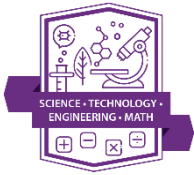


# AST-Mathematics for Transfer Degree 24-25



## ABOUT THIS MAJOR

The Associate in Science in Mathematics for Transfer (AS-T) offers students a fundamental knowledge of Mathematics and its relation to science, technology, and engineering. Students will enhance their problem solving and critical thinking skills by applying mathematical models to real world problems or utilizing mathematical objects and theorems to evaluate the validity of a statement or to prove mathematical statements. For more information, visit the [Mathematics, Sciences, and Engineering](#) division.

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

- [1] Completion of 60-semester units
- [2] Completion of General Education Requirements
- [3] Minimum grade point average of 2.0
- [4] A C or better in all courses required for the major

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>.

### AST - Mathematics [Total Units 21]

| Required Courses: (13units)              |   |
|--|---|
| MATH150 - Calculus and Analytic Geometry | 5 |
| MATH160 - Calculus and Analytic Geometry | 4 |
| MATH250 - Calculus and Analytic Geometry | 4 |

| Required Elective Group A & B (8-16 units)<br>Select 6 units minimum from the lists below with at least 3 units from list A |   |
|---|---|
| <b>Required Elective A: Select one (Total 4 - 8)</b>  |   |
| MATH 220-Linear Algebra   | 4 |
| MATH 230 - Introduction to Ordinary Differential Equations  | 4 |
| <b>Required Elective B: Select one (Total 4 - 8)</b>  |   |
| PHYS110 - General Physics   | 4 |
| MATH115 - Statistics  | 4 |
| MATH116 - Introduction to Statistics Using R  | 4 |

### 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         |

## RECOMMENDED PATHWAY: AST-Mathematics

The Recommended Plan of Study is determined by the discipline faculty. All [Program Electives](#) for the Major and [General Education Courses](#) are recommended only. Except for ENGL 101, you can make other selections for this area if you choose (See back page for GE 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.
- IGETC GE transfer pathways: CSU - UC - PRIVATE - OUT OF STATE - OR UNSURE
- CSU GE transfer pathways: CSU ONLY
- IGETC GE PATTERN: 2yrs HS LOTE or IGETC LOTE 101 & 102 Requirement (UC ONLY)
- Take classes in **Summer** or **Intersession** if needed to complete your degree in a timely manner!
- Fall/Spring: Max 19 units, 12-15 units Recommended.

| TERM 1              |                       |           |
|---------------------|-----------------------|-----------|
| CSU Gen-Ed Sequence | IGETC Gen-Ed Sequence | Units     |
| CSU B4 * MATH 150   | IGETC 2: * MATH 150   | 5         |
| CSU A1: #COMM 101   | IGETC 1C (CSU only)   | 3         |
| CSU C2: #PHIL 106   | IGETC 3H              | 3         |
| CSU E: #HE120       | Transferable Elective | 3         |
| ELECTIVE: #KINF 107 | ELECTIVE: #KINF 107   | 1         |
| <b>Total Units</b>  |                       | <b>15</b> |

| TERM 2                |                        |           |
|-----------------------|------------------------|-----------|
| CSU Gen-Ed Sequence   | IGETC Gen-Ed Sequence  | Units     |
| MATH 160              |                        | 4         |
| CSU B1/B3: *#PHYS 110 | IGETC 5A/5C:*#PHYS 110 | 4         |
| CSU A2: Engl 101      | IGETC 1A: ENGL 101     | 3         |
| CSU D: #HIST 108      | IGETC 4: #HIST 111     | 3         |
| ELECTIVE: #KINF 108   | ELECTIVE: #KINF 108    | 1         |
| <b>Total Units</b>    |                        | <b>15</b> |

| TERM 3                                       |                       |           |
|--|-----------------------|-----------|
| CSU Gen-Ed Sequence                          | IGETC Gen-Ed Sequence | Units     |
| MATH 250                                     |                       | 4         |
| Program Elective A/B: MATH 115 or 116 or 230 |                       | 4         |
| CSU A3: #PHIL 201                            | IGETC 1B: #PHIL 201   | 3         |
| CSU C1: #FTV 101                             | IGETC 3A: #FTV 101    | 3         |
| CSU D: #POLS 101                             | IGETC 4: #POLS 101    | 3         |
| <b>Total Units</b>                           |                       | <b>17</b> |

