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
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First Semester |  |  
CSC 210 or CSC 309 | Introduction to Computer Programming or Computer Programming for Scientists and Engineers | 3
MATH 325 | Linear Algebra | 3
MATH 440 | Probability and Statistics I | 3
GE Area A: Written English Communication II (A4) | 3
MATH 301GW | Exploration and Proof - GWAR | 3
MATH 441 | Probability and Statistics II | 3
MATH 448 | Introduction to Statistical Learning and Data Mining | 3
MATH 449 | Categorical Data Analysis | 3
US History (bulletin.sfsu.edu/undergraduate-education/graduation-requirements/#USHaGR) | 3
Upper Division GE: UD-B, UD-C, or UD-D | 3

Second Semester |  |  
MATH 338 | Introduction to SAS | 3
MATH 424 | Introduction to Linear Models | 3
MATH 442 | Probability Models | 3

Third Semester |  |  
MATH 301GW | Exploration and Proof - GWAR | 3
MATH 441 | Probability and Statistics II | 3
MATH 448 | Introduction to Statistical Learning and Data Mining | 3
MATH 449 | Categorical Data Analysis | 3
US History (bulletin.sfsu.edu/undergraduate-education/graduation-requirements/#USHaGR) | 3
Upper Division GE: UD-B, UD-C, or UD-D | 3

Fourth Semester |  |  
MATH 447 | Design and Analysis of Experiments | 3
Major Emphasis – Take Three | 9
Upper Division GE: UD-B, UD-C, or UD-D | 3

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 825 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; 40 units minimum at the upper-division level; to include the following:

University-Wide Requirements: 9-18 Units
- ENG 214 or equivalent A4 course (0-3 units) if not taken before transfer
- American Institutions (0-6 units): US History, US Government, California State and Local Government requirements if not taken before transfer
- Upper-division GE, areas B, C and D (9 units)
- 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: Zero 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.