

MATHEMATICS ASSOCIATE IN SCIENCE FOR TRANSFER DEGREE

Mathematics is one of the oldest sciences. Mathematicians usually work in two general areas of mathematics, theoretical or applied mathematics. Mathematicians expand mathematical knowledge, by discovering mathematical principles or expanding on known mathematical theory. Mathematicians develop models indirectly or directly to solve problems in other fields such as business, chemistry, biology, physics, engineering, statistics, computer science, and other sciences.

An AS-T degree in mathematics includes a general study of calculus, with additional study in linear algebra, differential equations, or computer science. The degree will prepare students to successfully complete additional study in mathematics at CSU.

The Associate in Arts for Transfer (AA-T) or the Associate in Science for Transfer (AS-T) is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing these degrees (AA-T or AS-T) are guaranteed admission to the CSU system, but not to a particular campus or major.

To earn this Mathematics AS-T degree, students must meet the following requirements:

- completion of the following major requirements with grades of C or better;
- Completion of a minimum of 60 CSU transferrable semester units with a grade point average of at least 2.0; and
- certified completion of the CSU General Education-Breadth (CSU-GE) or Intersegmental General Education Transfer Curriculum (IGETC) for CSU, which requires a minimum of 37-39 units.

It is highly recommended that students complete courses that satisfy the U.S. History, Constitution, and American Ideals requirement as part of CSUGE or IGETC before transferring to a CSU.

Students planning on transferring to a four-year institution and major in Early Childhood Education should consult with a counselor regarding the transfer process and lower division requirements.

Code	Title	Units
Required Courses:		
MATH 250	Single Variable Calculus I	4
MATH 251	Single Variable Calculus II	4
MATH 252	Multivariable Calculus	5
Select 8 units from List A and B with at least 4 units from List A.		
List A - One to two courses from the following:		
MATH 265	Linear Algebra	4
MATH 266	Ordinary Differential Equations	4
List B - One course from the following:		
CS 190	Programming in C++	4
PHYSIC 202	Physics I	4
MATH 108	Introduction to Probability and Statistics	4
or ECON 208	Business and Economic Statistics	

Code	Title	Units
Major Total		21
Total Units That May Be Double Counted		3
General Education (CSU-GE or IGETC) Units		37-39
Elective (CSU Transferable) Units		3-5
Total Units		60

See Section on Degree, Certificate, and Transfer Information for additional information on the Associate Degrees for Transfer.

To earn an SBVC Associate Degree for Transfer (AA-T or AS-T) students must complete one of the following general education patterns:

CSU GE requirements (<https://www.valleycollege.edu/student-services/counseling/csuge/>)

IGETC requirements (<https://www.valleycollege.edu/student-services/counseling/igetc/>)

Program Learning Outcomes

At the completion of this program, students will be able to:

- Apply mathematical rules to manipulate mathematical expressions.
- Differentiate between theoretical and applied mathematical concepts.
- Integrate mathematical concepts and principles to other science disciplines.
- Model a real world problem using a mathematical model.