Mathematics

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Degree(s)

Transfer:
A.S. in Mathematics for Transfer 30449 AS.MATH.OPTBAST and 30449 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 Mathematics for Transfer degree 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 of Science (AS) degree 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 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.

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

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>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>
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<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>
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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>or</td>
<td>MATH-140H Honors Introduction to Statistics</td>
<td>4</td>
</tr>
</tbody>
</table>
PHY-201  Mechanics and Wave Motion  4 units
PHY-202  Electricity and Magnetism  4 units
or
PHY-202  Honors Electricity and Magnetism  4 units
Required Subtotal  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)
DEGREE TOTAL  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 of 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.