Mathematics

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Degree(s)

Transfer:
AS-T in Mathematics for Transfer 30679 AS.MATH.OPTBAST or AS.MATH.OPTCAST
(using General Education Requirements Option B or C)

See Also:
A.A. in Liberal Arts - Mathematics & Science Emphasis

Non-Transfer:
None

Certificate(s)
None

Employment Concentration Certificate(s)
None
### Program Description

The Associate in Science in Mathematics for Transfer consists of a clear sequence of courses which prepares students for transfer into the major. The study of mathematics concerns the nature and manipulation of known and unknown quantities. The MSJC mathematics transfer degree is designed to provide students with an appreciation of the nature, scope and power of mathematics, as well as an understanding of how mathematics is applied to business, engineering, science and daily life.

### Career Opportunities

**Transfer Degree**

For BA/BS careers, please see your transfer institution.

### Transfer Preparation

MSJC offers a range of course work to prepare students to transfer to four-year colleges and universities. All four-year institutions prescribe their own standards for course evaluation and admissions. Prospective transfer students are advised to research careers, degrees and majors in the Career/Transfer Center, access www.assist.org, review the MSJC catalog and meet with a counselor to expedite their transfer plan.

### Learning Outcomes

- Develop the ability to express ideas and reason logically regarding abstract situations.
- Synthesize ideas and apply mathematical reasoning and logic to the real world.
- Set up and solve problems using arithmetic, algebraic, and geometric models.
- Write mathematical information symbolically, visually, and numerically.
- Develop problem-solving and modeling skills.

### Degree

An Associate in Science in Mathematics for Transfer prepares students for transfer to four-year colleges offering a Bachelor of Arts (BS) in Mathematics or related fields. The major requirement for an AS-T in Mathematics may be met by completing the pattern described below plus all MSJC General Education Option B (CSU-GE breadth) and/or Option C (IGETC) requirements.

<table>
<thead>
<tr>
<th>AS-T in Mathematics for Transfer (18 units)</th>
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<tbody>
<tr>
<td><strong>Required Core Courses/Sequence (12-15 units)</strong></td>
</tr>
<tr>
<td>MATH-211 Analytic Geometry and Calculus I 5 units</td>
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<tr>
<td>MATH-212 Analytic Geometry and Calculus II 5 units</td>
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<tr>
<td>MATH-212H Honors Analytic Geometry and Calculus II 5 units</td>
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<tr>
<td>or</td>
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<tr>
<td>MATH-213 Analytic Geometry and Calculus III 5 units</td>
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<td>or</td>
</tr>
<tr>
<td>MATH-213H Honors Analytic Geometry and Calculus III 5 units</td>
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<tr>
<th>List A (1 course)</th>
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<tbody>
<tr>
<td>MATH-215 Differential Equations 4 units</td>
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<tr>
<td>MATH-218 Linear Algebra 4 units</td>
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<table>
<thead>
<tr>
<th>List B (1 course)</th>
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<tbody>
<tr>
<td>CSIS-113A C++ Programming - Level 1 3 units</td>
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<tr>
<td>CSIS-113B Java Programming - Level 1 3 units</td>
</tr>
<tr>
<td>CSIS-123A C++ Programming - Level 2 3 units</td>
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<tr>
<td>MATH-140 Introduction to Statistics 4 units</td>
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<td>or</td>
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<tr>
<td>MATH-140H Honors Introduction to Statistics 4 units</td>
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<tr>
<td>PHY-201 Mechanics and Wave Motion 4 units</td>
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<tr>
<td>PHY-202 Electricity and Magnetism 4 units</td>
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<td>or</td>
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<tr>
<td>PHY-202 Honors Electricity and Magnetism 4 units</td>
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</tbody>
</table>

Units for Major 19-23 units

CSU General Education or IGETC Pattern 37-39 units

Possible double counting 9 units

Transferable Electives (as needed to reach 60 CSU transferable units) 60 units

**Total Units for AS-T Degree**

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.

This Associate in Science in Mathematics for Transfer degree is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. A student completing this degree is guaranteed admission to the CSU system, but not a particular campus or major. Students should meet with a counselor to develop an educational plan and receive university admission and transfer requirements.
Math Curriculum Flowchart

MATH-050 Mind Over Math

MATH-051 Pre-Algebra
MATH-051LL Pre-Algebra + Lab

MATH-090 Elementary Algebra

MATH-090A Elementary Algebra Part A
MATH-090B Elementary Algebra Part B

MATH-096 Intermediate Algebra

MATH-096A Intermediate Algebra Part A
MATH-096B Intermediate Algebra Part B

MATH-105 College Algebra

MATH-102 Finite Mathematics or MATH-115 Ideas of Mathematics or MATH-140 Introduction to Statistics

MATH-105 Pre-Calculus

MATH-110 Pre-Calculus

MATH-135 Calculus for Social Science and Business

MATH-156 Mathematics for Elementary Teaching II

MATH-155 Mathematics for Elementary Teaching I

MATH-211 Calculus I and Analytic Geometry

MATH-212 Analytic Geometry and Calculus II

MATH-213 Analytic Geometry and Calculus III

MATH-215 Differential Equations

MATH-218 Linear Algebra