### Program Requirements

- Math 30 or 30P Calculus I
- Math 31 Calculus II
- 9 units of upper division mathematics, excluding Math 100W, 101, 105, 106, 107A, 107B, and 110L (See Also * at right)
- A total of 18 units of mathematics

### Advantages of a Mathematics Minor

- Develop valuable reasoning and communication skills such as pattern recognition, generalization of concepts, organization of information, logical thinking, and communicating in a clear, precise manner
- Increase your ability to solve realistic problems in your major
- Improve your resume with the addition of a mathematics minor
- Gain an introduction to several branches of mathematics

### Notes:

1. A grade of C- or better is required for each of the individual courses used to satisfy the requirements for the math minor.
2. A GPA of 2.0 or higher is required for the math minor.
3. Transfer students must include at least 3 units of upper division mathematics from SJSU. All courses taken at a community college transfer to SJSU as lower division units. Courses taken at a community college cannot be used to satisfy any of the 9 units of upper division mathematics required for the math minor. The math minor must contain 12 units that are distinct from the major. If a student completes two minors, then each minor must contain 12 units that are distinct from the other minor. Courses that are listed in a student’s major requirements as being in support of the major, or as preparation for the major, may be counted as distinct units in the math minor.

If you have questions regarding the math minor, you can consult with an advisor. The list of Math Minor Advisors is available at http://www.math.sjsu/advisors/advisor.pdf and on the Math Bulletin Board across from MH 308.

---

### * Change in the Math Minor Requirements – Effective Fall 2003

The Mathematics Department has changed the requirements for a math minor, effective Fall 2003. Prior to Fall 2003, the math minor allowed one computer science course to be used to satisfy the requirements for the math minor. Engineering students could use one computer engineering course or one course from engineering, which is very mathematical, such as ISE 130, EE 104, EE 112, ChE 162, ME 130, or in the case of Civil Engineering, the two two-unit courses CE 190 and CE 192. Effective Fall 2003, students will no longer be allowed to use a computer science course or an engineering course for the math minor. (CS 143C and CS 143M are cross-listed with Math 143C and Math 143M, and will be considered to be math courses for the math minor.)

Since students usually do not formally declare their intention to pursue a minor, the new requirements will be phased in based on the declared major. Students who declared their major to be computer science or engineering prior to Fall 2003 will be allowed to use one CS course or one approved engineering course for the math minor.

### Procedure for Obtaining a Math Minor

At the time you are applying for graduation, you should complete a Math Minor Form, available in the Mathematics Department Office (MH 308). You may complete the minor form after you have applied for graduation, but it must be submitted to Admissions & Records before you actually graduate. Submit the minor form together with transcripts for math courses taken elsewhere to the Math Department Office. Unofficial copies of transcripts are sufficient. If math courses were taken at colleges or universities outside the Bay Area, you will also need to submit course catalog descriptions or provide a syllabus for those courses. You will need to return to the Math Department Office to pick up the approved minor form. Your transcripts and course descriptions will be returned to you. The white copy of the minor form will be placed in a sealed and stamped department envelope, which you must take to Admissions & Records in the Tenth Street Parking Garage.
Information for Computer Science, Engineering, and Physics majors:

**BS Computer Science**

- Math 30 or 30P, 31, 32, 42, 129A and 161A are support courses for the BS Computer Science.
- Students who began the BSCS major prior to Fall 2003 and who take Math 129A and Math 161A at SJSU would not need to take any additional courses to obtain a math minor, since one upper division CS course can be used to complete the math minor requirements.
- Students who begin the BSCS major Fall 2003 or later, would need one additional upper division math course to complete a math minor.
- All courses taken at a community college (including linear algebra) transfer to SJSU as lower division units and cannot be applied toward the 9 units of upper division required for the minor. An engineering course may not be used as equivalent to Math 161A for the math minor.

**Engineering Majors**

- Math 30 or 30P, 31, 32, 133A, and in some cases Math 129A, are listed as preparation for the major (except for Aviation and Industrial Technology).
- Students who began as an engineering major (other than Aviation or Industrial Technology) prior to Fall 2003, and who have upper division credit for Math 129A and Math 133A (not community college courses) would not need to take any additional courses to obtain a math minor, since one approved upper division engineering course can be used to complete the math minor requirements.
- Students who begin as an engineering major (other than Aviation or Industrial Technology) in Fall 2003 or later, and who have upper division credit for Math 129A and Math 133A (not community college courses) would need to take one more upper division math course to complete the requirements for a math minor.

**Physics Majors**

- The BA Physics has Math 30 or 30P, 31, 32, 133A and an additional upper division math course as support for the major. A student with this major, with upper division credit for Math 133A (not a community college course), would need one additional upper division math course to complete the requirements for the math minor.
- The BA Physics - Preparation for Teaching has Math 30 or 30P, 31, 32, and 133A as support for the major. A student with this major, with upper division credit for Math 133A (not a community college course), would need two additional upper division math courses to complete the requirements for the math minor.
- The BS Physics has Math 30 or 30P, 31, 32, 112A, 133A, and 133B as support for the major. A student with this major, with upper division credit for Math 133A (not a community college course) would not need to take any additional courses to obtain a math minor.

For more information
Department of Mathematics
San Jose State University
One Washington Square
http://www.math.sjsu.edu
San Jose, CA 95192-0103

Or contact your Advisor:

<table>
<thead>
<tr>
<th>SSN or SID</th>
<th>Advisor Name</th>
<th>Phone</th>
<th>Office</th>
</tr>
</thead>
<tbody>
<tr>
<td>00-19</td>
<td>Foster, Leslie</td>
<td>924-5123</td>
<td>MH 312</td>
</tr>
<tr>
<td>20-39</td>
<td>Goldston, Daniel</td>
<td>924-5125</td>
<td>MH 315</td>
</tr>
<tr>
<td>40-59</td>
<td>Hsu, Tim</td>
<td>924-5071</td>
<td>MH 419</td>
</tr>
<tr>
<td>60-79</td>
<td>Kellum, Kenneth</td>
<td>924-1395</td>
<td>DH 215</td>
</tr>
<tr>
<td>80-99</td>
<td>So, Wasin</td>
<td>924-5155</td>
<td>MH 418</td>
</tr>
</tbody>
</table>

SJSU does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, marital status, pregnancy, age, disability, disabled veteran's or Vietnam veteran's status. This policy applies to all SJSU student, faculty and staff programs and activities. Questions regarding this policy should be directed to the Office of Equal Opportunity, Administration Room 112, (408) 924-1115.