

Biological Science AS Degree (COC GE Track)

+If you have completed coursework at another college and/or are starting in a semester other than a Fall term, please follow up with the Counseling Department to determine if this sequence is appropriate for your academic and career goals.

Program Description: Biological Sciences covers all aspects of the scientific study of life and emphasizes both the unity and diversity of living things. The structure, function, and behavior of organisms are studied at the molecular, cellular, organismal and ecological levels. The broad course work requirements include biology, chemistry, physics, and mathematics. The biology program provides diverse course offerings serving two areas: the biology major; and nursing programs and other health professions.

Program SLO: Interpret, analyze, and evaluate Biological knowledge using the scientific method.

Important Transfer Information: Connect with a counselor to develop an individualized student education plan through the Counseling Department @ <https://www.canyons.edu/counseling> or (661) 362-3288. This sequence listed below, may not meet all your transfer admissions requirements.

Major courses are sequenced and **BOLDED** based on recommendations by the [Department of Biology](#).

First Semester (3-15 units units minimum)		FA=Fall; WI=Winter; SP=Spring; SU=Summer		
Course	Title	Units	Major Prep and GE Courses	
BIOL 106/106H	Organismal & Environmental Biology (FA, WI, SP, SU)	4	Major and Area A	
#MATH 102	Trigonometry (FA, WI, SP, SU)	4	Prerequisite and Area DII and Area 3	
+CHEM 151/151H	Preparatory Chemistry (FA, WI, SP, SU)	4	Prerequisite	
American Institutions - Choose Option I or II	Complete first course in chosen option – (note: must take both classes within one option) (FA, WI, SP, SU) – <i>see below</i>	3	American Institutions/Area E	
Term Total:		15		

#Based on assessment results

+Students can take Chemistry Diagnostic Exam to place into CHEM 201

Interession I (16-18 units minimum)				
Course	Title	Units	Major Prep and GE Courses	
*Humanities and Fine Arts	Choose one course from the AA GE Area C (FA, WI, SP, SU)	3	Area C (and *ideally, a Diversity GE course)	
Term Total:		3		

Courses with an () next to them will double-count toward the Diversity Requirement.

Second Semester (19-32 units minimum)				
Course	Title	Units	Major Prep and GE Courses	
CHEM 201/201H (Group 2 Course)	General Chemistry I (FA, WI, SP, SU)	5	Major Course	
#MATH 104	Pre-Calculus (FA, SP, SU)	5	Prerequisite	
ENGLISH 101/101H	English Composition (FA, WI, SP, SU)	4	Area DI	
Term Total:		14		

Interession II (33-36 units minimum)				
Course	Title	Units	Major Prep and GE Courses	
BIOL 107/107H	Molecular and Cellular Biology (FA,WI,SP,SU)	4	Major Course	
Term Total:		4		

Third Semester (37-49 units minimum)				
Course	Title	Units	Major Prep and GE Courses	
Group 1 Course	Choose any course from Group 1 listed below	4-5	Major Course	
Group 2 Course	Choose any course from Group 2 listed below	4-5	Major Course	
American Institutions – Choose Option I or II	Complete second course in chosen option – (note: must take both classes within one option) (FA, WI, SP, SU) – <i>see below</i>	3	American Institutions/Area E	
PE/Wellness	Take two of any KPEA or Active Dance classes (except not Dance 100) <u>or</u> Health 100, 149, 150, or 243* (FA, WI, SP, SU)	2-3	Area F	
		Term Total:	13-16	

Interession III (50-53 units minimum)				
Course	Title	Units	Major Prep and GE Courses	
Group 2 Course	Choose any course from Group 2 listed below	4-5	Major Course	
		Term Total:	4-5	

Fourth Semester (54-64 units minimum)				
Course	Title	Units	Major Prep and GE Courses	
Group 1 Course	Choose any course from Group 1 listed below	4-5	Major Course	
Group 2 Course	Choose any course from Group 2 listed below	4-5	Major Course	
*Social Science Course	Choose one course from the AA GE Area B (FA, WI, SP, SU)	3	Area B (and *ideally, a Diversity GE course, if not done yet)	
		Term Total:	11-13	

Total Units: 64+

Group 1 – Need a minimum of 8 units completed for this area (Choose any two courses)

Biosci 115	General Zoology (FA)	4
Biosci 116	General Botany (SP)	4
Biosci 201	Introduction to Human Anatomy (FA, SP, SU)	4
Biosci 202	Introduction to Human Physiology (FA, SP, SU)	4
Biosci 204	Human Anatomy and Physiology I (FA, SP, SU)	4
Biosci 205	Human Anatomy and Physiology II (FA, SP, SU)	4
Biosci 221	Introduction to Microbiology (FA, SP, SU)	5
Biosci 240	Molecular Genetics (FA,SP)	4

Group 2 – Need a minimum of sixteen units from the following:

CHEM 201 or 201H	General Chemistry I (FA, SP, SU)	5
CHEM 202	General Chemistry II (FA, SP, SU)	5
CHEM 255	Organic Chemistry I	5
CHEM 256	Organic Chemistry II	5
MATH 211	Calculus I (FA, SP, SU)	5
MATH 212	Calculus II (FA, SP, SU)	5
PHYSIC 110	General Physics I	4
PHYSIC 111	General Physics II	4
PHYSIC 220	Physics for Scientists and Engineers: Mechanics of Solids and Fluids (FA, SP, SU)	4
PHYSIC 221	Physics for Scientists and Engineers: Electricity and Magnetism (FA, SP, SU)	4

American Institutions Requirement – Select one of the options below and complete a total of 6 units

Option 1	One course from the following: Economics 170/170H, History 111/111H, History 112/112H, History 120*/120H*, or History 130* AND Political Science 150/150H (FA, WI, SP, SU)
Option 2	History 111/111H AND History 112/112H (FA, WI, SP, SU)

Counseling Resources

Biology Department: <https://www.canyons.edu/academics/biology/index.php>

AA General Education Guide:

https://www.canyons.edu/_resources/documents/student-services/counseling/top10/AssociateDegreeRequirements20192020.pdf

Clubs: Please contact Biology department chair

Career Resources

California Career Zone: www.californiacareerzone.com

O*Net Online: www.onetonline.com

Bureau of Labor and Statistics: www.bls.gov

What Can I Do With a Major In... <https://whatcanidowiththismajor.com>

Professional Associations:

ASM (American Society of Microbiology): <https://www.asm.org/>

ASCB (American Society of Cell Biology): www.ascb.org

APS (American Physiological Society): www.the-aps.org

HAPS (Human Anatomy & Physiology Society): www.hapsweb.org

AESS Association for Environmental Studies and Sciences: aessonline.org/