BACHELOR OF ARTS IN MATHEMATICS: CONCENTRATION IN MATHEMATICS FOR LIBERAL ARTS - QUANTITATIVE REASONING CATEGORY I/II AND ENG 114

120 Total Units Required
Minimum Number of Units in the Major: 42

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 an advisor in your major program for further guidance.

Course Title Units
First Semester
ENG 114  Writing the First Year: Finding Your Voice (A2) 3
MATH 226  Calculus I (Major Core, B4) 4
GE Area A 3
GE Area C 3
GE Area D 3

Units 16

Second Semester
MATH 227  Calculus II (Major Core) 4
GE Area A 3
GE Area C 3
GE Area D 3
GE Area E 3

Units 16

Third Semester
Select One (Major Concentration):
CSC 210  Introduction to Computer Programming 3
CSC 309  Computer Programming
MATH 228  Calculus III (Major Core) 4
GE Area A: Physical Science (B1) and Laboratory Science (B3) 4 3-4
GE Area C 3

Units 13-14

Fourth Semester
MATH 301GW  Exploration and Proof - GWAR (Major Core) 3
GE Area B: Life Science (B2) and Laboratory Science (B3) 4 3-4
GE Area D 3
Complementary Studies or SF State Studies or University Elective - Take Two 5

Units 15-16

Fifth Semester
MATH 300GW
MATH 325  Linear Algebra (Major Core) 3
GE Area UD-D: Upper-Division Social Sciences (Consider SF State Studies Course) 3
Complementary Studies or SF State Studies or University Elective - Take Two 5

Units 15

Sixth Semester
MATH 335  Modern Algebra (Major Core) 3
Concentration Elective (12 Units Total) - Take One 6
GE Area UD-C: Upper-Division Arts and/or Humanities (Consider SF State Studies Course) 3
Complementary Studies or SF State Studies or University Elective - Take Two 5

Units 15

Seventh Semester
MATH 370  Real Analysis I (Major Core) 3
Concentration Elective (12 Units Total) - Take One 6
GE Area UD-B: Upper-Division Physical and/or Life Sciences (Consider SF State Studies Course) 3
Complementary Studies or SF State Studies or University Elective - Take Two 5

Units 15

Eighth Semester
Concentration Elective (12 Units Total) - Take Two 6 6
Complementary Studies or SF State Studies or University Elective - Take Three 5

Units 15

Total Units 120-122

1 ENG 114 can only be taken if you complete Directed Self-Placement (DSP) and select ENG 114; if you choose ENG 104/ENG 105 through DSP you will satisfy A2 upon successful completion of ENG 105 in the second semester; multilingual students may be advised into alternative English courses.
Depending on courses completed through Early Start, students in Pathway/Category III or IV may be required to enroll in a support course to complement their Quantitative Reasoning/B4 requirement. There are multiple course options for this pathway. Before enrolling in a B4 course, students should verify their MATH Pathway/Category in their Student Center (http://cms.sfsu.edu/content/student-center). Information regarding the courses that correspond with your MATH Pathway/Category can be found on the Developmental Studies Office Website (http://developmentalstudies.sfsu.edu).

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

Consider taking a class combined with a laboratory or a separate lab to fulfill B3 if not already satisfied.

**Complementary Studies**

Students who pursue a Bachelor of Arts in Mathematics with Concentrations in Liberal Arts, Teaching, or Advanced Studies must complete 12 Complementary Studies units, within a coherent group of courses with a prefix other than MATH, and not cross-listed with MATH. Complementary Studies units for the MATH major may come from:

1. Any courses offered by other departments in the College of Science & Engineering (CoSE), or
2. Any of the following courses outside of CoSE:

   - DS 312 Data Analysis with Computer Applications (3 units)
   - DS 408 Computer Simulation (3 units)
   - ECON 101 Introduction to Microeconomic Analysis (3 units) (D1)
   - ECON 301 Intermediate Microeconomic Theory (3 units)
   - ECON 302 Intermediate Macroeconomic Theory (3 units)
   - FIN 350 Business Finance (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 650 Business Intelligence (3 units)
   - PHIL 205 Formal Logic I (3 units)
   - PHIL 350 Philosophy of Science (3 units) (UD-B)
   - PHIL 351 Philosophy of Risk (3 units) (UD-B, ES)
   - PHIL 694 Philosophical Logic Workshop (3 units)
   - PHIL 695 Advanced Logic Workshop (3 units)

Students who have earned AA-T or AS-T degrees and are pursuing a similar B.A. degree at SF State are required to fulfill the Complementary Studies requirement as defined by the major department. Students should consult with a major advisor about how transfer units and/or SF State units can best be applied to this requirement in order to ensure degree completion within 60 units.

**Concentration Elective (12 units)**

Four MATH courses numbered 300 or above except MATH 375, MATH 475, MATH 565, MATH 575, MATH 576, MATH 577, MATH 578.