A.S. Computer Engineering Degree 25-26

ABOUT THIS MAJOR

The Associate in Sciences in Computer Engineering will provide students with a fundamental knowledge of Computer Engineering, to enhance their computational and problem solving skills, sharpen their critical thinking, and to ensure proper preparation for junior level Computer Engineering coursework at a university. Students completing this degree should realize that there are many sub disciplines in Computer Engineering and most require a similar core education, but not all. . For more information, visit the Mathematics, Sciences, and Engineering division.

. TO EARN A DEGREE A STUDENT MUST COMPLETE THE FOLLOWING:

[1] Completion of a minimum of 60-semester units or 90 quarter units of degree applicable courses
[2] A minimum of 18-semester units in a major
[3] Completion of 21 units AVC General Education Requirements
[4] Minimum overall grade point average of 2.0
[5] A "C" or better in all courses required for the major

AS-Computer Engineering
[Total Units Required for Certificate 48]

Required CALC course, choose one total 5 units	
MATH150 - Calculus and Analytic Geometry	3
MATH150H - Calculus & Analytic Geometry Honors	5

Required Courses, complete ALL courses (total 32 units)	
MATH160 - Calculus and Analytic Geometry	4
MATH220 - Linear Algebra	4
MATH230 - Introduction to Ordinary Differential Equations	4
MATH250 - Calculus and Analytic Geometry	4
PHYS110 - General Physics	4
PHYS120 - General Physics	4
ENGR230 - Circuit Analysis	4
CS150 - Discrete Structures	3

Computer Programing Electives: choose one of the following programing language options (6 units)	
C/C++ Programming: CS120 - Programming and Algorithms in C/C++ CS130 - Data Structures using C++	6
OR	
Java Programming: CS121 - Programming and Algorithms in Java CS131 - Data Structures using Java	6
OR	
Python Programming: CS122 - Programming and Algorithms in Python CS132 - Data Structures using Python	6

Program Electives (3-4 units)	
CS110 - Intro to Programming Concepts and Methodologies	3
CS140 - Assembly Language and Computer Architecture	5
ENGR110 - Introduction to Engineering	4
ENGR185 - Digital Logic and Design	4

RECOMMENDED PATHWAY
Associate of Science in Computer Engineering

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   🟢 General Education   🔺 General Elective

SEMESTER 1

Course	Units
🟦 Program Elective: CS 110 or ENGR 110 (rec.)	3
🟦 MATH 150	5
🟢 AVC GE AREA 4: Social & Behavioral Sciences	3
🟢 AVC GE Area 1A:EnglC1000/H {formally Engl 101}	3
Total Units	14

SEMESTER 2

Course	Units
🟦 CS 120 or CS 121 or CS 122	3
🟦 MATH 160	4
🟦 PHYS 110	4
🟢 AVC GE Area 6: Ethnic Studies	3
Total Units	14

SEMESTER 3

Course	Units
🟢 AVC GE Area 3: Arts & Humanities	3
Total Units	3

SEMESTER 4

Course	Units
🟦 MATH 250	4
🟦 PHYS 120	4
🟦 CS 130 or CS 131 or CS 132	3
🟢 AVC GE Area 1B: Oral Comm.& Critical Think	3
Total Units	16
Total Degree Units	60

SEMESTER 5

Course	Units
🟦 MATH 220	4
🟦 MATH 230	4
🟦 ENGR 230	4
🟦 CS 150	4
Total Units	16
Total Degree Units	60

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	Career Center	AVC Student Health Services
Transfer Center	Office of Students with Disabilities	Palmdale Center
Basic Needs	Financial Aid	Counseling Division

2025-2026 AVC General Education Requirements

Advising Form Effective Fall 2025 - Summer 2026

The requirements for an AA or AS degree include the following:

1. A minimum of **60 semester units**; with at least **12 semester units completed in residence at AVC** for an AA/AS degree (credit earned by examination will not be included in these 12 units); **maximum of 12 pass/no-pass credit units** can be accepted towards an AA/AS degree.

2. Refer to each individual program for major requirements. **All major courses** as specified in the AVC catalog and AVC Area 1A **must** be completed with a grade of "C" or better.

