BIOLOGY MAJOR

Transfer Requirements

The following requirements for the major are subject to change without notice. To assure that this information is current, you should consult with a Biology counselor, or review articulation agreements via the internet at **WWW.ASSIST.ORG**. You may also consult the Articulation Officer for specific articulation agreements.

Due to the competitive nature of the Biology major, students are advised to complete as many lower division courses as possible prior to transfer. Please see a counselor for more information. Career information for the field of Biology is available in the El Camino College Career/Transfer Center and from the El Camino College Counseling Services website.

CALIFORNIA STATE UNIVERSITY, DOMINGUEZ HILLS (2009-2010)

BA Degree: Biology 101-102; Chemistry 1A-1B; Math 150; Physics 2A-2B; CIS 13

BS Degree: Biology 101-102; Chemistry 1A-1B; Math 150 and Math 160 or 190; Physics 2A-2B or 1A-1B-1C-1D (courses are approved as a sequence); CIS 13

CALIFORNIA STATE UNIVERSITY, FULLERTON (2009-2010)

BS in Biological Sciences: Biology 101-102 articulation pending review; Chemistry 1A-1B; Chemistry 7A-7B are accepted as course credit for CSUF's Chemistry 301A, 301B & 302 but not as upper division credit; Math 160 or 190; Physics 2A-2B or 3A-3B

CALIFORNIA STATE UNIVERSITY, LONG BEACH (2009-2010)

Requirements for all options: Biology 101-102; Chemistry 1A-1B; Math 160-161 or 190-191 (see option requirements); Physics 2A-2B or 3A-3B or Physics 1A-1B-1C

BS Degree recommends Math 190 & 191

Options: Biology, Botany & Physiology- no additional requirements
Cell and Molecular Biology - add Microbiology 33
Zoology – add Microbiology 33 or Geology 1 & 3 or 30 or 32
Ecology – add Geology 1 & 3 or 30 or 32
Biology Education– add Geology 1 & 3 or 6, Microbiology 33; Math 160 or 190; Students may take Physics 1A-1B-1C or 2A-2B or 3A-3B; Biology 17 & 18

CALIFORNIA STATE UNIVERSITY, LOS ANGELES (2009-2010)

English 1C with minimum C grade; Biology 101-102-103; Chemistry 1A & 1B; Math 190 & 191 or 160; Physics 2A-2B

SAN DIEGO STATE UNIVERSITY (2008-2009)

Biology 101 & 102 must both be taken; Chemistry 1A, 1B, 7A; Math 160 **&** 161 **or** Math 190; Physics 2A, 2B

Emphasis in Bioengineering: add Engineering 9*; Math 190, 191, 220, Physics 1A-1B-1C-1D

CALIFORNIA STATE UNIVERSITY POMONA (2009-2010)

Biology 101-102; Chemistry 1A-1B; Math 150; Microbiology 33; Physics 2A and 2B **or** 3A and 3B; English 1A & 1C; Psychology 5 or 7; Biology 8

Options: Biology; Botany; Biotechnology; Zoology

CALIFORNIA STATE UNIVERSITY, SAN LUIS OBISPO (2009-2010)

Biology 101-102; Chemistry 1A-1B, or 21A and 21B; Math 150 and 190 or Math 160 and 161; Microbiology 33, Physics 2A-2B or 3A-3B

BS Biological Sciences: concentrations in Anatomy and Physiology; Biology; Ecology, Field and Wildlife Biology, Marine and Cellular, Molecular and Cellular Biology, Systematics and Biodiversity (see www.assist.org for specific details).

UNIVERSITY OF CALIFORNIA, BERKELEY (2009-2010)

BA Integrative Biology*: Biology 101-102-103; Chemistry 1A-1B; 7A-7B; Math 160 or 190; Physics 1A-1B-1C or 3A-3B

BA Molecular and Cell Biology*: Biology 101-102-103; Chemistry 1A-1B; 7A-7B; Math 190-191; Physics 1A-1B-1C or 3A-3B. Students are advised to complete the entire Physics sequence at ECC prior to transfer or to complete the Physics requirement at Berkeley.

