition, students are advised to complete General Education requirements prior to transfer.

NOTE: *If you have not taken a mathematically-oriented chemistry course in the last five years with a grade of "C" or better AND a minimum of three (3) or four (4) years of high school mathematics including trigonometry, you should complete the following prerequisites to a biological science major:* CHEM 3 (or high school chemistry as indicated above); MATH (253 or 255 and 124) [intermediate algebra and trigonometry], and/or MATH 2 (pre-calculus mathematics, if major requires calculus or calculus-based physics).

Articulation agreements can change without notice at any point during your time at Saddleback College. Please refer to the college catalogs and websites of the transfer schools you are considering, as well as the state-wide articulation database for CSU and UC campuses, www.assist.org, for the most current information. Students are urged to contact a Saddleback College counselor to review this information on a regular basis.

THE FOLLOWING INFORMATION IS SUBJECT TO CHANGE WITHOUT NOTICE.

CSU FULLERTON

BACHELOR OF SCIENCE IN BIOLOGICAL SCIENCE

The following four concentrations are available at CSUF: 1) Biodiversity, Ecology and Conservation Biology; 2) Cell and Developmental Biology; 3) Marine Biology; and 4) Molecular Biology and Biotechnology.

IMPORTANT: *To qualify for a baccalaureate degree in Biological Sciences, students must have a minimum 2.0 overall GPA in all biology courses and in all required supporting courses.* No credit toward the major will be allowed for biological science courses in which a grade of "C-" or lower is earned. Courses taken under the "credit/no credit" grade option may not be applied towards the major.

Lower-Division Core Requirements: BIO (3A and 3B and 3C) [complete entire sequence prior to transfer].

Lower-Division Supporting Course Requirements: The following courses will meet support-course requirements for all options in biology and should be included in general education requirements: CHEM 1A, 1B, (12A and 12B); PHYS (2A and 2B); MATH (11 or 3A) [MATH 3A recommended.]

Refer to the CSU Fullerton catalog, ASSIST at www.assist.org, and the Biological Sciences Department website at www.fullerton.edu/catalog/academic_departments/biol.asp for additional information regarding this program.

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CSU LONG BEACH

BACHELOR OF SCIENCE IN BIOLOGY

This degree includes a general Biology option and six (6) additional specialized options in: (1) Biology Education; (2) Botany; (3) Cellular and Molecular Biology; (4) Ecology and Environmental Biology; (5) Physiology; and (6) Zoology.

BACHELOR OF SCIENCE IN BIOLOGY

Lower-Division Requirements:

Biology (General) Option: BIO 3A, 3C, 3B (complete entire sequence prior to transfer); CHEM 1A, 1B; MATH 3A, 3B; PHYS (2A **and** 2B) **or** PHYS (4A and 4B)

Biology Education Option: *(This program is designed solely for the Single Subject Teaching Credential in Science-Biological Science Concentration.)* ASTR 20; BIO 19, BIO 3A, 3C, 3B (complete entire sequence prior to transfer); CHEM 1A, 1B; GEOL 1; MATH 3A; BIO 15; PHYS (2A **and** 2B) **or** PHYS (4A **and** 4B)

Botany Option: BIO 3A, 3C, 3B (complete entire sequence prior to transfer); CHEM 1A, 1B; MATH 3A, 3B; PHYS (2A **and** 2B) **or** PHYS (4A **and** 4B).

Cell and Molecular Biology Option: BIO 3A, 3C, 3B (complete entire sequence prior to transfer); CHEM 1A, 1B; MATH 3A, 3B; BIO 15; PHYS (2A **and** 2B) **or** PHYS (4A **and** 4B)

Ecology Option: BIO 3A, 3C, 3B (complete entire sequence prior to transfer); CHEM 1A, 1B; GEOL 1; MATH 3A, 3B; PHYS (2A **and** 2B) **or** (PHYS 4A **and** 4B).

Physiology Option: BIO 3A, 3C, 3B (complete entire sequence prior to transfer); CHEM 1A, 1B; MATH 3A, 3B; PHYS (2A **and** 2B) **or** (PHYS 4A **and** 4B).

Zoology Option: BIO 3A, 3C, 3B (complete entire sequence prior to transfer); CHEM 1A, 1B; (BIO 15 **or** GEOL 1); MATH 3A, 3B; PHYS (2A **and** 2B) **or** (PHYS 4A **and** 4B).

BACHELOR OF SCIENCE IN MARINE BIOLOGY

Lower-Division Preparation: (BIO 19 **or** ENV 19), BIO 3A, 3C, 3B (complete entire sequence prior to transfer); CHEM 1A, 1B; MATH 3A, 3B; PHYS (2A **and** 2B) **or** (PHYS 4A **and** 4B)

Refer to the CSU Long Beach catalog; ASSIST at www.assist.org, and the Biological Sciences Department website at www.csulb.edu/depts/biology/ for additional information regarding these programs.

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CSU SAN MARCOS

BACHELOR OF SCIENCE IN BIOLOGICAL SCIENCES

Lower-Division Preparation: BIO 3A, 3B, 3C (complete entire sequence prior to transfer); CHEM 1A, 12A, 12B, 1B; MATH 3A.

Refer to the CSU San Marcos catalog, ASSIST at: www.assist.org, and the Department of Biological Sciences website at www.csusm.edu/Biology/ for further information.

Updated 3/6/2009

SAN DIEGO STATE UNIVERSITY

BACHELOR OF SCIENCE IN BIOLOGY

***BACHELOR OF ARTS IN BIOLOGY**

Programs include the following emphases: Bioengineering; Cellular and Molecular Biology; Ecology; Evolution and Systematics; Marine Biology; and Zoology.

