

Mathematical Sciences, B.A.

Degree Requirements

Mathematical Sciences Courses (required)

		Units
21-120	Differential and Integral Calculus	10
21-122	Integration and Approximation	10
21-127	Concepts of Mathematics	12
or 21-128	Mathematical Concepts and Proofs	
21-201	Undergraduate Colloquium	1
21-228	Discrete Mathematics	9-12
or 15-251	Great Ideas in Theoretical Computer Science	
21-241	Matrices and Linear Transformations	11
or 21-242	Matrix Theory	
21-259	Calculus in Three Dimensions	10-12
or 21-266	Vector Calculus using Matrix Algebra	
or 21-268	Multidimensional Calculus	
or 21-269	Vector Analysis	
21-260	Differential Equations	9-10
or 21-261	Introduction to Ordinary Differential Equations	
or 33-231	Physical Analysis	
21-325	Probability	9-12
or 21-425	Probability and Martingales	
or 15-259	Probability and Computing	
or 36-218	Probability Theory for Computer Scientists	

Depth Electives (required)

Seventy-two total units

- **Forty-five units** of Mathematical Sciences Electives (at the 21-300 level or above; or 21-270 or 21-292).
- **Twenty-seven units** of Technical Electives. These may be Mathematical Sciences (at the 21-300 level or above or 21-270 or 21-292), or Computer Science (at the 15-200 level or above), or Physics (at the 33-300 level or above), or Statistics (must be at the 36-300 level or above and have at least 36-225 as a prerequisite) electives. These may also be technical courses with course codes 10-xxx (Machine Learning), 11-xxx (Learning Technologies Institute), or 07-xxx (SCS interdisciplinary), subject to department approval.

MCS General Education (required)

MCS humanities, social sciences, and science core (114 units)

Minimum number of units required for degree: 360