BS Microbial Biology: under the College of Natural Resources at UCB; Biology 101-102-103; Chemistry 1A, 7A-7B; Math 160-161 or 190-191; Physics 3A or 1A and 1B; Math 150; English 1A-1B; IGETC is not required, but if completed would meet UCB's R1A, R1B, and all Humanities and Social Science requirements.

UNIVERSITY OF CALIFORNIA, BERKELEY (2009-2010) CONTINUED

***Note**: Additional courses in math, statistics, biochemistry, history of biology and/or foreign language are highly recommended; IGETC or UCB's Requirements in Reading and Composition, Quantitative Reasoning, and Foreign Language **MUST** be completed by the spring semester prior to fall transfer.

UNIVERSITY OF CALIFORNIA DAVIS (2009-2010)

Biology 101-102; Chemistry 1A-1B and 7A-7B; Math 150 and 160 & 161 or 190 & 191; Physics 2A-2B or 3A-3B. S*tudents should complete Biology, Chemistry and one year of Calculus before transferring to Davis, It is highly recommended that Chemistry 7A-7B be completed prior to transfer. If only one biology course is completed, the GPA must be a 3.0 in prerequisites, if two or three courses are completed, the GPA in prerequisites must be a 2.50 with no grade less than a C.*

BA Majors: Evolution, Ecology, and Biodiversity; Plant Biology (Botany); Microbiology

BS Majors: Biochemistry, Molecular Biology, Evolution, Ecology, and Biodiversity; Plant Biology (Botany); Genetics, Microbiology;

Note: Math 150 not a requirement for Evolution, Ecology, Biodiversity, Microbiology, Evolution, Biodiversity, Plant Biology (Botany) and Genetics

UNIVERSITY OF CALIFORNIA, IRVINE (UCI) (2009-2010)

Biology 101-102 must be completed prior to transfer: recommended Biology 103; Chemistry 1A-1B must be completed prior to transfer (students need to have B's or better in general chemistry), 7A-7B; Math 190 and 191; or Math 190 and 150 or Psychology 9A or Sociology 109; Physics 3A and Physics 3B or Physics 1A-1C

BS in Biological Sciences with specializations in, Biochemistry and Molecular Biology, Developmental Biology and Cell Biology, Ecology and Evolutionary Biology, Genetics, Neurobiology, and Plant Biology.

*NOTE: Students should have a 3.0 GPA or higher for admission consideration.

UNIVERSITY OF CALIFORNIA, LOS ANGELES (UCLA) (2009-2010)

Biology 101-102; Chemistry 1A-1B, 7A-7B; Math 150; Math 190 and 191; or 160 and 161 and Math 3C at UCLA; Physics 3A-3B or 1A, 1C, 1D; **Note**: Students should complete a minimum of one year of biology, one year of chemistry, one year of calculus, and at least one semester of organic chemistry by the end of the spring term prior to transfer to be competitive for admission to any of UCLA's 10 life science majors. It is strongly recommended to complete the second semester of organic chemistry and one year of calculus based physics for admission consideration.

***NOTE**: Students will **not** be able to change from a non-life science major into a life science major after admission to UCLA. All options except Molecular, Cell , Psychobiology, Physiological Science and Developmental Biology require Math 150

Options: General Biology; Molecular, Cell, and Developmental Biology; Ecology, Behavior and Evolution Biology; Marine Biology, Neuroscience, Physiological Science, Psychobiology,

UNIVERSITY OF CALIFORNIA, RIVERSIDE (2009-2010)

*IGETC is not accepted for majors in the College of Natural and Agricultural Sciences. Transfer students are encouraged to follow the College of Natural and Agricultural Sciences GE/Breadth pattern. (Please consult a counselor or www.assist.org)

BA and BS Biology & BS Biological Science:

Biology 101-102; Chemistry 1A-1B; Chemistry 7A-7B can only be used in lieu of UCR's upper division organic chemistry; Math 190-191; Physics 3A-3B or 1A-1B-1C

The Biological Sciences major differs from the Biology major in the structure of the upper division course work. In the Biological Sciences major, students choose one of nine upper division tracks of specialized course work. These tracks are: Biology; Cell/Molecular and Developmental Biology; Conservation Biology; Entomology; Environmental Toxicology; Evolution and Ecology; Microbiology; Plant Biology and Medical Biology.

