Bachelor of Arts in Mathematics

The Bachelor of Arts degree program in Mathematics is designed for the student who, upon graduation, will begin a career involving mathematics or plans to pursue graduate studies in mathematics, and is interested in augmenting their foundational mathematics curriculum with a minor in another field or studies in other subjects.

The B.A. in Mathematics requires a total of 55-58 units of coursework; of those, up to 6 units may be selected from courses that count towards the University's General Education requirements in categories A3 and B4, and one course (MATH 3100) counts toward the upper-division writing intensive requirement.

Students pursuing a career in education are strongly encouraged to consult a faculty advisor when selecting their elective coursework (Math 3345, Math 3460, Math 2900, and Math 4900 should be included).

Requirements (55-58 units)

Total units required for graduation: 120

Requirements for the B.A. in Mathematics

(Program Code: MATH)

Lower-division requirements (25-26)		
MATH 2210	Calculus I	4
MATH 2220	Calculus II	4
MATH 2265	Statistics with Applications	3
MATH 2270	Differential Equations with Dynamical Systems I	3
MATH 2310	Applied Linear Algebra	4
MATH 2320	Multivariable Calculus	4
Select one of the following CSE courses:		3-4
CSE 1100	Critical Thinking Through Computer Programming	
CSE 1250	Programming Basics	
CSE 2010	Computer Science I	
Upper-division requirements (15)		
MATH 3100	Mathematical Thinking: Communication and Proof	4
MATH 3329	Euclidean Geometry with Transformations	3
MATH 4300	Real Analysis	4
MATH 4600	Theory of Rings and Fields	4
Note: MATH 3100 satisfies the GE upper-division Writing Intensive (WI) requirement.		
Electives (15-17)		
Five courses (15-17 units) selected from the following with at least one course from each of Group A, Group B, and Group C. At least two of the five elective courses must be at the 4000-level or above.		15-17
Group A:		
MATH 3345	Number Theory	
MATH 3372	Combinatorics	
MATH 3770	Introduction to Graph Theory	
Group B:		
MATH 3320	Mathematical Interest Theory	
MATH 3460	Probability Theory	
MATH 4270	Differential Equations with Dynamical Systems II	
MATH 4455	Partial Differential Equations & Fourier Analysis	
Group C:		
MATH 4485	Differential Geometry	
MATH 5170	Complex Analysis	
MATH 5310	Advanced Linear Algebra	
MATH 5529	Advanced Topics in Geometry	
MATH 5550	Introduction to Topology	
Group D:		
MATH 2900	Problem Solving and Mathematical Reasoning for Teachers I	
MATH 4900	Problem Solving and Mathematical Reasoning for Teachers II	
MATH 3480	Topics in History of Mathematics	
MATH 4320	Introduction to Actuarial Modeling	
MATH 4360	Linear Statistical Models	
MATH 5510	Topics in Advanced Mathematics	
MATH 5300	Advanced Real Analysis	
MATH 5565	Mathematical Statistics	
MATH 5600	Group Theory	
MATH 5953	Independent Study	
PHIL 3560	Philosophy of Logic and Mathematics	
Total Units		**55-58**