| TERM 4                         |                       |           |
|--------------------------------|-----------------------|-----------|
| CSU Gen-Ed Sequence            | IGETC Gen-Ed Sequence | Units     |
| Program Elective A: # MATH 220 |                       | 4         |
| CSU B2: #ANTH 101              | IGETC 5B: #ANTH 101   | 3         |
| CSU F: # ENGL 257              | IGETC 7: #ENGL 257    | 3         |
| CSU C1/C2: #MUS 101            | IGETC 3A/3H:#MUS 101  | 4         |
| <b>Total Units</b>             |                       | <b>13</b> |

## 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.

# AST-Mathematics for Transfer Degree 24-25



| <b>TRANSFER OPTION 1 - MIN GPA 3.0</b><br>[CSU - UC - PRIVATE - OUT OF STATE - OR UNSURE]   |           |             |      |  |
|---|-----------|-------------|------|--|
| <b>24-25 IGETC PLAN</b><br>[Intersegmental General Educational Transfer Curriculum]   |           |             |      |  |
| Completion of all the requirements in the Intersegmental General Education Transfer Curriculum (IGETC) may satisfy lower division general education requirements for students who transfer from Antelope Valley College to a campus in either the California State University or University of California system. The course requirements for all areas must be completed before the IGETC can be certified.<br>All courses must be completed with grades of "C" or better and may not be used in more than one area. Legend: ( ) = Newly Approved, Effective Fall 2024 |           |             |      |  |
| GE AREA   | COMPLETED | IN PROGRESS | NEED | Advising Form Effective Fall 2024 - Summer 2025  |
| <b>AREA 1: ENGLISH COMMUNICATION</b><br>CSU - 3 courses required, one from each group 9 semester or 12 quarter units<br>UC - 2 courses required, one each from groups (A) and (B) 6 semester or 8 quarter units   |           |             |      |  |
| 1A  |           |             |      | Group A English Composition: ENGL 101, (101H)  |
| 1B  |           |             |      | Group B Critical Thinking: ENGL 102,(102H), 103 (103H); PHIL 201   |
| 1C  |           |             |      | Group C Oral Communication (CSU ONLY): COMM 101,(101H)   |
| <b>AREA 2: MATHEMATICAL CONCEPTS AND QUANTITATIVE REASONING</b><br>1 course, 3 semester or 4 quarter units  |           |             |      |  |
| 2A  |           |             |      | MATH 110, 115, (115H), 116, 124, 128, 140, 148, 150, (150H), 160, 220, 230, 250  |
| <b>AREA 3: ARTS AND HUMANITIES</b><br>3 courses, 9 semester units or 12 quarter units<br>At least one course from 3A, one from the 3B, and one additional course from either 3A or 3B   |           |             |      |  |
| 3A  |           |             |      | ARTS: ART 100, 101, (101H), 102, 103, 104, 106; DA 101; ENGL 235; FTV 101, 107, 108, 201, 203; MUS 101,(101H), 105; MUSC 102, 103, 107, 108; (109); THA 101,(101H), 110, 225   |
