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).

Course | Title | Units
--- | --- | ---
First Semester |  | 
CSC 210 | Introduction to Computer Programming (Major Core) | 3
or CSC 309 | or Computer Programming for Scientists and Engineers | 
| MATH 325 | Linear Algebra (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 |  | 3
| Units |  | 15

Second Semester |  | 
MATH 301GW | Introduction to Statistical Learning and Data Mining (Major Core) | 3
| MATH 441 | Probability and Statistics II (Major Core) | 3
| MATH 448 | Exploratory Data Analysis (Major Core) | 3
| MATH 449 | Categorical Data Analysis (Major Core) | 3
| US History (bulletin.sfsu.edu/undergraduate-education/graduation-requirements/#USHaGR) |  | 3
| or University Elective if US History met in transfer |  | 
| Units |  | 15

Third Semester |  | 
MATH 338 | Introduction to SAS (Major Core) | 3
| MATH 424 | Introduction to Linear Models (Major Core) | 3
| MATH 442 | Probability Models (Major Core) | 3
| GE Area UD-C: Upper-Division Arts and/or Humanities | 3
| U.S. and California Government (bulletin.sfsu.edu/undergraduate-education/graduation-requirements/#usg) | 3
| or University Elective if US/CA Government met before transfer |  | 
| Units |  | 15

Fourth Semester |  | 
MATH 447 | Design and Analysis of Experiments (Major Core) | 3
| Major Emphasis (9 units) - Take Three |  | 9
| GE Area UD-D: Upper-Division Social Sciences | 3
| Units |  | 15
| Total Units |  | 60

1 Major Emphasis (9 units)
Select three courses from one emphasis in consultation with the statistics advisor.

Business Emphasis
- 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)
- ISYS 363 Information Systems for Management (3 units)
- ISYS 463 Information Systems Analysis and Design (3 units)
- ISYS 464 Managing Enterprise Data (3 units)
- ISYS 569 Information Systems for Business Process Management (3 units)
- ISYS 650 Business Intelligence (3 units)

Economics Emphasis
- 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 Theory (3 units)
- ECON 829 Applied Time Series Econometrics (3 units)

Science Emphasis
- MATH 370 Real Analysis I (3 units)
- MATH 376 Ordinary Differential Equations I (3 units)
- MATH 400 Numerical Analysis (3 units)
- MATH 430 Mathematics of Optimization (3 units)
- MATH 460 Mathematical Modeling (3 units)
- MATH 491 Game Theory (3 units)
- MATH 493 Introduction to Actuarial Mathematics (3 units)
- MATH 494 Non-Parametric Statistics (3 units)

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: 39-42 units

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

- Core (30-33 units)
- Emphasis (9 units) in one of the following areas of emphasis: Business, Economics, or Science. Consult with a department advisor.

University Electives: 3 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.