



## ABOUT THIS MAJOR

The Associate in Science in Chemistry degree offers students a fundamental knowledge of chemistry, such as atomic and molecular structure, chemical reactions and mechanisms, thermochemistry, equilibrium, and kinetics.

Students will enhance their quantitative problem solving and critical thinking skills. Laboratory work will develop basic laboratory skills, experience with instrumentation, and data collection techniques. The Associate of Science in Chemistry degree prepares students for upper division chemistry courses. 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 degree applicable units
- [2] Completion of General Education
- [3] Minimum grade point average of 2.0
- [4] A "C" or better in all courses required for the major and ENGL 101

**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>

### AS-Chemistry [Total Units 37]

Choose one MATH150 (Total 5)	
MATH150H - Calculus & Analytic Geometry Honors	5
OR	
MATH150 - Calculus and Analytic Geometry	5

Choose one CHEM110 (Total 5)	
CHEM110H - General Chemistry Honors	5
OR	
CHEM110 - General Chemistry	5

Required Courses (27 units)	
CHEM120 - General Chemistry	5
CHEM210 - Organic Chemistry	5
CHEM220 - Organic Chemistry	5
PHYS110 - General Physics	4
PHYS120 - General Physics	4
MATH160 - Calculus and Analytic Geometry	4

### Additional Information

To succeed in CHEM 110, students are required to successfully complete CHEM 101 or one year of High School Chemistry. Algebra is used extensively to solve problems involving quantities.

## RECOMMENDED PATHWAY AS-Chemistry

The Recommended Plan of Study is determined by the discipline faculty. All **Program Electives** for the Major and **General Education** Courses, Areas A-F, are recommended only. Except for ENGL 101, you can make other selections for this area if you choose ([See back page for options](#)).

- [\*] = Courses will fulfill the completion requirements for Major & Gen Ed I
- [#] recommended courses may select other options.
- Electives are courses that count toward your credits for graduation, but not specific to degree of study
- Take classes in **Summer** or **Intercession** if needed to complete your degree in a timely manner!
- Fall/Spring: Max 19 units, 12-15 units Recommended.

TERM 1	
Course	Units
CHEM 110 or CHEM 110H	5
AVC Gen-Ed- AREA D2: * MATH 150 or MATH 150H	5
AVC Gen-Ed- AREA E	3
AVC Gen-Ed- AREA D1: ENGL 101	3
<b>Total Units</b>	<b>16</b>

TERM 2	
Course	Units
CHEM 120	5
MATH 160	4
AVC Gen Ed- AREA B	3
AVC Gen Ed- AREA D2	3
<b>Total Units</b>	<b>15</b>

TERM 3	
Course	Units
PHYS 110	4
CHEM 210	5
AVC Gen Ed- AREA A: #BIOL 110	5
<b>Total Units</b>	<b>14</b>

TERM 4	
Course	Units
CHEM 220	5
PHYS 120	4
AVC Gen Ed-Area C	3
AVC Gen Ed-Area F: #ENGL 257	3
<b>Total Units</b>	<b>15</b>

### COUNSELING NOTE SECTION

#### \*\*Consult with Counselor regarding Math Placement\*\*

#### Mathematics Calculus Sequence and prerequisites:

MATH 135 → MATH140 → MATH 150 → MATH 160 → MATH 220, MATH 250, MATH 230.  
(Trigonometry) (Precalc) (Calc 1) (Calc 2) (Linear Alg.) , (Diff.Eq.) , (Calc 3)

