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.

Course | Title | Units
--- | --- | ---
**First Semester**
Select One (Major Core): 3
MATH 309 | Mathematical Computing | 3
CSC 210 | Introduction to Computer Programming | 3
CSC 215 | Intermediate Computer Programming | 3
CSC 309 | Computer Programming | 3
University Elective if CSC 210 met in transfer | 3
MATH 301GW | Exploration and Proof - GWAR (Major Core) | 3
MATH 440 | Probability and Statistics I (Major Core) | 3
GE Area UD-B: Upper-Division Physical and/or Life Sciences | 3
University Elective | 2
**Units** | 14

**Second Semester**
MATH 325 | Linear Algebra (Major Core) | 4
MATH 338 | Introduction to SAS (Major Core) | 3
MATH 441 | Probability and Statistics II (Major Core) | 3
Guided Electives (9 units) - Take One 1 | 3
US History (http://bulletin.sfsu.edu/undergraduate-education/american-institutions/#USHaGR) | 3
or University Elective if US History met in transfer | 3
**Units** | 16
### Roadmap

#### Third Semester

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<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>MATH 424</td>
<td>Introduction to Linear Models (Major Core)</td>
<td>3</td>
</tr>
<tr>
<td>MATH 442</td>
<td>Probability Models (Major Core)</td>
<td>3</td>
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<tr>
<td>MATH 447</td>
<td>Design and Analysis of Experiments (Major Core)</td>
<td>3</td>
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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

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<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<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>
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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)