

# MATHEMATICS, B.S.

The BS is designed for students interested in continuing studies in math intensive fields after graduation. By completing the core, students will develop knowledge and skills in the major areas of mathematics (discrete and continuous, deterministic and probabilistic). By designing a concentration, students will explore in depth mathematics of their own choosing. The math faculty is committed to working with all students to ensure success by providing a supportive environment that stresses critical thinking, intellectual challenge, and complex problem solving.

*Policy on prerequisites:* A grade of C- or better is required for a course in mathematics to fulfill a prerequisite for another mathematics course. A student must receive the permission of the mathematics department to take a mathematics course that is a prerequisite for a mathematics course for which they have previously received credit.

## Summary

Code	Title	Credits
	Mathematics B.S. Major Requirements	56
	Integrative Core Curriculum Requirements <sup>1</sup>	28-40
	Electives	24-36
	<b>Total Credits</b>	<b>120</b>

<sup>1</sup> See Integrative Core Curriculum requirements, with information about the H&S CLA requirement. (<https://catalog.ithaca.edu/undergrad/schools/school-humanities-sciences/#integrativecorecurriculumicctext>)

## Degree Requirements

An overall GPA of C (2.00) or above is required in mathematics courses that are being used to fulfill the minimum course requirements for the mathematics major. No more than one passing grade below C- in mathematics courses may be used.

Code	Title	Credits
<b>REQUIRED COURSES IN THE DEPARTMENT</b>		
MATH 11100	Calculus I	4
MATH 11200	Calculus II	4
MATH 18500	Math Experimentation	3
MATH 19100	World of Mathematics	1
MATH 21600	Statistical Analysis	3
	or MATH 24600 Intermediate Statistics	
MATH 23100	Linear Algebra	3
MATH 30300	Abstract Algebra	4
	or MATH 30500 Introduction to Analysis	
MATH 39700	Junior Seminar	1
MATH 49800	Capstone in Mathematics I	1
MATH 49900	Capstone in Mathematics II	2
MATH xxxxx	12 additional MATH credits at MATH 17000 or above <sup>1</sup>	12
<b>CONCENTRATION REQUIREMENT</b>		
	The concentration must be planned with the adviser and approved by the department by the end of the student's fourth semester. The concentration design must meet the following criteria:	18

1) All courses must be at 300-level or above

2) At least 6 credits must be MATH courses

Total Credits 56

<sup>1</sup> The following courses cannot be used to count toward the Mathematics elective requirement: MATH 18800-18899.