The biology and microbiology majors are impacted programs. For further details regarding GPA and selection criteria for these programs, refer to the San Diego State University catalog, the San Diego State University Transfer Admission Planner website at <https://sunspot.sdsu.edu/pubred/!tap DISP>, ASSIST at www.assist.org, and the Office of Evaluations and Advising Impacted Programs website at <http://arweb.sdsu.edu/es/advising/impaction.html>.

Lower-Division Preparation for All Programs: BIO 20; 3B **and** 3C **and** 3A (complete entire sequence prior to transfer), CHEM 1A, 1B, 12A, PHYS 2A, 2B, MATH 3A

Bioengineering Emphasis: **ADD** ENGR 33, 31; MATH 3A, 3B, 3C), PHYS 4A, 4B, 4C).

***Foreign Language Requirement for the BACHELOR OF ARTS IN BIOLOGY (Liberal Arts & Sciences):** Competency (successfully completing the third college semester or fifth college quarter) is required in one foreign language to fulfill graduation requirements for this major.

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UC DAVIS

BACHELOR OF SCIENCE IN BIOLOGICAL SCIENCES

Transfer students are strongly advised to complete as many preparatory courses as possible for this major prior to transfer. For further details regarding selection criteria and GPA requirements for this program, refer to the UC Davis catalog, ASSIST at www.assist.org, and the College of Biological Sciences website at <http://biosci.ucdavis.edu/>.

Lower-Division Preparation: BIO 3A, 3B, 3C [complete entire sequence prior to transfer]; CHEM 1A, 1B, 12A, 12B; (MATH 11 **or** 3A), MATH 3B, 10; PHYS (2A **and** 2B) [complete sequence prior to transfer]

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UC IRVINE

BACHELOR OF SCIENCE IN BIOLOGICAL SCIENCES

IMPORTANT: *Completion of Bio 3A and 3B (C grade or higher), and Chem 1A and 1B (B grade or higher) and a cumulative GPA of 3.0 or higher is required for admission. Completion of Math 3A and 3B and IGETC is highly recommended.*

Lower-Division Preparation: BIO 3A, 3B, BIO 41; CHEM (1A and 1B), (12A and 12B); MATH (3A and 3B) [preferred] or **MATH (3A and 10); PHYS (4A and 4B) or PHYS (4A and 4C)

****NOTE:** The MATH 3A and MATH 10 combination is unique to this UCI major and should only be taken by students who are certain they will transfer to UCI.

For details regarding program requirements and selection criteria, refer to the UC Irvine catalog, and ASSIST at www.assist.org. Students are also advised to contact the School of Biological Sciences at (949) 824-5318, and refer to their website at www.bio.uci.edu for additional program information.

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UC LOS ANGELES

BACHELOR OF SCIENCE IN BIOLOGY

This Biology major is designed for students with a broad interest in biology and careers in a wide range of biological and health-related fields. ***This major is highly selective.*** For additional information and selection criteria, students are advised to refer to the UCLA catalog and ASSIST at www.assist.org.

***Lower-Division Preparation:** BIO 3A, 3B, 3C; CHEM (A, 1B, 12A, 12B); MATH 3A, 3B; PHYS 4A, 4B, 4C

***NOTE:** *Per UCLA, beginning with transfer applicants for Fall 2007, the following minimum major preparation course pattern should be completed by the end of the spring term prior to transfer: One (1) year of biology with lab; one (1) year of general chemistry with lab; one (1) year of calculus; and one (1) semester of organic chemistry with lab. Completion of a second semester of organic chemistry or one year of calculus based physics is strongly recommended.*

Students are advised by UCLA to complete major preparation coursework beyond the minimum required to become more competitive for admission and to prepare for upper-division coursework in the major after transfer.

For more details regarding selection criteria for this major, refer to the Department of Ecology and Evolutionary Biology at www.eeb.ucla.edu/undergraduate.php.

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UC SAN DIEGO

BACHELOR OF SCIENCE IN BIOLOGY: GENERAL BIOLOGY

The biological sciences majors at UCSD are impacted and admission is highly selective. For more details regarding selection criteria, and GPA for this impacted major, refer to the UC San Diego catalog, ASSIST at www.assist.org, and the Division of Biological Sciences website at www-biology.ucsd.edu/.

Lower-Division Preparation: BIO 3A, 3B; CHEM 1A, 1B, 12A, 12B; MATH 3A, 3B, 3C; PHYS 4A, 4B, 4C

UNIVERSITY OF SOUTHERN CALIFORNIA

BACHELOR OF SCIENCE IN BIOLOGICAL SCIENCES

Lower-Division Preparation: BIO (3A and 3B); CHEM (1A and 1B), MATH 3A; PHYS (2a or 4A and 4C); (PHYS 2B or 4B).

NOTE: Also, refer to the "Transferring to USC" booklet for general education and prerequisite information (*available in the Counseling Services office*), or online at www.usc.edu/transferring.

- As each college/university has its own orientation to their Biology/Biological Science major, read the entire Biology/Biological Science major section in the catalog of each college/university to which you are considering transferring. Pay particular attention to the upper-division requirements.
- Contact each college/university that you are interested in. Ask them to send you information about their Biology/Biological Science program; selection criteria, GPA requirements, and other pertinent admissions information. Also ask for information about their campus, services, housing, etc. Meet with college/university representatives when they visit Saddleback College.
- Visit each school to which you are considering transferring.
- Research careers related to your chosen major.
- For additional transfer information, consult Saddleback College's Transfer Student Home Page: www.saddleback.edu/ss/tc/TRANSFERSTUDENTPAGE.html, and ASSIST for CSU and UC campuses: www.assist.org.