

Computational Biology Certificate 25-26



ABOUT THIS MAJOR

Computational Biology uses data analysis, mathematical modeling, and computational simulation techniques to understand complex biological systems. The Computational Biology certificate provides coursework designed to train students entering careers that require the interpretation and analysis of large amounts of biological data. The objective of the certificate is to acquire skills in computer science, biology and statistics that can be applied to bioinformatics. Students may also wish to obtain the Associate in Science in Biology degree (AS or AS-T), which can be used to transfer to a university for a BA/BS degree in Computational Biology, Biotechnology, Bioinformatics, or related field. For more information, visit the [Mathematics, Sciences, and Engineering](#) division.

TO EARN A Certificate A STUDENT MUST COMPLETE THE FOLLOWING:

- [1] Completion of Major & Program Electives Courses
- [2] Minimum grade point average of 2.0
- [3] A C or better in all courses required for the major

Cert.- Computational Biology

[Total Units Required for the Major 23]

Required Courses: Complete all the following (total 8 units)	
BIOL110 - General Molecular Cell Biology	5
CS110 - Intro to Programming Concepts and Methodologies	3

Chemistry Prep Course, choose one (total 5units)	
CHEM110 - General Chemistry	5
CHEM110H - General Chemistry Honors	5

Statistics Course, choose one (total 4 units)	
MATH116 - Introduction to Statistics Using R	4
STATC1000 - Introduction to Statistics	4
STATC1000H - Introduction to Statistics - Honors	4

Skill Courses, Complete all the following (total 6 units)	
CS122 - Programming and Algorithms in Python	3
BIOL206 - Introduction to Bioinformatics	3

RECOMMENDED PATHWAY Computational Biology Certificate

The Recommended Plan of Study is determined by the discipline faculty. Take classes in Summer or Intersession if needed to complete your degree in a timely manner!

Fall/Spring: Max 19 units | Summer: Max 9 units | Intersession: Max 6 units

Major

SEMESTER 1

Course Advisement	Units
<input type="checkbox"/> CS 110	5
<input type="checkbox"/> BIOL 110	5
<input type="checkbox"/> CHEM 110 OR CHEM 110H	3
Total Semester Units	13

SEMESTER 2

Course Advisement	Units
<input type="checkbox"/> STATC1000 or STATC1000H or MATH 116	4
Total Semester Units	4

SEMESTER 3

Course Advisement	Units
<input type="checkbox"/> CS 122	3
<input type="checkbox"/> BIOL 206	3
Total Semester Units	6
Total Degree units	

COUNSELING NOTE SECTION

Prerequisite: If a course is listed as a prerequisite for another course, that prerequisite course must be completed with a satisfactory grade to enroll in the next course. A satisfactory grade is a grade of "A," "B," "C" or "P". Students who enroll in classes for which they do not meet the prerequisites will be involuntarily dropped. Students will be notified of this involuntary drop. Title 5, Section 55200(d)

Application for Graduation:

Antelope Valley College awards degrees three times annually following the Fall, Spring, and summer semesters. Students must apply for graduation to earn their degree or certificate. Applications are due by September 6 for spring/summer graduates and by February 14 for fall graduates.

AVC 25-26 CATALOG: [ACADEMIC POLICIES](#)

INFORMATION and RESOURCES

Tutoring Assistance
Transfer Center
Basic Needs

Career Center
Office of Students with Disabilities
Financial Aid

AVC Student Health Services
Palmdale Center
Counseling Division

TRANSFER BEGINS DAY 1

The State requires ALL STUDENTS to have a Comprehensive Education Plan. You MUST make a counseling appointment as soon as enrollment is established to receive your plan. Stop by the Counseling Center or call 661-722-6300 x 6338 to schedule an appointment.