# BACHELOR OF ARTS IN MATHEMATICS: CONCENTRATION IN TEACHING – 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, 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

- American Institutions (0–6 units): US History, US Government, California State and Local Government requirements if not taken before transfer.
- Upper-Division GE (9 units): Courses required for the major may double-count if approved for UD GE.
- Students entering this major with the AS-T in Mathematics are not required to fulfill SF State Studies requirements.
- Complementary Studies: Consult with a department advisor on how transfer units and/or SF State units can be applied to ensure degree completion within 60 units.

### Mathematics for Teaching Major:  30–33 Units

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

- Core (15 units)
- Concentration (15–18 units)
- Students must meet with a major advisor during their first semester.

### University Electives: 12 or More Units

Depends on course choices made at the community college, how transferred units are applied to the requirements above, and course choices at SF State. Some courses may meet more than one requirement, e.g., both in UD GE and the major.

| Course | Title | Units |
|---|---|---|
| **First Semester** | | |
| Select One (Major Core): | | 3 |
| MATH 309 | Mathematical Computing | |
| CSC 210 | Introduction to Computer Programming | |
| CSC 215 | Intermediate Computer Programming | |
| CSC 309 | Computer Programming | |
| MATH 301GW | Exploration and Proof - GWAR (Major Core) | 3 |
| MATH 325 | Linear Algebra (Major Core) | 4 |
| GE Area UD-B: Upper-Division Physical and/or Life Sciences | | 3 |
| University Elective | | 3 |
| | **Units** | **16** |
| **Second Semester** | | |
| MATH 324 | Probability and Statistics with Computing (Major Concentration) | 3 |
| MATH 350 | Geometry (Major Concentration) | 3 |
| GE Area UD-C: Upper-Division Arts and/or Humanities | | 3 |

| US History (http://bulletin.sfsu.edu/undergraduate-education/american-institutions/#USHaGR) | | 3 |
|---|---|---|
| or University Elective if US History met before transfer | | |
| University Elective | | 3 |
| | **Units** | **15** |
| **Third Semester** | | |
| MATH 310 | Elementary Number Theory (Major Concentration) [1] | 3 |
| MATH 335 | Modern Algebra (Major Core) | 3 |
| MATH 375 | Field Study for Secondary Teachers (Major Concentration) [1] | 3 |
| GE Area UD-D: Upper-Division Social Sciences | | 3 |
| U.S. and California Government (http://bulletin.sfsu.edu/undergraduate-education/american-institutions/#usg) | | 3 |
| or University Elective if US/CA Government met before transfer | | |
| | **Units** | **15** |
| **Fourth Semester** | | |
| MATH 370 | Real Analysis I (Major Core) | 3 |
| MATH 475 | Capstone Course for Secondary Teachers of Mathematics (Major Concentration) [2] | 3 |
| Select One (Major Concentration): | | 3 |
| MATH 575 | Mathematics in the Middle School Classroom | |
| MATH 576 | Math in Middle Schools II | |
| MATH 577 | Math in Middle School III | |
| University Elective – Take Two | | 6 |
| | **Units** | **15** |
| | **Total Units** | **61** |

[1] MATH 310 and MATH 375 are offered in Fall Semesters only.

[2] MATH 475 is offered Spring Semesters only.