

MATHEMATICS (AS-T DEGREE S0333)

Natural Sciences Division Degree S0333

The Associate in Science in Mathematics for Transfer is designed to facilitate successful transfer to a baccalaureate mathematics program. This degree provides the lower division breadth and depth of calculus, differential equations, and linear algebra. Students who complete the requirements for this degree will be prepared to continue their studies in mathematics. Students in the STEM fields can complete a majority, if not all, of their lower division Math requirements by completing the Associate in Science in Mathematics for Transfer degree requirements.

To earn an Associate in Science in Mathematics for Transfer a student must complete 60 semester units that are eligible for transfer to the CSU that consist of Cal-GETC pattern and a major of at least 18 units. Students must have a minimum GPA of 2.0 in all CSU-transferable coursework to receive an associate degree for transfer and all courses in the major must be completed with a C or better. A 'P' (Pass) grade is also an acceptable grade for courses in the major if the course is taken on Pass or No Pass basis. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements.

Correction: List B option updated to PHYS 2AG AND PHYS 4A. 9/15/2025. Clarified language under list B from "Choose additional courses so that List A and List B courses total a minimum of six units" to "choose from the following or any course not already used in List A" to clarify that students can take both MATH 260 and 290. 9/24/2025

Required Courses

Course Prefix	Course Name	Units
Core Courses		13
MATH 180	Calculus and Analytic Geometry I	
MATH 181	Calculus and Analytic Geometry II	
MATH 280	Calculus and Analytic Geometry III	
List A		3-4
Choose one course from the following:		
MATH 260	Linear Algebra	
MATH 290	Differential Equations	
List B		3-9
Choose from the following or any course not already used in List A.		
BUSC 17	Applied Business Statistics	
or PSYC 10	Statistics for the Behavioral Sciences	
or STAT C1000	Introduction to Statistics	
or STAT C1000H	Introduction to Statistics - Honors	
CSCI 110 & CSCI 140	Fundamentals of Computer Science and C++ Language and Object Development	
CSCI 110 & CSCI 145	Fundamentals of Computer Science and Java Language and Object Oriented Programming	
PHYS 2AG & PHYS 4A	General Physics and Engineering Physics	
Total Units for Major		19-26
General Education (Cal-GETC) units ¹		34
Total Units		60

¹ Courses may be double-counted for the major and Cal-GETC. However, courses may not be double-counted to satisfy more than one area of Cal-GETC.

Math and Computer Science Website (<http://www.mtsac.edu/math/>)

Program Learning Outcomes

Upon successful completion of this program, a student will be able to:

- Translate real world phenomena and conceptual ideas into mathematical symbols and equations.
- Use mathematical tools to manipulate, simplify, and transform mathematical expressions.
- Model real world phenomenon using mathematical equations.
- Develop techniques to analyze and interpret data.
- Use mathematical tools to effectively communicate outcomes of experiments and describe the nature of real world phenomenon and conceptual ideas.
- Develop ability to effectively use numbers and other abstract representations of real world phenomenon and conceptual ideas.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.