

# MATHEMATICS MAJOR— BS

Minimum of 36 semester course credits and general BS requirements (<https://catalog.mills.edu/undergraduate/academic-requirements/ba-requirements>)

Code	Title	Credits
<b>Required</b>		
MATH 049	Multivariable Calculus	4
MATH 050	Linear Algebra	4
MATH 131	Introduction to Abstract Algebra	4
MATH 141 & MATH 142	Real Analysis I and Real Analysis II	8
Select four courses from the following:		16
MATH 006	Discrete Mathematics II	
MATH 102	Probability and Statistics	
MATH 104	Differential Equations	
MATH 108	Mathematical Modeling	
MATH 127	Linear Optimization	
MATH 128	Theory of Computation	
MATH 132	Topics in Algebra	
MATH 154	Foundations of Geometry	
MATH 158	Topics in Topology	
MATH 160	Complex Analysis	
MATH 180	Topics in Mathematics	
CS 064	Computer Concepts and Intermediate Programming	
CS 125	Theory of Algorithms	

Other computer science upper-division courses may be used as electives in the mathematics major at the discretion of the department.

## Recommended

Additional courses in mathematics, logic, and computer science, and a reading knowledge of French, German, or Russian, are useful.

Note: MATH 049 Multivariable Calculus, MATH 050 Linear Algebra, or MATH 141 Real Analysis I, included in the required courses above, and MATH 102 Probability and Statistics, MATH 104 Differential Equations, or CS 064 Computer Concepts and Intermediate Programming, if chosen from the list of electives above, may not be counted toward the natural science and mathematics core option for the BS degree.

Students intending to pursue graduate study are encouraged to give an oral presentation on an advanced topic.