Biotechnology A.S. Degree - transfer

PART 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: 2026-27

GE Pattern: Cal-GETC

Total Units: 60

Start Term: Fall

First Year

Semester 1 (Fall) — 8 Units

CAT.	COURSE	UNIT	PREREQUISITES	GE AREA
Req	BIOT 307 Biotechnology and Society	2		
Req	ENGL C1000 College Composition	3		1A
GE	any Area 3A (Arts) course	3		3A

Semester 2 (Spring) — 9 Units

CAT.	COURSE	UNIT	PREREQUISITES	GE AREA
Req	STAT C1000 Introduction to Probability and Statistics	4		2
RE	CHEM 400 General Chemistry I	5	(see below)	5A, 5C

CHEM 400 prerequisite: CHEM 310 or another college chemistry course or a year of high school chemistry AND a passing score on the Chemistry Assessment Test at American River College

Second Year

Semester 3 (Fall) — 8 Units

CAT.	COURSE	UNIT	PREREQUISITES	GE AREA
RE	ENGL C1001 Advanced Composition and Critical Thinking	3	ENGL C1000	1B
RE	CHEM 401 General Chemistry II	5	CHEM 400	

Semester 4 (Spring) — 8 Units

CAT.	COURSE	UNIT	PREREQUISITES	GE AREA
RE	BIOL 400 Principles of Biology	5	CHEM 400	5B

TRANSFER PATH

Potential Transfer Majors:

- Biotechnology B.S.
- Biology B.S.
- Microbiology B.S.
- Cell & Molecular Biology B.S.
- Plant Biology B.S.

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

- A bachelor's degree in Biology or Biotechnology opens doors to many careers in the biosciences.

Advising Notes:

- This degree can be completed using either the local AA/AS general education (GE) pattern or the Cal-GETC transfer GE pattern. See a counselor to determine which pattern is best for you based on your academic goals.
- This map is designed for students preparing to transfer into a traditional biology degree program. There is another roadmap for students preparing for direct employment.
- This map is designed for students who are able to take 2-3 classes (or 6-9 units) each semester. See a counselor to

CAT.	COURSE	UNIT	PREREQUISITES	GE AREA
GE	any Area 1C (Oral Communication) course	3		1C

Third Year

Semester 5 (Fall) — 6 Units

CAT.	COURSE	UNIT	PREREQUISITES	GE AREA
Req	BIOT 301 Biotechnology and Human Health	3	(see below)	
GE	any Area 4 (Social & Behavioral Sciences) course (from 2 academic disciplines)	3		4

BIOT 301 prerequisite: BIOL C1000, BIOL 310, BIOL 400, BIOL 440, BIOL 442, or BIOT 307

Semester 6 (Spring) — 7 Units

CAT.	COURSE	UNIT	PREREQUISITES	GE AREA
RE	BIOT 305 Introduction to Bioinformatics	1	(see below)	
GE	any Area 3B (Humanities) course	3		3B
GE	any Area 4 (Social & Behavioral Sciences) course (from 2 academic disciplines)	3		4

BIOT 305 prerequisite: BIOL C1000, BIOL 310, BIOL 400, BIOL 440, BIOL 442, BIOT 301, or BIOT 307

Fourth Year

Semester 7 (Fall) — 8 Units

CAT.	COURSE	UNIT	PREREQUISITES	GE AREA
RC	BIOL 415 Introduction to Biology: Biodiversity, Evolution, and Ecology	5	BIOL 400	
GE	any Area 6 (Ethnic Studies) course	3		6

Semester 8 (Spring) — 6 Units

CAT.	COURSE	UNIT	PREREQUISITES	GE AREA
Req	BIOT 311 Biotechnology Laboratory Methods - Molecular Techniques	2	(see below)	

adjust the coursework to meet your specific needs.

- **Transferable Elective Courses:** any elective courses numbered 300-499, or having a 4-digit number starting with C.
- This degree can be started in the spring as well. See a counselor to adjust the coursework.

Scheduling Notes:

- BIOT 301 is offered in the fall.
- BIOT 305 is offered as a 2nd-8-week class in the spring.
- BIOT 307 is offered as a 1st-8-week class in the fall.
- BIOT 311 is offered as 1st-8-week class in the spring.
- BIOT 312 is offered as a 2nd-8-week class in the spring.

Other Notes to Students Preparing to Transfer:

- The chemistry and biology courses in this roadmap align with the requirements of many traditional biology degree programs.
- Additional coursework may be necessary to transfer. Other requirements may include courses such as calculus (MATH 355 or 400), physics (PHYS 350 and 360), and organic chemistry (CHEM 420 and 421, or CHEM 423).
- See ASSIST.ORG for the transfer requirements of the institution to which you plan to transfer.
- The CSU system requires every student receiving a bachelor's degree to be knowledgeable about the Constitution of the United States, American history, and state and local government. This requirement is generally known as the American Institutions requirement. Students can

CAT.	COURSE	UNIT	PREREQUISITES	GE AREA
Req	**BIOT 312** Biotechnology Laboratory Methods - Microbial and Cell Culture Techniques	2	(see below)	
Elec	**any transferable elective course**	2		

BIOT 311/312 prerequisite: BIOL 300, BIOL C1000, BIOL 310, BIOL 400, BIOL 440, BIOL 442, or BIOT 307

EXPLANATION OF CATEGORIES		
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
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
RC	Recommended Course	A course that is not part of this program but is included in its roadmap
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

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complete this requirement at ARC before transferring. See a counselor for a list of approved courses.

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.