BACHELOR OF ARTS IN MATHEMATICS: CONCENTRATION IN MATHEMATICS FOR LIBERAL ARTS – MATH ASSOCIATE DEGREE FOR TRANSFER ROADMAP

This is a sample pathway for students who transfer to San Francisco State University in the current Bulletin year with an AS-T in Mathematics. At least 12 units in the major (MATH 226, MATH 227, MATH 228) and all lower-division GE requirements have been satisfied. Additional units in the major may have been satisfied. Check with a major advisor about the most appropriate course sequence. Degree completion guaranteed in 60 units; see the Associate Degree for Transfer (ADT) section for more information.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Semester</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSC 210 or CSC 309</td>
<td>Introduction to Computer Programming (Major Concentration) or Computer Programming for Scientists and Engineers</td>
<td>3</td>
</tr>
<tr>
<td>MATH 325</td>
<td>Linear Algebra (Major Concentration)</td>
<td>3</td>
</tr>
<tr>
<td>GE Area UD-B: Upper-Division Physical and/or Life Sciences</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>University Elective - Take Two</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td><strong>Units</strong></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td><strong>Second Semester</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 301GW</td>
<td>Exploration and Proof - GWAR (Major Core)</td>
<td>3</td>
</tr>
<tr>
<td>Major Concentration Elective – Take Two</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>US History</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>or University Elective if US History met in transfer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Units</strong></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td><strong>Third Semester</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 370</td>
<td>Real Analysis I (Major Core)</td>
<td>3</td>
</tr>
<tr>
<td>Major Concentration Elective – Take One</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>U.S. and California Government</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>or University Elective if US/CA Government met before transfer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GE Area UD-C: Upper-Division Arts and/or Humanities</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>University Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Units</strong></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td><strong>Fourth Semester</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 300GW</td>
<td>History of Mathematics - GWAR (Major Concentration) ²</td>
<td>3</td>
</tr>
<tr>
<td>MATH 335</td>
<td>Modern Algebra (Major Core)</td>
<td>3</td>
</tr>
<tr>
<td>Major Concentration Elective – Take One</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>GE Area UD-D: Upper-Division Social Sciences</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>University Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Units</strong></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td><strong>Total Units</strong></td>
<td></td>
<td>60</td>
</tr>
</tbody>
</table>
1. Major Concentration Elective Course numbered 300 or above (except MATH 375, MATH 475, MATH 565, MATH 575, MATH 576, MATH 577, and MATH 578).

2. MATH 300GW offered in Spring Semesters only.

**To Do at SF State:**

Enough total units to reach 120 minimum for graduation; 40 units minimum at the upper-division level; to include the following:

**University-Wide Requirements: 9–15 Units**

- American Institutions (0–6 units): US History, US Government, California State and Local Government requirements if not taken before transfer.
- Upper-Division GE (9 units): Courses required for the major may double-count if approved for UD GE.
- Students entering this major with the AS-T in Mathematics are not required to fulfill SF State Studies requirements.
- Complementary Studies: Consult with a department advisor on how transfer units and/or SF State units can be applied to ensure degree completion within 60 units.

**Mathematics for Liberal Arts Major: 27–30 Units**

MATH 226-MATH 227-MATH 228 met in transfer; CSC 210 may have been met in transfer.

- Core (12 units)
- Concentration (15–18 units)

**University Electives: 15 or More Units**

Depends on course choices made at the community college, how transferred units are applied to the requirements above, and course choices at SF State. Some courses may meet more than one requirement, e.g. UD GE and the major.