A Course of Study for

BIOLOGICAL SCIENCE - Transfer

This major can lead to many biological science careers. Medical laboratory technicians work in a clinical laboratory and perform routine tests to obtain data used by physicians and other medical staff in the prevention, diagnosis, and treatment of illness. Bioscience technicians conduct tests and analyze data for use in research and production. Some additional careers include genetic counselors, environmental health specialists, medical illustrators, microbiologists, toxicologists, wild life biologists, and teachers.

For additional career possibilities, visit the Career Services Center on the main campus to utilize computerized career information systems and other valuable career resources.

TRANSFER

Students planning to transfer to a four-year college should complete the lower-division major requirements and the general education pattern for the appropriate transfer institution. Santa Monica College has articulation agreements for this major with the following UC, CSU, and private institutions. Exact major requirements for these and other UC and CSU campuses can be found online at www.assist.org. Articulation agreements with private institution can be found online at www.smc.edu/articulation.

Please note: Due to the competitive nature of Biology, students are advised to complete as many lower division courses as possible prior to transfer. Please see a counselor for more information.

ASSIST

ASSIST.org is a student-transfer information system that shows how course credits earned at Santa Monica College can be applied when transferred to a University of California (UC) or California State University (CSU). ASSIST.org is the official repository of articulation for California’s public colleges and universities and provides the most accurate and up-to-date information about major requirements and general education.

Along with meeting minimum admission requirements, one of the most important aspects of a successful transfer is the completion of significant coursework in the major prior to transfer, for two very specific reasons.

- One, completion of major coursework makes you more attractive for admission, especially for the more competitive universities.
- Two, completion of major coursework at SMC prior to transfer will allow you to transfer and graduate from the university in a timelier manner.

Assist.org has listed the exact courses that you should complete at SMC to satisfy lower-division major requirements prior to transfer to public California universities, but not all majors at all universities are included at this site.

UNIVERSITY OF CALIFORNIA

UNIVERSITY OF CALIFORNIA, BERKELEY
- Integrative Biology B.A.
- Molecular and Cell Biology B.A.
- Bioengineering B.S.
- Chemical Biology B.S.
- Molecular Environmental Biology B.S.

UNIVERSITY OF CALIFORNIA, DAVIS
- Biological Science A.B.
- Biochemical Engineering B.S.
- Biochemistry and Molecular Biology B.S.
- Biological Science B.S.
- Biological Systems Engineering B.S.
- Biomedical Engineering B.S.
- Biotechnology B.S.
- Cell Biology B.S.
- Global Disease Biology B.S.
- Psychology B.S. - Biology
- Wildlife, Fish and Conservation Biology B.S.

*www.assist.org
*Please access the above website for transfer requirements to the UC and/or CSU campuses.
### UNIVERSITY OF CALIFORNIA, IRVINE
- Biochemistry and Molecular Biology B.S.
- Biological Sciences B.S.
- Biology/Education B.S.
- Biomedical Engineering B.S.
- Biomedical Engineering B.S. - Pre-Medical
- Developmental and Cell Biology B.S.
- Ecology and Evolutionary Biology B.S.

### UNIVERSITY OF CALIFORNIA, LOS ANGELES
- Biochemistry B.S.
- Bioengineering B.S.
- Biology B.S.
- Biophysics B.S.
- Computational and Systems Biology B.S.
- Human Biology and Society B.S.
- Marine Biology B.S.
- Microbiology, Immunology, and Molecular Genetics B.S.
- Molecular, Cell, and Developmental Biology B.S.
- Physiological Science B.S.

### UNIVERSITY OF CALIFORNIA, MERCED
- Bioengineering B.S.
- Biological Sciences B.S.

### UNIVERSITY OF CALIFORNIA, RIVERSIDE
- Biochemistry B.A.
- Biology B.A.
- Cell, Molecular and Developmental Biology B.A.
- Plant Biology B.A.
- Bioengineering B.S.
- Biochemistry B.S.
- Bioengineering B.S.
- Biology B.S.
- Cell, Molecular and Developmental Biology B.S.
- Microbiology B.S.
- Plant Biology B.S.

