

MATHEMATICS

missioncollege.edu/depts/math

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Mathematics: Associate in Science (AS)

Associate in Science in Mathematics is a multifaceted subject of great beauty and application. Mathematics courses provide the student with a universal language used to study quantities and relationships in all fields. Through the study of mathematics, the student develops the ability to think logically and abstractly, as well as developing the problem solving and computational skills necessary for success in any field of study.

Program Learning Outcomes:

- Solve mathematical problems using techniques appropriate to the course content and level of study.
- Solve applied problems using mathematical methods appropriate to the course content and the level of study.
- Apply technology to analyze and solve problems.

Career/Transfer Opportunities:

Career opportunities include the following: teaching, education, researcher, computer programming, and statistical analysis.

To earn this degree, students must meet the following requirements:

1. Completion of 60 degree applicable units with an overall GPA of 2.0.
2. Completion of a minimum of 18 semester units in the major with a grade of C (or P) or better.
3. Completion of the AA/AS Graduation Requirements, CSU GE-B or IGETC.

Core Requirements (22 units):

Complete all of the following

	Units
MAT 003A Analytic Geometry and Calculus I -OR-	5.0
MAT 003AH Analytic Geometry and Calculus I - Honors	5.0
MAT 003B Analytic Geometry and Calculus II	5.0
MAT 004A Multivariable Calculus	4.0
MAT 004B Differential Equations -OR-	4.0
MAT 004C Linear Algebra	4.0
MAT 010 Elementary Statistics -OR-	4.0
MAT 010H Elementary Statistics - Honors	4.0

Elective List A (3-5 units):

Complete one (1) course from the following

	Units
AST 001 Astronomy	3.0
AST 003 Astronomy with Lab	4.0
BIO 010 Introduction to Biology	3.0
CHM 002 Introductory Chemistry	3.0
PHY 002A General Physics - Mechanics and Thermodynamics	5.0

Elective List B (3-4 units):

Complete one (1) course from the following

	Units
CIS 007 Python Programming	4.0
CIS 008 Advanced Python Programming	4.0
CIS 037A Introduction to C Programming	4.0
CIS 040 C++ Programming	4.0
CIS 043 Software Development With Java	4.0
EGR 030 Introduction to Computing for Engineers	4.0
MAT 005 Introduction to MATLAB	3.0
MAT 019 Discrete Mathematics	4.0

Required Units for the Major: 28.0-31.0

Completion of General Education Requirements and electives as needed to reach 60 units.

Total Required Units: 60.0