

MATHEMATICS, A.S.-T

An Associate in Science degree in Mathematics for Transfer will fulfill the requirements for students to transfer to a four-year college or university as a Mathematics major.

AST.MATH.CG

Program Map Design Your Future!

Begin by exploring MSJC program maps to find career or transfer (<https://msjc.emsicc.com/?radius=®ion=All%20Regions>) opportunities. Program maps show the recommended course sequence that leads to graduation or transfer. The maps were developed by program experts to give you the skills and knowledge you need to succeed.

Transfer degrees require a minimum of 60 semester CSU or UC transferable units with a minimum 2.0 overall GPA. Additionally, transfer degrees also require the completion of Cal-GETC general education. Please note that some courses are only transferable to a CSU, and this is noted in the program map. To transfer to a UC, students must complete at least 60 UC transferable units.

- **Starting in Spring?** Choose Fall Semester 1 courses.
- **Are you a part-time student?** Start Fall Semester 1 courses and follow the course sequence.

Cal-GETC

Fall Semester 1		Units
ENGL-C1000	Academic Reading and Writing	3
MATH-211	Analytic Geometry and Calculus I	4
COMM-C1000	Introduction to Public Speaking	3
POLS-C1000	American Government and Politics	3
CSIS-113A	C++ Programming - Level 1	3
Units		16

Spring Semester 1		Units
ENGL-C1001	Critical Thinking and Writing	3
HIST-111 or HIST-112	U.S. History to 1877 or U.S. History Since 1865	3
ANTH-101	Biological Anthropology	3
MATH-212	Analytic Geometry and Calculus II	4
CSIS-123A	C++ Programming - Level 2	3
Units		16

Fall Semester 2		Units
MATH-213	Analytic Geometry and Calculus III	5
PHY-201	Mechanics and Wave Motion	4
PHIL-101	Introduction to Philosophy I	3

PS/ETHS-103 or HIST/ETHS-160	Ethnic Politics in America or Black History in the American Context	3
or LIT/ETHS-240 or LIT/ETHS-275 or LIT/ETHS-280 or ETHS-112	or American Indian Literature (formerly ENGL-240) or Latinx/Chicanx Literature or Multiethnic Literature (formerly ENGL-280) or Introduction to Chicana/o/x Studies	

Units 15

Spring Semester 2

MATH-218 or MATH-215	Linear Algebra or Differential Equations	3
SPAN-101 or FREN-101 or ASL-100	Elementary Spanish I or Elementary French I or American Sign Language I	4
PHY-202	Electricity and Magnetism	4
DAN-100 or ART-100	History and Appreciation of Dance or Art Appreciation	3

Units 14

Total Units 61

Language Other Than English (LOTE):

This is a graduation requirement for UC campuses but not for admission. You can fulfill LOTE by completing two years of the same foreign language in high school with a grade of C or better in the final semester; by completing one semester of a foreign language at a college, or by demonstrating proficiency with a grade of C or better in ASL-100, FREN-101, or SPAN-101. Languages other than English for Native Speakers are also acceptable for this requirement. Review individual campus information and requirements here: <https://admission.universityofcalifornia.edu/counselors/uc-graduation-requirements/>. Some CSU campuses may also require language proficiency for graduation, and more than one semester may be necessary. At MSJC, LOTE courses count as electives. For personalized guidance, please consult your MSJC Counselor.

CSU - U.S. History, Constitution, and American Ideals:

This is a graduation requirement for CSU campuses but not for admission. Although not a Cal-GETC requirement, MSJC may certify completion of the CSU graduation requirement in U.S. History, Constitution and American Ideals with POLS-1000/1000H and HIST-111/111H or HIST-112/112H. Courses used to meet this requirement may also be used to satisfy Cal-GETC Subject Area 4 requirements.

High School Students:

Students are encouraged to take courses during the summer before the Fall semester begins, specifically for students majoring in STEM.

Work Based Learning:

Sign up for a special project or internship opportunity to gain valuable work experience and earn credits. For more information, email AWBL@msjc.edu or call 951-639-5352.

Requirements

Course	Title	Credits
Required Core Courses/Sequence		
MATH-211 or MATH-211H	Analytic Geometry and Calculus I Honors Analytic Geometry and Calculus I	4

MATH-212 or MATH-212H	Analytic Geometry and Calculus II Honors Analytic Geometry and Calculus II	4
MATH-213 or MATH-213H	Analytic Geometry and Calculus III Honors Analytic Geometry and Calculus III	5
List A: Select one-two		
Select one or two of the following: ¹		3-7
MATH-215 or MATH-215H	Differential Equations Honors Differential Equations	
MATH-218	Linear Algebra	
List B: Select one		
Select one of the following: ¹		3-4
CSIS-113A	C++ Programming - Level 1	
CSIS-123A	C++ Programming - Level 2	
PHY-201	Mechanics and Wave Motion	
STAT-C1000 or STAT-C1000H	Introduction to Statistics Introduction to Statistics - Honors	
Total Units		19-24

¹ Can use both in List A in lieu of any courses in List B.

Course	Title	Credits
Units for Major		19-24
Cal-GETC Pattern (https://catalog.msjc.edu/degrees-certificates-curricula/general-education-requirements-cal-getc/)		34
Possible double counting: 3-7 units		
Transferable Electives (as needed to reach 60 transferable units)		

Total Units for A.S.-T Degree: 60 units

Note: When selecting 4-5 unit courses for the Associate in Science in Mathematics for Transfer, keep in mind that you may not require more than 60 units for the entire degree.

The overall requirements for this Associate Degree for Transfer (ADT) can be met by:

- Completion of 60 semester units or 90 quarter units that are eligible for transfer.
- Completion of Cal-GETC requirements.
- Completion of a minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.
- Completion of a minimum grade point average of 2.0.

ADTs also require that students earn a C or better in all courses required for the major or area of emphasis. A "P" (Pass) grade is acceptable if pass is defined as a grade of C or better. ADTs are intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. A student completing an ADT is guaranteed admission to the CSU system, but not a particular campus or major. Students should meet with a Counselor to develop a comprehensive educational plan to further understand university and transfer requirements.

Career Exploration

Discover information about careers that interest you!

1. Take a **Career Quiz** (<https://msjc.emsicc.com/assessment/>) to learn about yourself and receive career suggestions based on your interests.
2. Search available **in-demand jobs** (<https://msjc.emsicc.com/browse-careers/>) in your career areas of interest and find up-to-date salaries and education requirements.
3. Find the **MSJC Program** (<https://msjc.emsicc.com/browse-programs/>) that connects your interests to a career.

Note: There are no guaranteed positions for students completing these programs. Education and work experience required will vary by employer. The salary and benefits for specific occupations will be dependent on work experience, education, background, and employer.