Biological Science, Conservation Biology Track: add Geography 1 and 6

Biological Science, Biology Track: add two courses from the following: CS 1 or 2 or 30* or 40 or Math 210

Biological Science, Bioinformatics and Genomics Track: add CS 1, 2, 30

UNIVERSITY OF CALIFORNIA, SAN DIEGO (2009-2010)

*The Division of Biological Sciences will require students in all biology majors, with the exception of bioinformatics, to take one biology lab before the end of sophomore year. Transfer students whose community college laboratory course is determined to be comparable in content to an existing biology lab will have completed the requirement upon transfer. Transfer students must petition to have community college course work cover this lab requirement. Transfer students who do not meet this requirement at the time of transfer may petition through the division for an extension. *Note: Transfer students are strongly advised to complete as many preparatory courses as soon as possible for their major before enrolling at UCSD. Biology 101-102 (the entire sequence **must** be completed prior to transfer or students will be required to complete the one year biology sequence at UCSD; Math 190-191, and 220 or 150; Chemistry 1A-1B, Chemistry 7A-7B (subject credit for upper division Chemistry course at UCSD); Physics 1A-1B-1C or 3A-3B

UNIVERSITY OF CALIFORNIA, SAN DIEGO (CONTINUED)

BS in Biology with specializations in: Bioinformatics (add Math 270 and Computer Science 2 and 3*), Animal Physiology and Neuroscience, Biochemistry and Cell Biology, Ecology, Behavior and Evolution, General Biology, Human Biology, Microbiology, Molecular Biology. Please view the ASSIST website for transfer information at (www.assist.org).

***Beginning Fall 2011 for all transfer students: students must indicate via the UC application that they want to be considered for admittance to a biology major at UC San Diego. If a student is not admitted as a biology major, they could be admitted to UC San Diego in a second choice major. The Division of Biological Sciences expects transfer students to have completed all of the lower-division course work required for their desired biology major at the time of transfer. For more information about the Division of Biological Sciences' impacted status and how it affects incoming transfers, please visit** http://biology.ucsd.edu/undergrad/enrollmentmanagement.html

UNIVERSITY OF CALIFORNIA, SANTA BARBARA (2009-2010)

BA and BS degrees: Chemistry 1A-1B, 7A-7B (no upper division credit will be given); Biology 101-102-103 (complete entire series prior to transfer); Math 190-191 or 160-161; Math 150 or 270; Physics 3A-3B or students may substitute Physics 2A-2B

Options: Biochemistry (add Math 270), Biochemistry-Molecular Biology, Aquatic Biology, Ecology and Evolution, Microbiology, Pharmacology, Physiology, Zoology

At minimum students should complete one year of general chemistry with a laboratory, and at least one year-long sequence from within calculus, organic chemistry with laboratory, general physics with laboratory, or general biology with laboratory. Students are initially admitted into the pre-major. Admission into the pre-major does not guarantee automatic admission to full major standing.

Note: All biological science majors screen applicants on the basis of GPA of 2.70 or better in the science and math major preparatory courses. It is highly recommended that students complete as much major preparatory courses as possible with no grade less than a "C" prior to admission.

LOYOLA MARYMOUNT UNIVERSITY (2009-2010)

BA degree: Biology 101-102; Chemistry 1A, 1B, 7A; Math 190

BS degree: Biology 101-102; Chemistry 1A, 1B, 7A, 7B; Math 190, 191; Physics 3A-3B

UNIVERSITY OF SOUTHERN CALIFORNIA (2009-2010)

BA and BS in Biological Sciences: Biology 101-102; Chemistry 1A-1B, 7A-7B; Math 190; Physics 1A-1B-1C or 2A-2B or 3A-3B

*Note: it is recommended that students complete the entire sequence of a series