# 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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<tbody>
<tr>
<td><strong>MATH 241 Calculus I FS</strong></td>
<td><strong>MATH 243 Calculus III</strong></td>
<td><strong>MATH 412 Intro. to Abstract Algebra I W</strong></td>
<td><strong>MATH 431 Principles of Analysis I W</strong></td>
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<tr>
<td>English 100 FW</td>
<td>MATH 321 Intro. to Advanced Math. W DB/DY</td>
<td>Math 302 Intro Differential Equations I DS</td>
<td>MATH 471 Probability</td>
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<td>FG</td>
<td>DS</td>
<td>DA</td>
<td>Elective E</td>
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<td>HSL 101</td>
<td>HSL 201</td>
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<td><strong>MATH 242 Calculus II FG</strong></td>
<td><strong>MATH 244 Calculus IV</strong></td>
<td><strong>MATH 442 Vector Analysis</strong></td>
<td><strong>MATH 407 Numerical Analysis</strong></td>
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<td>FG</td>
<td>MATH 311 Intro. to Linear Algebra</td>
<td>Math 372 Elementary</td>
<td>MATH 472 Statistical Inference</td>
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<td>DH</td>
<td>MATH 331 Intro. to Real Analysis W</td>
<td>Probability and Statistics**</td>
<td>MATH 480 Senior Seminar O</td>
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<td>HSL 102</td>
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**Foundations and Diversification**
These include the calculus I-IV 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. & Diff. Eqns.**
- **321 Intro. Adv. Math**
- **331 Intro. Real Analysis**
- **301 Intro. Discrete Math**
- **302 & 303 Intro. Diff. Eqns**
- **304 & 305 Math Modeling**
- **351 & 352 Foundation of Euclidean & Non-Euclidean Geometry**
- **372 Elementary Probability & Statistics**

**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 Partial Diff. Eqns.**
- **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 Math Logic**
- **471 Probability**
- **472 Statistical Inference**

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