Mathematics

San Jacinto Campus
(951) 487-MSJC (6752)
1-800-624-5561
Keith Johnson (951) 487-3752
jjohnson@msjc.edu
Jorge Valdez-Alvarez (951) 487-3758
jvaldezalvarez@msjc.edu

Menifee Valley Campus
(951) 672-MSJC (6752)
1-800-452-3335
Michael Beckham (951) 639-5755
mbeckham@msjc.edu

Temecula Education Complex
Bahram Sherkat (951) 506-6617
bsherkat@msjc.edu

Degree(s)

Transfer:

A.S.-T in Mathematics for Transfer
30-679 AS MATH OPTBAST
or 30-679 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 A.S.-T 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

A.S.-T in Mathematics for Transfer (18 units)

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.

The major required for an A.S.-T in Mathematics for Transfer may be met by:
• Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University.
• The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education-Breadth Requirements.
• A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.
• Obtainment of a minimum grade point average of 2.0.

Required Core Courses/Sequence (12-15 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH-211</td>
<td>Analytic Geometry and Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>MATH-212</td>
<td>Analytic Geometry and Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>or</td>
<td>MATH-212H Honors Analytic Geometry and Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>MATH-213</td>
<td>Analytic Geometry and Calculus III</td>
<td>5</td>
</tr>
<tr>
<td>or</td>
<td>MATH-213H Honors Analytic Geometry and Calculus III</td>
<td>5</td>
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List A (1 course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>MATH-215</td>
<td>Differential Equations</td>
<td>4</td>
</tr>
<tr>
<td>MATH-218</td>
<td>Linear Algebra</td>
<td>4</td>
</tr>
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</table>

List B (1 course)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>CSIS-113A</td>
<td>C++ Programming - Level 1</td>
<td>3</td>
</tr>
<tr>
<td>CSIS-113B</td>
<td>Java Programming - Level 1</td>
<td>3</td>
</tr>
<tr>
<td>CSIS-123A</td>
<td>C++ Programming - Level 2</td>
<td>3</td>
</tr>
<tr>
<td>MATH-140</td>
<td>Introduction to Statistics</td>
<td>4</td>
</tr>
<tr>
<td>PHY-201</td>
<td>Mechanics and Wave Motion</td>
<td>4</td>
</tr>
<tr>
<td>PHY-202</td>
<td>Electricity and Magnetism</td>
<td>4</td>
</tr>
<tr>
<td>or</td>
<td>PHY-202H Honors Electricity and Magnetism</td>
<td>4</td>
</tr>
</tbody>
</table>

Units for Major 19-23
CSU General Education or IGETC Pattern 37-39
Possible double counting 0-9
Transferable Electives (as needed to reach 60 CSU 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.

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-055 Accelerated Pre-Algebra with Arithmetic
    - 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-110 Pre-Calculus
                    - MATH-211 Analytic Geometry and Calculus I
                      - MATH-212 Analytic Geometry and Calculus II
                        - MATH-213 Analytic Geometry and Calculus III
                          - MATH-215 Differential Equations
                            - MATH-218 Linear Algebra
  - 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-110 Pre-Calculus
                    - MATH-211 Analytic Geometry and Calculus I
                      - MATH-212 Analytic Geometry and Calculus II
                        - MATH-213 Analytic Geometry and Calculus III
                          - MATH-215 Differential Equations
                            - MATH-218 Linear Algebra
    - MATH-096B Intermediate Algebra Part B
      - MATH-105 College Algebra
        - MATH-110 Pre-Calculus
          - MATH-211 Analytic Geometry and Calculus I
            - MATH-212 Analytic Geometry and Calculus II
              - MATH-213 Analytic Geometry and Calculus III
                - MATH-215 Differential Equations
                  - MATH-218 Linear Algebra
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            - MATH-213 Analytic Geometry and Calculus III
              - MATH-215 Differential Equations
                - MATH-218 Linear Algebra
          - MATH-213 Analytic Geometry and Calculus III
            - MATH-215 Differential Equations
              - MATH-218 Linear Algebra
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