| 3B  |           |             |      | HUMANITIES: CHIN 102; COMM 114, 217; ENGL 221, 222, 225, 227, 230, 231, 235, 242, 253, (253H) 256, 257, 259, 265, 279; FREN 102, 201, 202, 203; FTV 201, 203, 251; GER 102, 201, 202; HIST 101, 102, 104, 105, 107,(107H), 108,(108H), 110, (110H), 111,(111H) 113, 115, 119; LATN 102, 201; PHIL 105, (105H), 106, 108, 109; PHOT 107; SPAN 110SS, 201, 202, 203, 210SS, 220SS; THA 239, (239H) |
| 3A or 3B  |           |             |      |  |
| <b>AREA 4: SOCIAL AND BEHAVIORAL SCIENCE</b><br>2 courses, 6 semester units or 8 quarter units. Courses shall be completed in at least 2 different disciplines.   |           |             |      |  |
| 4   |           |             |      | AJ 206; ANTH 102, 103, 110, 112, (112H), 140; BUS 212; CFE 102, 103; ECON 100, 101, (101H), 102, (102H), 110; DFST 105, 106, 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, 202, 203;  |
| 4   |           |             |      | PSY 101, (101H), 200, 201, 212, 230, 232, 233, 234, 235, 236; SOC 101, (101H), 105, 110, 111, 112, 115, 116, 120, 200  |
| <b>AREA 5: PHYSICAL AND BIOLOGICAL SCIENCES</b><br>At least 2 courses required, 7 semester units or 9 quarter units<br>One physical science course and one biological science course; at least one course must include a lab. # meets 5C requirement  |           |             |      |  |
| 5A  |           |             |      | A: PHYSICAL SCIENCES: ASTR 101 (101H); CHEM 101#, 102#, 110#, 120#, 210#, 220#; ERSC 101#; GEOG 101, 102; GEOL 101,(101H), 102; PHYS 101#, 102#, 110#, 120#, 211#; PSCI 101#   |
| 5B  |           |             |      | B: BIOLOGICAL SCIENCES: ANTH 101 (101H); BIOL 101*#, 102#, 103#, 104, (104H), 110#, 120#, 201#, 202#, 204#, 205#<br>*# Must register for required lab component separately   |
| 5C  |           |             |      | C: LABORATORY: ANTH 101L; ASTR 101L; BIOL 101L; GEOG 101L, 102L; GEOL 101L, 102L   |
| <b>AREA 6: LANGUAGE OTHER THAN ENGLISH (UC REQUIREMENT ONLY)</b><br>Proficiency equivalent to two years of high school in the same language with a grade of "C" OR earn a score of 3 or higher on the AP Foreign Language test, OR 550 on the College Board Achievement Test in Foreign Language OR complete one of the foreign language courses listed below.  |           |             |      |  |
| 6   |           |             |      | CHIN 102, 201, 202; DFST 102, 201, 202; FREN 102, 201, 202, 203; GER 102, 201, 202; LATN 102, 201; SPAN 102, 201, 202, 203, 110SS, 210SS, 220SS  |
| <b>AREA 7: ETHNIC STUDIES</b> 1 course, 3 semester or 4 quarter units<br>*Reduction of units in Area 4 and inclusion of Area 7 take effect for students matriculating at a California community college beginning in Fall 2023  |           |             |      |  |
| 7   |           |             |      | ENGL 257 or ETHN 257EN   |
| <b>CSU GRADUATION REQUIREMENT IN U.S. HISTORY, CONSTITUTION, AND AMERICAN IDEALS</b><br>(Not part of IGETC, may be completed prior to transfer). 2 courses, 6 semester units or 8 quarter units. May also apply to Area 3B & 4.   |           |             |      |  |
|   |           |             |      | HIST 107 & POLS 101; HIST 108 & POLS 101; HIST 110 & POLS 101; HIST 111 & POLS 101   |

