#### **BA in Mathematics with Secondary Ed Focus**

Year 1	Year 2	Year 3	Year 4
MATH 241 Calculus I FS English 100 FW FG HSL 101 Elective	MATH 243 Calculus III MATH 321 Intro. Advanced Math W DS HSL 201	MATH 412 Intro to Abstract Algebra I W Math 372 Elementary Probability and Statistics Math 351 Foundation of Euclidean Geometry DB	MATH 431 Principles of Analysis I W MATH 471 Probability MATH 411 Linear Algebra Elective Elective
MATH 242 Calculus II 301 Intro. Discrete Mathematics FG DA HSL 102	MATH 244 Calculus IV MATH 311 Introduction to Linear Algebra MATH 331 Introduction to Real Analysis W HSL 202 DS	MATH 413 Intr. to Abstract Algebra II Math 352 Non- Euclidean Geometries DH DP DY	MATH 420 Intro. to the Theory of Numbers W MATH 472 Statistical Inference MATH 480 Senior Seminar O Elective HAP
		Math Emporium	

# Foundations and Diversification

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

### 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 2<sup>nd</sup> & 3<sup>rd</sup> year.

311 Intro. Linear Algebra 307 Linear Alg. & Diff. **Equations** 321 Intro. Adv. Math 331 Intro. Real Analysis 301 Intro. Discrete Mathematics 302 & 303 Intro. Diff. **Equations** 304 Mathematical **Modeling: Deterministic Models** 305 Math Modeling: **Probabilistic Models** 351 Foundation of **Euclidean Geometry** 352 Non-Euclidean Geometry 372 Elem. Probability &

**Statistics** 

#### Core

These are the core courses of the major. MATH 412 & 413 and 431 & 432 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. to Abstract Algebra

431 & 432 Principles of Analysis

- **402 Partial Diff. Equations**
- **407 Numerical Analysis**
- 411 Linear Algebra
- 420 Intro. to 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**