

## 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