BACHELOR OF ARTS IN MATHEMATICS: CONCENTRATION IN TEACHING ROADMAP – QUANTITATIVE REASONING CATEGORY III/IV

120 Total Units Required
Minimum Number of Units in the Major: 46

This roadmap is a suggested plan of study and does not replace meeting with an advisor. Please note that students may need to adjust the actual sequence of courses based on course availability. Please consult your Degree Planner (https://registrar.sfsu.edu/degreeplanner/) and an advisor for further guidance.

To avoid taking additional units, it is recommended that you meet the **SF State Studies** (AERM, GP, ES, SJ) requirements within your GE or major.

Course	Title	Units
First Semester		
MATH 197	Prelude to Calculus I (Prerequisite for MATH 226) [1]	3
GE Area 1: English Communication		3
GE Area 3: Arts and Humanities		3
GE Area 4: Social and Behavioral Sciences [2]		3
Complementary Studies or SF State Studies or University Elective [3]		3
	Units	**15**
Second Semester		
MATH 198	Prelude to Calculus II (Prerequisite for MATH 226, GE 2) [1]	3
GE Area 1A: English Composition [4]		3
GE Area 1: English Communication		3
GE Area 3: Arts and Humanities		3
GE Area 4: Social and Behavioral Sciences [2]		3
	Units	**15**
Third Semester		
MATH 226	Calculus I (Major Core, GE 2) [1]	4
GE Area 5: Physical and Biological Sciences [5]		3-4
Complementary Studies or SF State Studies or University Elective - Take Two [3]		6
	Units	**13-14**
Fourth Semester		
Select One (Major Core):		3
MATH 209	Mathematical Computing	
CSC 101	Introduction to Computing	
CSC 309	Computer Programming	
MATH 227	Calculus II (Major Core)	4
MATH 301GW	Exploration and Proof - GWAR (Major Core)	3
GE Area 5: Physical and Biological Sciences [5]		3-4
GE Area 6: Ethnic Studies (https://bulletin.sfsu.edu/undergraduate-education/general-education/areasix/)		3
	Units	**16-17**
Fifth Semester		
MATH 228	Calculus III (Major Core)	4
Select One:		4
CSC 215	Intermediate Computer Programming (if CSC 101 taken)	
Complementary Studies or SF State Studies or University Elective (if MATH 209 or CSC 309 taken)		
MATH 310	Elementary Number Theory (Major Concentration)	3
MATH 325	Linear Algebra (Major Core)	4
	Units	**15**
Sixth Semester		
MATH 324	Probability and Statistics with Computing (Major Concentration)	3
MATH 335	Modern Algebra (Major Core)	3
MATH 350	Geometry (Major Concentration)	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	
U.S. and California Government (https://bulletin.sfsu.edu/undergraduate-education/american-institutions/#usg)		3
	Units	**15**
Seventh Semester		
MATH 370	Real Analysis I (Major Core)	3
MATH 375	Field Study for Secondary Teachers (Major Concentration) [6]	3
GE Area 3UD: Upper-Division Arts or Humanities		3
GE Area 4UD: Upper-Division Social and Behavioral Sciences		3

Complementary Studies or SF State Studies or University Elective [3]		3
	Units	**15**
Eighth Semester		
MATH 475	Capstone Course for Secondary Teachers of Mathematics (Major Concentration) [7]	3
GE Area 5UD or 2UD: Upper-Division Sciences or Upper-Division Mathematical Concepts		3
Complementary Studies or SF State Studies or University Elective - Take Three [3]		10
	Units	**16**
	Total Units	**120-122**

1 Students should use their Pathway/Category (https://gatorsmartstart.sfsu.edu/pathways/) to determine the appropriate GE 2 course option. For directions on how to view your Pathway/Category, visit how to find your pathway (https://gatorsmartstart.sfsu.edu/howtofindyourpathways/). Questions? Contact Gator Smart Start. (https://gatorsmartstart.sfsu.edu/)

2 First-time freshmen must take one lower-division Area 4 course that meets US History (USH).

3 **Complementary Studies**
Students in the B.A. Math program will satisfy the Complementary Studies requirement by taking 12 units of courses in the College of Science and Engineering outside of Math.

4 Students should use their Pathway/Category (https://gatorsmartstart.sfsu.edu/pathways/) to determine the appropriate GE 1A course option. For directions on how to view your Pathway/Category, visit how to find your pathway (https://gatorsmartstart.sfsu.edu/howtofindyourpathways/). Questions? Contact Gator Smart Start. (https://gatorsmartstart.sfsu.edu/)

5 Consider taking a class with a combined laboratory or a separate lab to fulfill 5C if not already satisfied.

6 Requires 45 hours of field experience outside of class time.

7 MATH 475 serves as the capstone course for the major.