BS in Mathematics for a student interested in grad school

Year 1	Year 2	Year 3	Year 4
MATH 241 Calculus I FS DS FG FW HSL 101	MATH 243 Calculus III MATH 321 Intro. to Advanced Math. W Phys 272L DP DY HSL 201	MATH 412 Intro. to Abstract Algebra I W MATH 411 Linear Algebra Chem 171/L DP DY DA	MATH 431 Principles of Analysis I W MATH 421 Topology Math 454 Axiomatic Set Theory Related XXX DB
MATH 242 Calculus II Phys 170L DP DY FG HSL 102	MATH 244 Calculus IV MATH 331 Intro. to Real Analysis W MATH 311 Intro. to Linear Algebra HSL 202	MATH 413 Intro. to Abstract Algebra II W MATH 444 Complex Analysis Math 302 Intro Diff Eqs I Chem 271/L DP DY DH	Math 442 Vector Analysis MATH 420 Intro. to the Theory of Numbers W MATH 480 Senior Seminar O Related XXX HAP
		Summer REU	Grader, MATH 300+ course

Foundations and Diversification

These include the calculus sequence and UHM Gen. Ed. Core Requirements.

In these courses, you should acquire the tools to succeed in college and be introduced to global and Hawaiian perspectives.

Hawaiian/Second Language and Focus

These graduation requirements include two years of language and an Ethics, Writing Intensive and Oral component.

Bridge

These courses are your bridge to upper level mathematics. In 307 or 311, 321, & 331 you develop the tools to do advanced mathematics. The 300 level topics courses are good to take in your 2nd & 3rd year.

- 311 Intro. Linear Algebra
- 307 Linear Alg. & Diff. Eq
- 321 Intro. Adv. Math
- 331 Intro. Real Analysis
- 301 Intro. Discrete Math
- 302 Intro. Diff Equations
- 304 Math Modeling: Deterministic Models
- 305 Math Modeling: Probabilistic Models
- 351 Foundation of Euclidean Geometry
- 352 Non-Euclidean Geometries
- 372 Elementary Probability & Stats

Core

These are the core courses of the major. MATH 412 & 413, and 431, are minimum requirements for most graduate math programs. Even if you are not continuing to grad school, math majors should take the bulk of their courses from this section.

- 412 & 413 Intro. Abstract Algebra
- 431 & 432 Principles of Analysis
- 402 Part. Diff. Equations I
- 407 Numerical Analysis
- 411 Linear Algebra
- 420 Intro. to the Theory of Numbers
- 421 Topology
- 442 Vector Analysis
- 443 Differential Geometry
- 444 Complex Analysis
- 454 Axiomatic Set Theory
- 455 Mathematical Logic
- 471 Probability
- 472 Statistical Inference

For a BS in Mathematics, up 15 upper division credits may be replaced by appropriate non---introductory courses in the natural sciences, denoted Related XXX. One of these can be used to satisfy the "algorithms and logic" major requirement.