

MATHEMATICS-PHYSICS MAJOR — B.A.

This B.A. degree requires 90 liberal arts credits out of the 120 credits required for graduation.

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 he or she has previously received credit.

Summary

Code	Title	Credits
	Mathematics-Physics B.A. Major Requirements	62-64
	Integrative Core Curriculum Requirements and Electives ¹	56-58
Total Credits		120

¹ This major is approved to fulfill the Integrative Core Curriculum (<https://catalog.ithaca.edu/undergrad/programsaz/integrative-core-curriculum/>) requirement for the Natural Sciences perspective.

Degree Requirements

An overall average of C (2.00) or above is required in mathematics and physics courses being used to fulfill the minimum course requirements for the major.

Code	Title	Credits
REQUIRED MATHEMATICS COURSES		
MATH 10800 or MATH 1110C	Applied Calculus Calculus I	4
MATH 11200	Calculus II	4
MATH 19100	World of Mathematics	1
MATH 21100	Calculus III	4
MATH 21400 or MATH 2160C	Differential Equations Statistical Analysis	3
MATH 23100	Linear Algebra	3
MATH xxxxx	Course(s) at the 300-level or above (excluding MATH 39100)	6-8
REQUIRED PHYSICS COURSES		
PHYS 11000	Introductory Mathematical and Computational Methods for Physics	2
PHYS 12100	Light and Special Relativity	4
PHYS 12200	Momentum, Energy, and Heat	4
PHYS 12300	Classical Fields: Gravity, Electricity, & Magnetism	4
PHYS 21000	Intermediate Mathematical and Computational Methods for Physics	2
PHYS 22400	Classical and Quantum Waves	4
PHYS 25000 or PHYS 26000	Intermediate Applied Physics Design Laboratory Intermediate Physics Laboratory	2
PHYS 31000	Advanced Mathematical and Computational Methods for Physics	4
Physics Directed Electives:		8

PHYS 32200	Classical Mechanics
PHYS 32300	Electromagnetism
PHYS 32400	Quantum Mechanics
PHYS 32500	Thermal Physics

CAPSTONE

Select one of the following options: 3

OPTION 1

MATH 49800	Capstone in Mathematics I
MATH 49900	Capstone in Mathematics II

OPTION 2

PHYS 499xx	Advanced Physics Research
------------	---------------------------

Total Credits 62-64