**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)

AVC 24-25 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

## 2024-2025 AVC General Education Requirements

Advising Form Effective Fall 2024 - Summer 2025

	GE AREA	COMPLETED	IN PROGRESS	NEED	Requirements
					<p>The requirements for an AA or AS degree include the following:</p> <ol style="list-style-type: none"> <li>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.</li> <li>Refer to each individual program for major requirements. All major courses as specified in the AVC catalog <u>must</u> be completed with a grade of "C" or better.</li> <li>Completion of the requirements for the associate degree with a minimum cumulative grade point average (GPA) of 2.0 in the degree-applicable courses.</li> </ol> <p><b>Double counting:</b> 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.</p> <p><b>Prerequisite:</b> 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.</p> <p><b>Complete at least 3 units from each of the following areas below: A, B, C, D1, D2, E, and F. Minimum Total GE Units Required: 21</b></p> <p>Legend: ( ) = Newly Approved, <b>Effective Fall 2024</b></p>
<b>AREA A: NATURAL SCIENCES</b>					
Select at least 3 units					
A					ANTH 101, (101H); ASTR 101, (101H); BIOL 100, 101*#, 101L*#, 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, (101H), 102; PHYS 101, 102, 110, 120, 211; PSCI 101 *# BIOL 101 & 101L must be taken concurrently
<b>AREA B: SOCIAL &amp; BEHAVIORAL SCIENCES</b>					
Select at least 3 units					
B					AJ 201, 204, 206; ANTH 102, 103, 110, 112, (112H), 140; BUS 101, 212; CFE 102, 103; COMM 217; DFST 105, 106, 110; ECON 100, 101, (101H), 102, (102H), 110; GEOG 105, 106, 110; HIST 101, 102, 104, 105, 107, (107H), 108, (108H), 110, (110H), 111, (111H), 113, 114, 116, 118, 119; POLS 101, (101H), 103, 200, 201, 202, 203; PSY 101, (101H), 200, 201, 212, 230, 232, 233, 234, 235, 236; SOC 101, (101H), 105, 110, 111, 112, 115, 116, 120, 200, THA 240
<b>AREA C: HUMANITIES</b>					
Select at least 3 units					
C					ART 100, 101, (101H), 102, 103, 104, 106, 110, 113, 120, 132, 135, 136, 137, 140, 145, 150, 163, 170, 210, 213; CHIN 101, 102, 201, 202; COMM 112, 114, 214, 217, 219; DA 101; DFST 101, 102, 105, 106, 201, 202; ENGL 102, 111, 112, 221, 222, 225, 227, 230, 231, 235, 242, 253, (253H), 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 101, 102, 104, 105, 107, (107H), 108, (108H), 110, (110H), 111, (111H), 113, 115, 118, 119; LATN 101, 102, 201; MUS 101, (101H), 105, (106), (110), 111, 121, 131, 132, 151, 153, 185, 231, 232, 251A, 251B, 253A, 253B; MUSC 102, 103, 107, 108, 109; NF 150; PHIL 105, (105H), 106, 108, 109, (130), (140); PHOT 107; PHTC 101, 150, 201; SPAN 101, 1105S, 102, 201, 202, 2105S, 2205S; THA 101, (101H), 102, 103, 110, 115A, 115B, 116A, 116B, 117A, 117B, 118A, 118B, 121A, 121B, 130, 133, 225, 239, (239H)
<b>AREA D: LANGUAGE AND RATIONALITY</b>					
Select 3 units from (1) and 3 units from (2). <b>Grade of "C" or better required in Area D1</b>					
D1					D1 Academic Composition: ENGL 101, (101H)
D2					D2 Communication and Analytical Thinking: BUS 113; CA 103; CS 100, 110, 120, 121, 122, 123; COMM 101, (101H), 107, 109, 112, 114, 115, 201, 217, 219; ENGL 102, (102H), 103, (103H); GEOG 201, 205; MATH 103, 110, 115, (115H), 116, 120, 124, 128, 131, 135, 140, 148, 150, (150H), 160, 220, 230, 250; PHIL 101, 106, 110, 201, (210)
<b>AREA E: ADDITIONAL BREADTH</b>					
Select 3 units from Areas A, B, C, D2, or E *Courses must be taken from a discipline not previously selected					
E					HD 100, 101, 102, 103, 105; HE 101, 120, 110, 201; KINT 100; LIB 107, 110; NF 100, 102, 103, 110, 150; Any DA activity course(s) from DA 102-205, <b>except</b> DA 107A-C, 108, 109, and 111 Any Kinesiology Fitness (KINF) activity course, Intercollegiate Athletics (IATH) activity course, or DD214 for 4 units
<b>AREA F: DIVERSITY STUDIES</b>					
Select 3 units					
F					ANTH 102, 112 (112H); BUS 212; CFE 116; COMM 114, 217, 219; DFST 105, 106, 110; ECON 110; ENGL 250, 253, (253H), 256, 257, 259; ETHN (110), (111), (112), (113), 257EN; FTV 201, 203; HE 110, 201; HIST 110, (110H), 111, (111H), 113; MUSC 107, 108; POLS 202; SOC 105, 110, 116; THA 239, (239H), 240