



# Biology AS-T Degree - combined botany & zoology

FULL TIME

This program roadmap 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 roadmap is not a guarantee of course availability or financial aid applicability.

Catalog: 2024-25

GE Pattern: IGETC-STEM

Total Units: 60

## First Year

### Semester 1

15 Units

CAT.	COURSE	TITLE	UNIT	GE AREA
RE	MATH 355 <sup>1</sup>	Calculus for Biology and Medicine I	4	2
Req	CHEM 400	General Chemistry I	5	5A
GE	ENGWR 300 / 480 <sup>H</sup>	College Composition	3	1A
GE		any Area 4 (Social & Behavioral Sciences) course	3	4

<sup>1</sup> or MATH 400 (Calculus I). See a counselor to determine the appropriate math course(s) to take, based on your educational goals.

### Semester 2

15 Units

CAT.	COURSE	TITLE	UNIT	GE AREA
Req	CHEM 401	General Chemistry II	5	
GE		any Area 1B (Critical Thinking) course	3	1B
GE		any Area 3A (Arts) course	3	3A
Elec		any elective course numbered 300-499	3	
Elec		any elective course numbered 300-499	1	

## Second Year

### Semester 3

15 Units

CAT.	COURSE	TITLE	UNIT	GE AREA
Req	BIOL 400	Principles of Biology	5	5B, 5C
Req	PHYS 350	General Physics	4	
GE		any Area 1C (Oral Communication) course	3	1C
GE		any Area 7 (Ethnic Studies) course	3	7

### Semester 4

15 Units

CAT.	COURSE	TITLE	UNIT	GE AREA
Req	BIOL 415	Introduction to Biology: Biodiversity, Evolution, and Ecology	5	
Req	PHYS 360	General Physics	4	
GE		any Area 3B (Humanities) course	3	3B
Elec		any elective course numbered 300-499	3	

2 YEARS

### TRANSFER PATH

#### Potential Transfer Majors:

- Biology B.S.

#### Potential Career/Options After Completing a Bachelor's Degree:

Career opportunities include:

- physician
- physiologist
- molecular biologist
- biotechnologist
- cell biologist
- geneticist
- researcher (lab or field)
- botanist
- zoologist
- ecologist
- technical writer

A bachelor's degree in biology also prepares students for professional schools including medical school, dental school, and optometry school.

#### Advising Notes:

- This roadmap, with combined botany and zoology (BIOL 415), is only recommended for students with strong science backgrounds and few outside commitments.
- Students can substitute ESLW 340 for ENGWR 300/480.

### EXPLANATION OF CATEGORIES

RE	Restricted Elective	A course selected from a list of elective courses specified for this program in the course list in the catalog, which can be replaced with another course from the same list
Req	Required Core	A course that is required for this program
GE	General Education	A course that fulfills a specific general education requirement for a degree, which can be replaced with another course that meets the same requirement
Elec	Degree Elective	A degree-applicable course that is part of a degree roadmap to ensure that there is a total of at least 60 units, which is a requirement for an associate degree

- This map starts with MATH 355 and CHEM 400, which have prerequisites. Please [see a counselor](#) to add in prerequisite courses, if needed.

### Other Notes to Students Preparing to Transfer:

- CSUS and some other CSUs require STAT 300 for admission.
- Organic chemistry and second semester calculus are often required for transfer.
- See [ASSIST.ORG](#) for the transfer requirements of the institution to which you plan to transfer.
- The UC system requires proficiency in a language other than English equivalent to two years of high school study. [See a counselor](#) about fulfilling this requirement.

### Honors Courses (H):

Students with a cumulative GPA of 3.2 or better who complete 15 or more units of Honors coursework earn an [Honors](#) Transfer Certificate and can take advantage of honors-to-honors transfer agreements with highly selective colleges and universities, both public and private.