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.
- 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: 4 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 209</td>
<td>Mathematical Computing</td>
<td>3</td>
</tr>
<tr>
<td>CSC 101</td>
<td>Introduction to Computing</td>
<td></td>
</tr>
<tr>
<td>CSC 309</td>
<td>Computer Programming</td>
<td></td>
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<tr>
<td>MATH 301GW</td>
<td>Exploration and Proof - GWAR (Major Core)</td>
<td>3</td>
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<tr>
<td>MATH 325</td>
<td>Linear Algebra (Major Core)</td>
<td>4</td>
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<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>
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<td>3</td>
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</tbody>
</table>

Units 16

Second Semester
MATH 338 Introduction to SAS (Major Core) 3
MATH 441 Probability and Statistics II (Major Core) 3
Select One:
CSC 215 Intermediate Computer Programming 4
University Elective
University Elective 4

Units 14

Third Semester
MATH 424 Introduction to Linear Models (Major Core) 3
MATH 442 Probability Models (Major Core) 3
Bachelor of Science in Statistics – MATH Associate Degree for Transfer (ADT)  
Roadmap

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 447</td>
<td>Design and Analysis of Experiments (Major Core)</td>
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</tr>
<tr>
<td>Guided Electives (9 units) - Take Two</td>
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</tr>
</tbody>
</table>

**Fourth Semester**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 448</td>
<td>Introduction to Statistical Learning and Data Mining (Major Core)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 449</td>
<td>Categorical Data Analysis (Major Core)</td>
<td>3</td>
</tr>
<tr>
<td>Guided Electives (9 units) - Take One</td>
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<td>3</td>
</tr>
<tr>
<td>Select One (UD-C, USH, USG/CSLG):</td>
<td></td>
<td>3</td>
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<tr>
<td>HIST 470</td>
<td>The U.S. Constitution to 1896</td>
<td>3</td>
</tr>
<tr>
<td>HIST 471</td>
<td>The U.S. Constitution Since 1896</td>
<td>3</td>
</tr>
<tr>
<td>GE Area UD-D: Upper-Division Social Sciences</td>
<td></td>
<td>3</td>
</tr>
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**Total Units** | 60

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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)