### UNIVERSITY OF CALIFORNIA, SAN DIEGO
- Anthropology B.A. - Biological Anthropology Concentration
- Bioengineering B.S.
- Bioengineering B.S. - Bioinformatics
- Bioengineering B.S. - BioSystems
- Bioengineering B.S. - Biotechnology
- Biology B.S. - Bioinformatics Specialization
- Biology B.S. - Biochemistry and Cell Biology
- Biology B.S. - Ecology, Behavior, and Evolution
- Biology B.S. - General Biology
- Biology B.S. - Human Biology
- Biology B.S. - Microbiology
- Biology B.S. - Molecular Biology
- Biology B.S. - Physiology and Neuroscience
- Chemistry and Biochemistry B.S. - Bioinformatics
- Chemistry and Biochemistry B.S. - Biochemistry/Chemistry
- Chemistry and Biochemistry B.S. - Chemical Education
- Chemistry and Biochemistry B.S. - Chemical Physics
- Chemistry and Biochemistry B.S. - Chemistry
- Chemistry and Biochemistry B.S. - Environmental Chemistry
- Chemistry and Biochemistry B.S. - Molecular Synthesis
- Chemistry and Biochemistry B.S. - Pharmacological Chemistry
- Computer Science B.S. - Bioinformatics Specialization
- Physics B.S. - Biophysics Specialization
### UNIVERSITY OF CALIFORNIA, SANTA BARBARA
- Anthropology B.A. - Biological Emphasis
- Biological Sciences B.A.
- Biology B.A.
- Aquatic Biology B.S.
- Biochemistry B.S.
- Biochemistry B.S. - Molecular Biology
- Biology B.S.
- Biological Sciences B.S.
- Biopsychology B.S.
- Cell and Developmental Biology B.S.
- Ecology and Evolution B.S.
- Microbiology B.S.
- Pharmacology B.S.
- Physiology B.S.
- Zoology B.S.

### UNIVERSITY OF CALIFORNIA, SANTA CRUZ
- Biology B.A.
- Biology B.A. - Bioeducation Concentration
- Environmental Studies/Biology Combined B.A.
- Biochemistry and Molecular Biology B.S.
- Bioengineering B.S.
- Bioinformatics B.S.
- Biology B.S.
- Human Biology B.S.
- Marine Biology B.S.
- Molecular, Cellular, and Developmental Biology B.S.

General education requirements for the University of California campuses are listed on a separate sheet in the Transfer/Counseling Center, as well as online (go to [www.smc.edu/articulation](http://www.smc.edu/articulation)).

### CALIFORNIA STATE UNIVERSITY

#### CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA
- Biochemistry B.S.
- Biology B.S. - Botany
- Biology B.S. - General Biology
- Biology B.S. - Microbiology
- Biology B.S. - Zoology
- Biotechnology B.S.
- Chemistry B.S. - Biochemistry
- Environmental Biology B.S.

#### CALIFORNIA STATE UNIVERSITY, CHANNEL ISLANDS
- Biology B.A.
- Biology B.S.

#### CALIFORNIA STATE UNIVERSITY, CHICO
- Biochemistry B.A.
- Biological Sciences B.A.
- Natural Sciences B.A. - General Biology Option
- Natural Sciences B.A. - Human Biology Option
- Biochemistry B.S.
- Biological Sciences B.S. - Cellular and Molecular Option
- Biological Sciences B.S. - Ecological, Evolutionary, Organismal Option
- Biological Sciences B.S. - Plant Biology Option
- Microbiology B.S. - Clinical Laboratory Science Option
- Microbiology B.S. - General Microbiology Option

### CALIFORNIA STATE UNIVERSITY, DOMINGUEZ HILLS
- Biology B.A.
- Biochemistry B.S.
- Biology B.S.
**CALIFORNIA STATE UNIVERSITY, EAST BAY**

Biochemistry B.A.
- Biochemistry B.A. - Chemistry Education Option
- Biological Science B.A. - Biology Education Option
- Biological Science B.A. - General Biology Option

Biochemistry B.S.
- Biological Science B.S. - Cell and Molecular Biology Option
- Biological Science B.S. - Ecology and Conservation Biology Option
- Biological Science B.S. - Forensic Science Option
- Biological Science B.S. - General Biology Option
- Biological Science B.S. - Microbiology/Biomedical Lab Sciences Option
- Biological Science B.S. - Physiology Option

**CALIFORNIA STATE UNIVERSITY, FULLERTON**

Biochemistry B.S.
- Biological Science B.S.
  - Biological Science B.S. - Cell and Developmental Biology Concentration
  - Biological Science B.S. - Ecology and Evolutionary Biology Concentration
  - Biological Science B.S. - Marine Biology Concentration
  - Biological Science B.S. - Molecular Biology and Biotechnology Concentration

**HUMBOLDT STATE UNIVERSITY**

- Biology - Cellular/Molecular
- Biology - Ecology and Biodiversity
- Biology - Environmental
- Biology - General
- Biology - Marine
- Biology - Microbiology
- Biology - Science Education
- Zoology

**CALIFORNIA STATE UNIVERSITY, LONG BEACH**

Biochemistry B.S.
- Biology B.S. - General
  - Biology B.S. - Biology Education Option
  - Biology B.S. - Molecular Cell Biology and Physiology Option
  - Biology B.S. - Organismal Biology Option

- Marine Biology B.S.
- Microbiology B.S.

