

MATHEMATICS, BS

More Information: <https://mathstats.case.edu/undergraduate-programs/why/frequently-asked-questions/>

Degree: Bachelor of Science (BS)

Major: Mathematics

Program Overview

All undergraduate degrees in the department are based on a four-course sequence in calculus and differential equations and have a computational component. The mathematics and applied mathematics degrees all require further mathematics courses in analysis and algebra. The statistics degrees all require a further statistics core. The applied mathematics program has a four-course professional core requirement to promote the understanding of how mathematics is applied in other fields. There are additional requirements particular to each degree program, including technical electives in the major. Each degree program requires a minimum of 120 credit hours.

The bachelor of science in mathematics differs from the bachelor of arts by requiring more hours in the major (although the same total hours for the degree. The extra requirements are both in additional mathematics technical electives, and in coursework in the sciences.

Undergraduate Policies

For undergraduate policies and procedures, please review the Office of Undergraduate Studies section of the General Bulletin.

Accelerated Master's Programs

Undergraduate students may participate in accelerated programs toward graduate or professional degrees. For more information and details of the policies and procedures related to accelerated studies, please visit the Office of Undergraduate Studies section of the General Bulletin.

Program Requirements

Students seeking to complete this major and degree program must meet the general requirements for bachelor's degrees and the general requirements of the College of Arts and Sciences. Students completing this program as a secondary major while completing another undergraduate degree program do not need to satisfy the latter set of requirements.

The BS degree in mathematics requires at least 50 hours of mathematics courses and at least 17 hours in basic science. The specific requirements are as follows:

Code	Title	Hours
Mathematics Requirements		
MATH 121	Calculus for Science and Engineering I	4
MATH 122	Calculus for Science and Engineering II	4
or MATH 124	Calculus II	
MATH 223	Calculus for Science and Engineering III	3
or MATH 227	Calculus III	
MATH 224	Elementary Differential Equations	3
or MATH 228	Differential Equations	
MATH 307	Linear Algebra	3

MATH 308	Introduction to Abstract Algebra	3
MATH 321	Fundamentals of Analysis I	3
MATH 322	Fundamentals of Analysis II	3
MATH 324	Introduction to Complex Analysis	3
or MATH 425	Complex Analysis I	
MATH 330	Introduction to Scientific Computing	3
Six approved technical electives *		18
Non-mathematics Requirements		
PHYS 121	General Physics I - Mechanics	4
PHYS 122	General Physics II - Electricity and Magnetism	4
PHYS 221	Introduction to Modern Physics	3
One of the following sequences:		6
CHEM 105	Principles of Chemistry I	
& CHEM 106	and Principles of Chemistry II	
CHEM 111	Principles of Chemistry for Engineers	
& ENGR 145	and Chemistry of Materials	
EEPS 110	Physical Geology	
& EEPS 115	and Introduction to Oceanography	
EEPS 110	Physical Geology	
& EEPS 210	and Earth History: Time, Tectonics, Climate, and Life	
Total Hours		67

* No more than 9 hours may be from outside the department.

In addition to the major requirements above, students must satisfy various university and college requirements.