3. An overall grade point average (GPA) of 2.0 ("C" average) is required.

Double counting: While a course may satisfy more than one general education requirement, it may not be counted more than once for these purposes. A course may be used to satisfy both a general education requirement and a major or area of emphasis requirement.

Prerequisite: If a course is listed as a prerequisite for another course, that prerequisite course must be completed with a satisfactory grade in order 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)*

Complete at least 3 semester units from each of the following areas below: 1A, 1B, 2, 3, 4, 5, and 6.

Minimum Total GE Units Required 21 semester units or 28-31.5 quarter units.

GE AREA	COMPLETED	IN PROGRESS	NEED	
				AREA 1: ENGLISH COMPOSITION, ORAL COMMUNICATION, AND CRITICAL THINKING 2 courses required, one from Area A and one from Area B, 6 semester or 8 quarter units
1A				Area 1A: English Composition: ENGL C1000, ENGL C1000H
1B				Area 1B: Oral Communication and Critical Thinking: COMM C1000, C1000H; ENGL C1001, C1001H, 102, 102H; PHIL 201
				AREA 2: Mathematical Concepts and Quantitative Reasoning 1 course, 3 semester or 4 quarter units
2				MATH 103, 110, 116, 124, 128, 140, 148, 150, 150H, 160, 220, 230, 250; STAT C1000, C1000H
				AREA 3: ARTS AND HUMANITIES 1 courses, 3 semester units or 4 quarter units
3				ART 100, 101, 101H, 102, 102H, 103, 104, 106, 113, 132, 135, 137, 140, 145, 163, 170, 213; CHIN 101, 102, 201, 202; DFST 101, 102, 201, 202; COMM 112, 114, 217, 219; DA 101, 113; ENGL 102, 102H, 114, 221, 222, 225, 227, 230, 231, 235, 242, 253, 253H, 256, 257, 259, 265, 279; FREN 101, 102, 201, 202, 203; FTV 101, 107, 108, 201, 203, 251; GER 101, 102, 201, 202; HIST 104, 105, 107, 107H, 108, 108H, 110, 110H, 111, 111H, 113, 115, 119; LATN 101, 102, 201; MUS 101, 101H, 105, 106, 110, 111, 120, 151; MUSC 102, 103, 107, 108, 109; PHIL 105, 105H, 106, 108, 109, 130, 140; NF 150; PHOT 107; PHTC 101, 150, 201; SPAN 101, 102, 110SS, 201, 202, 203, 210SS, 220SS; THA 101, 101H, 102, 103, 104, 106, 110, 111, 225, 239, 239H, 240
				AREA 4: SOCIAL AND BEHAVIORAL SCIENCE 1 course, 3 semester units or 4 quarter units
4				AJ 206; ANTH 102, 103, 110, 112, 112H, 140; BUS 212; CFE 102, 103; DFST 105, 106, 110; ECON 100, 101, 101H, 102, 102H, 110; GEOG 105, 106, 110; HIST 104, 105, 107, 107H, 108, 108H, 110, 110H, 111, 111H, 113, 114, 116, 118, 119; POLS C1000, C1000H, 103, 200, 201, 202, 203; PSY 200, 201, 212, 230, 232, 233, 234, 235, 236; PSYC C1000, C1000H; SOC 101, 101H, 105, 110, 111, 112, 115, 116, 120, 200;
				AREA 5: NATURAL SCIENCES 1 course, 3 semester units or 4 quarter units
5				ANTH 101, 101H; ASTR 101, 101H; BIOL 100, 101#, 102, 103, 104, 104H, 110, 120, 201, 202, 204, 205; CHEM 101, 102, 110, 120, 210, 220; ELTE 101; ERSC 101; GEOG 101, 102; GEOL 101, 102; PHYS 101, 102, 110, 120, 211; PSCI 101 #Students must register for the required lab component (BIOL 101L) separately.
				AREA 6: ETHNIC STUDIES 1 course, 3 semester units or 4 quarter units
6				ETHN 101, 102, 110, 111, 112, 113, ENGL 257 or ETHN 257EN