



# Biology AS-T Degree - Intersegmental General Education Transfer Curriculum, Univ. of Cal or Cal State Univ.

This AS-T is designed to prepare students for a seamless transfer into a baccalaureate degree in Biology or a similar major. Students wishing to transfer to a Univ. of California Biology program should meet with a CRC counselor to select and plan the courses as additional courses (in chemistry, physics, and math) may be required.

**Total Units: 64-70**

## First Year

### Semester 1

18-19 Units

| COURSE  | UNITS | PRE-REQS <sup>^</sup>   | SEMESTERS OFFERED*                | GE AREA            |
|---|-------|---|-----------------------------------|--------------------|
| <b>CHEM 400</b> <sup>Z</sup><br>General Chemistry I                 | 5     | Elementary Algebra and CHEM 300, 305, 309 or 1 yr of HS Chem with Lab | F, S, Su                          | IGETC Area 5A & 5C |
| <b>MATH 400</b> <sup>Z</sup><br>Calculus I or                       | 5     | MATH 370  | F, S                              | IGETC Area 2       |
| <b>MATH 355</b> <sup>Z</sup><br>Calculus for Biology and Medicine I | 4     | MATH 335  | Check Class Schedule for offering | IGETC Area 2       |
| <b>IGETC Area 1A-English Composition</b> <sup>Z</sup>               | 3     | Recommend meeting with a counselor                                    | F, S, Su                          | IGETC Area 1A      |
| <b>IGETC Area 3A-Arts</b> <sup>Z</sup> or                           | 3     |   | F, S, Su                          | IGETC Area 3A      |
| <b>IGETC Area 3B-Humanities</b> <sup>Z</sup>                        | 3     |   | F, S, Su                          | IGETC Area 3B      |
| <b>IGETC Area 1C-Oral Communication</b> <sup>Z</sup>                | 3     |   | F, S, Su                          | IGETC Area 1C      |

<sup>Z</sup> At least one section of this course is offered with free textbooks and is labeled as zero textbook costs (ZTC). If it is a GE area class or elective, there may be several ZTC offerings to fulfill the GE requirement. Use the Free Textbook filter to find these courses. Learn more on the [ZTC page of the college website](#).

### Semester 2

13-18 Units

| COURSE | UNITS | PRE-REQS <sup>^</sup> | SEMESTERS OFFERED* | GE AREA |
|--------|-------|-----------------------|--------------------|---------|
|--------|-------|-----------------------|--------------------|---------|

## Career

### Options/Outlook:

Biologists research or study the basic principles of plant and animal life, such as origin, relationship, development, anatomy, and functions. Tasks may include collecting and analyzing biological data about relationships among and between organisms and their environment; prepare technical and research reports, such as environmental impact reports, and communicate the results to individuals in the industry, government, or the general public. **Career opportunities require more than an associate degree.**

### A sample of reported job titles:

Aquatic Biologist, Aquatic Scientist, Biological Scientist, Biologist, Botanist, Horticulturist, Marine Biologist, Research Biologist, Research Scientist, Scientist

### Projected job openings nationally (2020-2030):

1,640

### Projected growth nationally (2020-2030):

21% growth

| COURSE  | UNITS | PRE-REQS^   | SEMESTERS OFFERED* | GE AREA            |
|---|-------|---|--------------------|--------------------|
| <b>BIOL 400</b> <sup>Z</sup><br>Principles of Biology | 5     | CHEM 400 or 305 and MATH 120; Advisory: Eligibility for ENGWR 300 | F, S               | IGETC Area 5B & 5C |
| <b>CHEM 401</b> <sup>Z</sup><br>General Chemistry II  | 5     | CHEM 400  | F, S               | IGETC Area 5A & 5C |
| <b>IGETC Area 1B-Critical Thinking</b> <sup>Z</sup>   | 3     |   | F, S, Su           | IGETC Area 1B      |
| <b>Any Transferable Elective</b> <sup>1</sup>         | 0-5   |   | F, S               |                    |

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<sup>1</sup> Suggestion-MATH 401 Calculus II(5 units); Pre-req: MATH 400; F, S. Units required are determined by the number of units needed to total 60 units for graduation. Refer to [Course Number](#) for the appropriate course level necessary for the degree.

