# BA in Mathematics (Emphasis Applied/Actuarial)

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
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| **MATH 241 Calculus I FS**  
English 100 FW  
FG  
HSL 101  
Elective | **MATH 243 Calculus III**  
MATH 321 Intro. to Advanced Math. W  
DB/ DY  
DS  
HSL 201 | **MATH 412 Intro. to Abstract Algebra I W**  
Math 302 Intro DEs I  
DS  
DA  
Elective | **MATH 431 Principles of Analysis I W**  
MATH 471 Probability  
Elective E  
Elective  
Elective |
| **MATH 242 Calculus II**  
FG  
DH  
HSL 102  
Elective | **MATH 244 Calculus IV**  
MATH 311 Intro. to Linear Algebra W  
MATH 331 Intro. to Real Analysis  
HSL 202  
Elective | **MATH 442 Vector Analysis**  
Math 372 Probability and Stats**  
Elective W  
Elective DP | **MATH 407 Numerical Analysis**  
MATH 472 Statistical Inf.  
MATH 480 Senior Seminar O  
Elective  
Elective |

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

### 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. & DE**
- **321 Intro. Adv. Math**
- **331 Intro. Real Analysis**

### Hawaiian/Second Language and Focus
These graduation requirements include two years of language and an Ethics, Writing Intensive and Oral component.

- **301 Intro. Discrete Math**
- **302/3 Intro. DEs**
- **304/5 Math Modeling**
- **351/2 Geometry**
- **372 Probability & Stats** (373 Spring 2017)

### Core
These are the core courses of the major. The 412/413 sequence and 431 are minimum requirement 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.

- **412/3 Intro. Abstract Algebra**
- **431/2 Principles of Analysis**
- **402 PDEs**
- **407 Numerical Analysis**
- **411 Linear Algebra**
- **420 Intro. Number Theory**
- **421 Topology**
- **442 Vector Analysis**
- **443 Differential Geometry**
- **444 Complex Analysis**
- **454 Set Theory**
- **455 Logic**
- **471 Probability**
- **472 Statistical Inference**