BACHELOR OF SCIENCE IN STATISTICS – MATH ASSOCIATE DEGREE FOR TRANSFER (ADT) 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, and 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 (http://bulletin.sfsu.edu/undergraduate-admissions/transfer-students/).

To Do at SF State:

Enough total units to reach 120 minimum for graduation; 30 units minimum at the upper-division level; to include the following:

University-Wide Requirements: 9-15 Units

- Upper-Division GE, Areas B, C, and D (9 units): Courses required for the major may double-count if approved for UD GE.
- Students entering the major with the AS-T in Mathematics are not required to fulfill SF State Studies or Complementary Studies requirements.

Statistics Major: 40-43 units

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

- Core (31-34 units)
- Guided Electives (9 units) in one of the following areas: Science, Economics, Business: Decision Sciences, or Business: Information Systems. Consult with a department advisor.

University Electives: 2 or More Units

Depends on the number of units transferred, course choices made at the community college, and how transferred units are applied to the requirements above.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Semester</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select One (Major Core):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 309</td>
<td>Mathematical Computing</td>
<td>3</td>
</tr>
<tr>
<td>CSC 210</td>
<td>Introduction to Computer Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSC 215</td>
<td>Intermediate Computer Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSC 309</td>
<td>Computer Programming</td>
<td>3</td>
</tr>
<tr>
<td>University Elective if CSC 210 met in transfer</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>MATH 440</td>
<td>Probability and Statistics I (Major Core)</td>
<td>3</td>
</tr>
<tr>
<td>GE Area UD-B: Upper-Division Physical and/or Life Sciences</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>University Elective</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Units</td>
<td>14</td>
</tr>
<tr>
<td>Second Semester</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 325</td>
<td>Linear Algebra (Major Core)</td>
<td>4</td>
</tr>
<tr>
<td>MATH 338</td>
<td>Introduction to SAS (Major Core)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 441</td>
<td>Probability and Statistics II (Major Core)</td>
<td>3</td>
</tr>
<tr>
<td>Guided Electives (9 units) - Take One</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>US History (<a href="http://bulletin.sfsu.edu/undergraduate-education/american-institutions/#USHaGR">http://bulletin.sfsu.edu/undergraduate-education/american-institutions/#USHaGR</a>)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>or University Elective if US History met in transfer</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Units</td>
<td>16</td>
</tr>
</tbody>
</table>

1. Guided Electives (9 units) - Take One
### Third Semester

- **MATH 424**: Introduction to Linear Models (Major Core) - 3 units
- **MATH 442**: Probability Models (Major Core) - 3 units
- **MATH 447**: Design and Analysis of Experiments (Major Core) - 3 units

Guided Electives (9 units) - Take One

U.S. and California Government ([http://bulletin.sfsu.edu/undergraduate-education/american-institutions/#usg](http://bulletin.sfsu.edu/undergraduate-education/american-institutions/#usg)) - 3 units

or University Elective if US/CA Government met before transfer

**Units**: 15

### Fourth Semester

- **MATH 448**: Introduction to Statistical Learning and Data Mining (Major Core) - 3 units
- **MATH 449**: Categorical Data Analysis (Major Core) - 3 units

Guided Electives (9 units) - Take One

GE Area UD-C: Upper-Division Arts and/or Humanities - 3 units

GE Area UD-D: Upper-Division Social Sciences - 3 units

**Units**: 15

**Total Units**: 60

---

1. **Guided Electives (9 units)**

   Select three courses from one of the areas (Science, Economics, Business: Decision Sciences, or Business: Information Systems) listed below:

   **Science**
   - MATH 370 Real Analysis I (3 units)
   - MATH 376 Ordinary Differential Equations I (3 units)
   - MATH 400 Numerical Analysis (3 units)
   - MATH 425 Applied and Computational Linear Algebra (3 units)
   - MATH 430 Mathematics of Optimization (3 units)
   - MATH 460 Mathematical Modeling (3 units)

   **Economics**
   - ECON 301 Intermediate Microeconomic Theory (3 units)
   - ECON 302 Intermediate Macroeconomic Theory (3 units)
   - ECON 312 Introduction to Econometrics (3 units)
   - ECON 715 Mathematical Economics (3 units)
   - ECON 731 Econometric Methods and Applications (3 units)
   - ECON 825 Applied Time Series Econometrics (3 units)

   **Business: Decision Sciences**
   - DS 311 Technologies in Data Analytics (3 units)
   - DS 408 Computer Simulation (3 units)
   - DS 412 Operations Management (3 units)
   - DS 604 Applied Business Forecasting (3 units)
   - DS 624 Quality Management (3 units)

   **Business: Information Systems**
   - ISYS 363 Information Systems for Management (3 units)
   - ISYS 463 Information Systems Analysis and Design (3 units)
   - ISYS 569 Information Systems for Business Process Management (3 units)
   - ISYS 650 Business Intelligence (3 units)