## Year 2

### Semester 3

18 Units

| COURSE   | UNITS | PRE-REQS^                                     | SEMESTERS OFFERED* | GE AREA            |
|--|-------|---|--------------------|--------------------|
| <b>BIOL 410</b> <sup>Z</sup><br>Principles of Botany                           | 5     | BIOL 400; Advisory: Eligibility for ENGWR 300 | F, S               | IGETC Area 5B & 5C |
| <b>PHYS 350</b> <sup>Z</sup><br>General Physics                                | 4     | MATH 335                                      | F                  | IGETC Area 5A & 5C |
| <b>IGETC Area 3B-Humanities</b> <sup>Z</sup>                                   | 3     |   | F, S, Su           | IGETC Area 3B      |
| <b>IGETC Area 3A-Arts</b> <sup>Z</sup>   | 3     |   | F, S, Su           | IGETC Area 3A      |
| <b>IGETC Area 4-Social &amp; Behavioral Sciences</b> <sup>1</sup> <sup>Z</sup> | 3     |   | F, S, Su           | IGETC Area 4       |

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<sup>1</sup> A total of 6 units from 2 disciplines to satisfy Area 4; Suggestion-select a course that will also meet the CSU graduation requirement.

## Median Salary in California with advanced degree (2021):

\$97,260/yr

### Source:

<https://www.onetonline.org/link/summary/19-1020.01>

### Honors option:

The CRC Honors Program is designed specifically for academically accomplished students and for students with the potential for high achievement. Students who complete 15 units or more in honors-designated courses will earn special recognition as an Honors Scholar, a distinction that may entitle the student to guaranteed transfer and scholarship opportunities at select transfer colleges and universities.

### Transfer notes:

Please meet with a counselor for specific transfer course evaluation or transferring to a specific 4-year institution.

### About this map:

This program map represents one possible pathway to complete the program. Please see a counselor to create an education plan that is customized to meet your needs. This map is not a guarantee of course availability or financial aid applicability.

## Zero Textbook Costs (ZTC):

The Zero Textbook Costs designation and logo are added to any course that provides free access to all required instructional materials. These are typically shared with students through Canvas. Courses that are designated as ZTC may still require students to purchase supplemental materials such as lab coats, a calculator,

## Semester 4

15 Units

| COURSE   | UNITS | PRE-REQS <sup>^</sup>                                  | SEMESTERS OFFERED <sup>*</sup> | GE AREA            |
|--|-------|--|--------------------------------|--------------------|
| <b>BIOL 420</b> <sup>(Z)</sup><br>Principles of Zoology                            | 5     | BIOL 400;<br>Advisory:<br>Eligibility for<br>ENGWR 300 | F, S                           | IGETC Area 5B & 5C |
| <b>PHYS 360</b> <sup>(Z)</sup><br>General Physics                                  | 4     | PHYS 350   | S                              | IGETC Area 5A & 5C |
| <b>IGETC Area 4-<br/>Social &amp;<br/>Behavioral<br/>Sciences</b> <sup>1 (Z)</sup> | 3     |  | F, S, Su                       | IGETC Area 4       |
| <b>IGETC Area 7-<br/>Ethnic Studies</b> <sup>(Z)</sup>                             | 3     |  | F, S, Su                       | IGETC Area 7       |

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<sup>^</sup>You must have passed the prerequisite course(s) with a "C" or better; Corequisite must be taken during the same semester; Advisory means it is recommended but not required to enroll in the course.

<sup>\*</sup>(O) = online available (P) = partially online

<sup>1</sup> A total of 6 units from 2 disciplines to satisfy Area 4; Suggestion-select a course that will also meet the CSU graduation requirement.

art supplies, etc. See full definitions and searching tips on the [Zero Textbook Costs page](#) of the college website.

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