**CALIFORNIA STATE UNIVERSITY, LOS ANGELES**

Biochemistry B.S.
- Biology B.S.
- Microbiology B.S.
- Natural Science B.S.

**CALIFORNIA STATE UNIVERSITY, MONTEREY BAY**

- Biology B.S. - Ecology, Evolution and Organismal Biology Concentration
- Biology B.S. - Molecular Biology Concentration
- Biology B.S. - Teacher Preparation Concentration

**CALIFORNIA STATE UNIVERSITY, NORTHRIDGE**

- Biology B.A.
- Biochemistry B.S.
- Biology B.S.
  - Biology B.S. - Option I: Cell and Molecular Biology Option
  - Biology B.S. - Option II: Ecology and Environmental Biology Option
  - Biology B.S. - Option III: Marine Biology Option
  - Biology B.S. - Option IV: Biotechnology/Medical Technology
  - Biology B.S. - Option V: Microbiology Option

*www.assist.org*

*Please access the above website for transfer requirements to the UC and/or CSU campuses.*
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<th>California State University, Sacramento</th>
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<td>B.A. Biological Sciences</td>
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<td>B.S. Biological Sciences - General</td>
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<td>B.S. Biological Sciences - Eco, Evolution and Conservatory</td>
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<td>Forensic Science B.S. - Biology Concentration</td>
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<tr>
<td>Biological Sciences B.S. - Field and Wildlife Biology Concentration</td>
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<td>Biological Sciences B.S. - General Biology Curriculum</td>
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<td>Biological Sciences B.S. - Marine Biology and Conservation Concentration</td>
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General education requirements for the California State University campuses are listed on a separate sheet in the Transfer/Counseling Center, as well as online (go to [www.smc.edu/articulation](http://www.smc.edu/articulation)).
Santa Monica College has articulation agreements for this major (see [www.smc.edu/articulation](http://www.smc.edu/articulation) for exact major requirements) with the following local private and out of state institutions:

### LOYOLA MARYMOUNT UNIVERSITY
- B.A. Biology
- B.S. Biology
- B.S. Biochemistry
- B.S. Natural Science - Pre-Physical/Occupational Therapy Emphasis

Core requirements for this major can be found online on the LMU website:
[http://www.lmu.edu/resources/articulation/list/santa_monica/Santa_Monica_College_2009-10_Lower_Division_Major_Requirements.htm](http://www.lmu.edu/resources/articulation/list/santa_monica/Santa_Monica_College_2009-10_Lower_Division_Major_Requirements.htm)

### MILLS COLLEGE

#### Biology

*Minimum courses: Chemistry 11, 12; optimal courses, also complete: Biology 21, 22; Chemistry 21, 22, 24; Math 7, 52; recommended courses, also complete: Math 7, 8, 54 and 1 semester of computer programming*

Department Representative: John Harris johnh@mills.edu

#### Biochemistry/Molecular Biology

*Minimum courses: Chemistry 11, 12; Math 7, 8; optimal courses, also complete: Biology 22, 23; Chemistry 21, 22, 24; recommended course, also complete: Math 11*

Department Representative: John Brabson johnb@mills.edu

#### Biopsychology

*Minimum courses: Chemistry 11, 12; Psychology 1; optimal courses, also complete: Biology 21, 22, 23; Chemistry 21; Math 52*

Departmental Representative: Carol George george@mills.edu

"Minimum" is the minimum coursework needed in order to complete a B.A. in the associated major in two years, requiring multiple “heavy” semesters with three or four science courses in one semester. Students on a four-year B.A. path typically take two science or math courses each semester. “Minimum” coursework will not enable a student to complete a B.S. two years. Students who do not meet the “minimum” pre-requisites may be able to complete the program, given extra time or some summer coursework, and should contact the departmental representatives below.

"Optimal" is the additional coursework to put a transfer student on the same schedule as a student who entered Mills College as a freshwoman, for the B.A. program. Students who enter at this level will also be able to complete the B.S. by taking one or more semesters with 4 science courses and/or some summer coursework.

"Recommended" courses are specifically for students interested in the B.S. degree. In the B.S. program, students typically take 3 science and/or math courses after the freshman year. With the recommended coursework completed, transfer students should not need to take more than 3 science/math courses in one semester to complete the B.S. degree.

### MOUNT SAINT MARY'S COLLEGE

#### Biological Sciences with Emphasis of Pre-Physical Therapy

Anatomy 1; Biology 21, 22; Chemistry 11, 12; CIS 1; Math 7, 54; Physics 6, 7; Psychology 1; 11 or 19

THE SCHOOLS LISTED ABOVE ARE WHERE MOST SMC STUDENTS TRANSFER TO, BUT THERE ARE MANY OTHER TRANSFER DESTINATION OPPORTUNITIES!