BS in Mathematics for a student interested in grad school

<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>MATH 241 Calculus I FS</td>
<td>MATH 243 Calculus III</td>
<td>MATH 412 Intro. to Abstract Algebra I W</td>
<td>MATH 431 Principles of Analysis I W</td>
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<td>DS FG FW HSL 101</td>
<td>MATH 321 Intro. to Advanced Math. W</td>
<td>MATH 411 Linear Algebra</td>
<td>MATH 421 Topology</td>
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<td>Phys 272L DP DY HSL 201</td>
<td>Chem 171/L DP DY DA</td>
<td>Math 454 Set Theory</td>
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<td>HAP</td>
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<td>MATH 242 Calculus II</td>
<td>MATH 244 Calculus IV</td>
<td>MATH 413 Intro. to Abstract Algebra II W</td>
<td>MATH 442 Vector Analysis</td>
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<tr>
<td>Phys 170L DP DY FG HSL 102</td>
<td>MATH 331 Intro. to Real Analysis</td>
<td>MATH 444 Complex Analysis</td>
<td>MATH 420 Intro.</td>
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<td>MATH 311 Intro. to Linear Algebra W HSL 202</td>
<td>Math 302 Intro DEs I</td>
<td>Number Theory W</td>
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<td>Chem 271/L DP DY DH</td>
<td>MATH 480 Senior Seminar O</td>
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Summer REU Grader for 302

**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.

**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
331 Intro. Real Analysis
301 Intro. Discrete Math
302 Intro. DEs
304/5 Math Modeling
351/352 Geometry
372 Probability & Stats (373 Spring 2017)

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

**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

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.