



AS - Electrical Engineering 19-20

Recommended Program Sequence

All courses with a + sign indicate a pre-requisite or co-requisite

Term 1 (Semester: Maximum 19 units, 15 units recommended)		Units	Term 5 (Semester: Maximum 19 units, 15 units recommended)		Units
ENGR 110+, Engineering Orientation and Basic Skills		3	ENGR 125+, Programming and Problem Solving in MATLAB		4
Gen Ed. Area D2 MATH 150+, Calculus and Analytic Geometry		5	MATH 250+, Calculus and Analytic Geometry		4
General Education Area D1 (English 101+)		3	PHYS 120+, General Physics		4
General Education Area B (Social Science)		3	General Education C (Humanities)		3
Total		14	ENGR 185+, Digital Logic and Design		15
Term 2: (Intersession(6/3)-Summer (9/6) Max./Recommended units)			Term 6: (Intersession(6/3)-Summer (9/6) Max./Recommended units)		
Term 3 (Semester: Maximum 19 units, 15 units recommended)		Units	Term 7 (Semester: Maximum 19 units, 15 units recommended)		Units
Gen. Ed. Area E CIS 161, Introduction to C Programming		3	ENGR 230+, Circuit Analysis		4
ENGR 185+, Digital Logic and Design		4	MATH 230+, Introduction to Ordinary Differential Equations		4
MATH 160+, Calculus and Analytic Geometry		4	PHYS 211+, General Physics		5
Gen. Ed. Area A PHYS 110+, General Physics		4	General Education Area F (Diversity Studies)		3
Total		15	Total		16
Term 4: (Intersession(6/3)-Summer (9/6) Max./Recommended units)			Transfer or Graduate		

Take Summer or Intersession classes if needed to complete the program in a timely manner.

The state requires all students to have a Comprehensive Educational Plan. Make a counseling appointment as soon as enrollment is established on any term. Come by the Counseling Center or call.

Major Required Courses:	
CIS 161, Introduction to C Programming	3
ENGR 110+, Engineering Orientation and Basic Skills	3
ENGR 125+, Programming and Problem Solving in MATLAB	4
ENGR 185+, Digital Logic and Design	4
ENGR 230+, Circuit Analysis	4
MATH 150+, Calculus and Analytic Geometry	5
MATH 160+, Calculus and Analytic Geometry	4
MATH 230+, Introduction to Ordinary Differential Equations	4
MATH 250+, Calculus and Analytic Geometry	4
PHYS 110+, General Physics	4
PHYS 120+, General Physics	4
PHYS 211+, General Physics	5
Units Required for the Major:	48
<i>other requirements for degree</i>	
General Education	21-27
Proficiency (See Proficiency Requirements)	*
Electives	0
Minimum Units Required for AS Degree	60
Other Requirements:	
<ul style="list-style-type: none"> Minimum grade of "C" required on each course Maximum of 12 pass/no-pass units accepted for the Degree Refer to catalog or online website for course listings and descriptions 	
AS General Education: At least 3 units from each of the following areas below: A, B, C, D1, D2, E, and F. Minimum Total GE Units Required	
Area A Natural Sciences: (min. 3 units)	
ANTH 101, 101L ASTR 101+, 101L+ BIOL 100, 101+, 101L+, 102, 103, 104, 110+, 120+, 201+, 202+, 204+, CHEM 101+, 102+, 110+ ELTE 101 ERSC 101+ GEOG 101+, 101L+, 102, 102L+ GEOL 101+, 101L+, 102+, 102L+ PHYS 101, 102+, 110+, 120+, 211+ PSCI 101	
Area B Social & Behavioral Sciences: (min. 3 units)	
AJ 201, 204, 206 ANTH 102, 103, 112, 140 BUS 101 CFE 102 COMM 217+ DFST 105 ECON 100, 101+, 102+, 110 GEOG 105, 106, 110 HIST 101, 102, 104, 105, 107, 108, 110, 111, 113, 114, 116, 118, 119	
POLS 101, 103, 200, 201+, 202+, 203+ PSY 101, 201+, 212+, 230+, 232, 233+, 234+, 235+, 236+ SOC 101, 105, 110, 111, 112, 115, 116+, 120 <div style="background-color: yellow; padding: 2px;">Area C Humanities: (min. 3 units)</div> ART 100, 101, 102, 103, 104, 106, 110, 113, 120, 132, 135, 136+, 137+, 140, 145, 150, 163, 170+, 210+, 213+ CHIN 101, 102+, 201+, 202+ COMM 103, 112, 114, 214+ DA 101 DFST 101, 102+, 105, 106, 201+, 202+ ENGL 102, 111+, 112+, 221+, 222+, 225+, 227+, 230+, 231+, 235+, 242+, 253+, 256+, 257+, 259+, 265+, 279+ FREN 101, 102+, 201+, 202+, 203+ FTV 101, 103, 107, 108, 201, 203, 241, 251, 261 GER 101, 102+, 201+, 202+ HIST 115 ID 150, 201 LATN 101, 102+, 201+ MUS 101, 105, 111, 131, 132+, 151+, 153+, 185+, 231+, 232+, 251A+, 251B+, 253A+, 253B+ MUSC 102, 103, 107, 108 PHIL 105, 106, 108, 109 PHOT 107 PHTC 101+, 150+, 201+ SPAN 101, 110SS, 102+, 201+, 202+, 210SS+, 220SS+ THA 101, 102, 103, 110, 115A, 115B+, 116A+, 116B+, 117A+, 117B+, 118A+, 118B+, 121A, 121B, 130, 133, 225+, 239	
Area D Language & Rationality: (min. 3 units from (1) and 3 units from (2))	
1. <i>Academic Composition:</i> Courses fulfilling the written composition requirement shall be designed to include both expository and argumentative writing. ENGL 101+ 2. <i>Communication and Analytical Thinking</i> BUS 113+ CA 103 CIS 101, 111, 141, 157, 161 COMM 101, 103, 107, 109, 112, 114, 115, 217+, 219+ ENGL 102+, 103+ GEOG 201, 205 MATH 102+, 110+, 115+, 116+, 120+, 124+, 128+, 135+, 140+, 148+ 150+, 160+, 220+, 230+, 250+ PHIL 110, 106, 110, 201+	

