

B.S in Mathematics - Pure Mathematics Emphasis 2022-23

| | Course | Title | Cr. | When | Prerequisites |
|--|-------------------|--------------------------------|-----|-----------|---|
| Required GE Course | Quantitative Lit. | MATH 1210 - Calculus I | 4 | F/S/SU | MATH 1050 & 1060 or ACT 26+ |
| Other GE courses are required to graduate with a Bachelor's Degree from SUU. | | | | | |
| Math Core Courses | MATH 1220 | Calculus II | 4 | F/S/SU | MATH 1210 |
| | MATH 2210 | Calculus III | 4 | F/S/SU | MATH 1220 |
| | MATH 2270 | Linear Algebra | 3 | F/S/SU | MATH 1220 |
| | MATH 2280 | Differential Equations | 3 | S | MATH 1220 & 2270** |
| | MATH 3120 | Transition to Advanced Math | 3 | F/S | MATH 1220 & MATH 2270 |
| | MATH 3250 | Complex Variables | 3 | S-ODD | MATH 2210 |
| | MATH 3700 | Probability and Statistics | 4 | F/S/SU | MATH 1220 |
| | MATH 4220 | Abstract Algebra I | 3 | F | MATH 3120 |
| | MATH 4400 | Advanced Calculus I | 3 | F | MATH 2210 & 3120 |
| Choose 1 Advanced Class | MATH 4230 | Abstract Algebra II | 3 | S-EVEN | MATH 4220 |
| | MATH 4410 | Advanced Calculus II | 3 | S-ODD | MATH 4400 |
| Choose 1 Programming Class | CS 1400 | Fundamentals of Programming | 3 | F/S | CSIS 1030 or MATH 1050 or Permis. |
| | CS 1410 | Object Oriented Programming | 3 | F/S/SU | CS 1400 |
| Math Elective Credits (15 total credits required) | MATH 3130 | Modern Geometries | 3 | S | MATH 3120 |
| | MATH 3160 | Number Theory | 3 | F-ODD | MATH 3120 |
| | MATH 3190 | Fundamentals of Data Science | 3 | S | MATH 2140, (MATH 2170 or 2270), ANLY 4100, (CS1400) |
| | MATH 3500 | Actuarial Mathematics | 3 | S-EVEN | MATH 1100 or MATH 1210 |
| | MATH 3600 | Numerical Analysis | 3 | S-EVEN | MATH 2250 or 2280 & comp. knowledge |
| | MATH 3770 | Mathematical Modeling | 3 | S-ODD | MATH 3700 |
| | MATH 3800 | Partial Differential Equations | 3 | F-ODD | MATH 2210 and 2250 or 2280 |
| | MATH 3990 | Undergraduate Research | 1-3 | As Needed | Instructor Permission; may repeat up to 5 cr. |
| | MATH 4230 | Abstract Algebra II | 3 | S-EVEN | MATH 4220 |
| | MATH 4340 | Topology | 3 | F-EVEN | MATH 3120 |
| | MATH 4410 | Advanced Calculus II | 3 | S-ODD | MATH 4400 |
| | MATH 4700 | Special Topics | 1-3 | As Needed | Instructor Permission; may repeat up to 5 cr. |

Additional Degree Requirements:

In addition to the above-listed requirements, to complete a Bachelor's Degree at SUU, students must have a total of 40 upper-division credits, and 120 credits total. Pure Math majors may need an additional 5-9 upper-division credits, and 30 or more free elective credits to meet both of those requirements.

* PHYS 2210/2215 is the recommended Physical Science GE course for students seeking advanced degrees in mathematics.

** Can be taken concurrently