

MATHEMATICS, AS-T

Natural Sciences Division

Degree S0333

Upon successful completion of Mt. San Antonio College's Associate in Science in Mathematics for Transfer degree requirements, the student will have demonstrated understanding of differential and integral calculus of one and several variables including infinite series, vector analysis, partial derivatives and transcendental functions, as well as demonstrating knowledge of linear algebra and differential equations. This coursework will satisfy the lower division mathematics requirements at the California State University. Guaranteed admission with junior status to the CSU system will be granted in mathematics (or possibly statistics).

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: IGETC pattern or CSU GE breadth 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. Students earning an associate degree for transfer will not be required to complete any other local graduation requirements.

Required Courses

Course Prefix	Course Name	Units
Core Courses		
MATH 180	Calculus and Analytic Geometry	4
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MATH 280	Calculus and Analytic Geometry	5
List A:		
MATH 285	Linear Algebra and Differential Equations	5
List B:		
Choose one course from the following:		3-5
CSCI 140	C++ Language and Object Development	
MATH 110	Elementary Statistics	
	or MATH 111 (Elementary Statistics - Honors)	
MATH 120	Finite Mathematics	
PHYS 4A	Engineering Physics	
Total Units for Major		21-23
CSU General Education of IGETC Pattern ¹		39-42
Total Units		60

¹ Courses may be double-counted with either CSU-GE or IGETC.

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

Guided Pathway of Study (<http://www.mtsac.edu/instruction>)

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 \(SLOs\)](#) for this program.