| <b>TRANSFER OPTION 2 - MIN GPA 2.0</b><br>[CSU ONLY]  |           |             |      |  |
|---|-----------|-------------|------|--|
| <b>24-25 CSU PLAN</b><br>[CSU General Education Requirements]   |           |             |      |  |
| Completion of all the requirements in the CSU General Education Breadth may satisfy lower division general education requirements for students who transfer from Antelope Valley College to a California State University campus. Courses may not be used in more than one area with the exception of American Institutions requirement.<br>Legend: ( ) = Newly Approved, Effective Fall 2024 |           |             |      |  |
| GE AREA   | COMPLETED | IN PROGRESS | NEED | Advising Form Effective Fall 2024 - Summer 2025  |
| <b>AREA A: ENGLISH LANGUAGE COMMUNICATION AND CRITICAL THINKING</b><br>9 semester units (12 quarter units); One course in each Subareas A1, A2, and A3. Grade of "C" or better required all Area A.   |           |             |      |  |
| A1  |           |             |      | A1 Oral Communication: COMM 101,(101H), 201  |
| A2  |           |             |      | A2 Written Communication: ENGL 101, (101H)   |
| A3  |           |             |      | A3 Critical Thinking: COMM 110, 115; ENGL 102, (102H), 103 (103H); PHIL 101, 106, 110, 201, (210)  |
| <b>AREA B: SCIENTIFIC INQUIRY AND QUANTITATIVE REASONING - 9 semester units (12 quarter units)</b> One course each in Subareas B1, B2, and B4, plus laboratory activity (B3) related to one of the completed science courses. # meets B3 requirement  |           |             |      |  |
| B1  |           |             |      | B1 Physical Science: ASTR 101,(101H); CHEM 101#, 102#, 110#, 120#, 210#, 220#; ERSC 101#; GEOG 101, 102; GEOL 101,(101H), 102; PHYS 101#, 102#, 110#, 120#, 211#; PSCI 101#  |
| B2  |           |             |      | B2 Life Science: ANTH 101,(101H); BIOL 101*#, 102#, 103#, 104,(104H), 110#, 120#, 201#, 202#, 204#, 205#<br>*# Must register for required lab component separately   |
| B3  |           |             |      | B3 Laboratory Activity: ANTH 101L; ASTR 101L; BIOL 101L; GEOG 101L, 102L; GEOL 101L, 102L  |
| B4  |           |             |      | B4 Mathematics/Quantitative Reasoning: Grade of "C" or better required in Area B4<br>MATH 103, 110, 115, (115H), 116, 120, 124, 128, 131, 135, 140, 148, 150,(150H), 160, 220, 230, 250  |
| <b>AREA C: ARTS AND HUMANITIES - 9 semester units (12 quarter units)</b><br>One course in each Subareas C1 and C2, and one additional course from either C1 or C2.  |           |             |      |  |
| C1  |           |             |      | C1 Arts: ART 100, 101, (101H), 102, 103, 104, 106, 113, 132, 135, 137, 140, 145, 163, 170, 213; COMM 112, 114; DA 101; FTV 101, 107, 108, 201, 203, 251; HIST 115; MUS 101,(101H), 105, (106), (110), 111, 121, 126, 131, 132, 151, 153B, 160, 166, 185, 231, 251A, 251B; MUSC 102, 103, 107, 108, (109), 142, 173, 220A, 273; PHTC 101, 150, 201; PHOT 107; THA 101, (101H), 102, 110, 130, 225   |
| C2  |           |             |      | C2 Humanities: CHIN 101, 102, 201, 202; COMM 112, 217, 219; DFST 101, 102, 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 201, 203, 251; 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; MUSC 108; NF 150; PHIL 105, (105H), 106, 108, 109, (130), (140); PHOT 107; SPAN 101, 110SS, 102, 201, 202, 203, 210SS, 220SS; THA 239, (239H) |
| C1 or C2  |           |             |      |  |
| <b>AREA D: SOCIAL SCIENCE - 6 semester units (8 quarter units)</b><br>Courses shall be completed in at least 2 different disciplines.   |           |             |      |  |
| D1  |           |             |      | 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 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  |
| D2  |           |             |      |  |
| <b>AREA E: LIFELONG LEARNING &amp; SELF-DEVELOPMENT - 3 semester units (4 quarter units)</b> DD214 for 4 units** Basic Military Training notated on an official Military Transcript (e.g. CCAF, JST) may be substituted for the DD214   |           |             |      |  |
| E   |           |             |      | CFE 102; COMM 107; DA 108, 111; HE 101, 120; HD 101, 102, 105; NF 100, 103, 150; PSY 212, 236; SOC 111, 116, 120   |
| <b>AREA F: ETHNIC STUDIES - 3 semester (4 quarter units)</b>  |           |             |      |  |
| F   |           |             |      | ENGL 257 or ETHN 257EN, (ETHN 110), (ETHN 111), (ETHN 112), (ETHN 113)   |
| <b>A.I. American Ideals - 6 semester (8 quarter units)</b> Select one pair. Courses may also apply to Area C2 and D above   |           |             |      |  |
| A.I.  |           |             |      | HIST 107 & POLS 101; HIST 108 & POLS 101; HIST 110 & POLS 101; HIST 111 & POLS 101   |

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