For an educational plan, please consult with a counselor. To obtain counseling services please call: (661) 722-6338. Antelope Valley College's website: www.avc.edu. To contact the Mathematics, Science, and Engineering Division, please call: 661-722-6300 ext. 6415

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Area E - Additional Breadth: (min. 3 units)

From areas A**, B**, C**, D2, ** or
 CFE 102 NF 100, 102, 103, 110, 150
 COMM 103, 107, 219+ PSY 212
 DFST 105 SOC 111, 116
 HD 100, 101, 102, 103, 105
 HE 101, 120, 201
 ID 100, 120
 KINT 100
 LIB 107, 110
 MUSC 108
 Any DA activity course(s) from DA102-205, except DA 107A-C, 108, 109, and 111.
 Any Kinesiology Fitness (KINF) activity course, Intercollegiate Athletics (IATH) activity course, or up to 4 units for military experience.

**** Courses must be taken from a discipline not previously selected.**

Area F Diversity Studies: (min. 3 units)

ANTH 102, 112	FTV 201, 203
BUS 212	HE 201+
CFE 116+	HIST 110, 111, 113
COMM 114, 217+, 219+	MUSC 107, 108
DFST 105, 106	POLS 202+
ECON 110	SOC 105, 110, 116+
ENGL 250+, 253+, 256+, 257+, 259+	THA 239

Proficiency Requirements

Proficiency requirements exist for the areas of Reading, Writing and Math. Students must demonstrate competency in each of these areas in order to be eligible for the associate degree.

A. READING

Complete ENGL 101 with a "C" or better or completion of READ 099 with a minimum grade of "P" (Pass), or completion of an Associate Degree or higher from a regionally accredited institution of higher education.

B. WRITING

Completion of ENGL 101 with a minimum grade of "C." NOTE: ENGL 101 may be taken with the Pass/No Pass option; however, students are cautioned that other colleges and universities may not accept ENGL 101 courses taken on a Pass/No Pass basis, especially for satisfaction of general education and major requirements. Students planning to transfer should check college catalogs for applicable policies.

C. MATHEMATICS

Completion of MATH 102 or higher or CIS 121 with a satisfactory grade or placement by AVC assessment into a math course higher than MATH 102.

***Fulfilling proficiencies** will not require any extra units if the competencies are demonstrated by including the required courses in the general education, or major requirements, or by satisfying the reading proficiency through AVC's policy.

Electives: The remaining number of units (up to a minimum of 60) are considered electives. Any course that has already been counted toward (1) the general education requirements, or (2) the major, cannot be used as an elective. Any course with a designation of "AVC" at the end of a course description can be used as an **Grade Point Average Requirement:** An overall grade point average of 2.0 ("C" average) is required.

Double Counting: While a course might 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.

Residency: Minimum of 12 units completed at AVC with a minimum of 9 of those units completed from the certificate/major. (credit earned by examination will not be included in these 12 units) Title 5, Section 54000:<http://ccr.oal.ca.gov>

Requirements for Two or More Associate Degrees: To be eligible for multiple associate degrees, a student must have completed all of the graduation requirements for each degree.

Transfer: Students planning to continue studies at a four-year college or university after AVC should visit the Transfer Resource Center or the Counseling Center and consult with a counselor as soon as possible to develop a plan of studies. Additional preparation for the major information on official transfer articulation agreements from AVC to many CSU/UC campuses can be found at the following Web site: www.assist.org

The "Catalog Rights Policy" sets forth the criteria used for determining the degree requirements under which students may graduate. Please refer to the AVC Catalog for a detailed description or consult with a counselor.

Advisory: A condition of enrollment that a student is advised, but not required, to meet before or in conjunction with enrollment in a course or educational program.

Prerequisite: A condition of enrollment that a student is required to meet in order to demonstrate current readiness for enrollment in a course or educational program. Prerequisites are enforced and a student will be blocked from enrolling or involuntarily dropped after enrolling if the student does not meet the stated prerequisite. A student must complete a course prerequisite with a satisfactory grade of A, B, C or P (pass).

Corequisite: A condition of enrollment consisting of a course that a student is required to simultaneously take in order to enroll in another course. Corequisites are enforced and a student will be blocked from enrolling if the student does not meet the stated co-requisite