

Mathematics BS

Overview

The **Bachelor of Science in Mathematics**, offered by the Department of Mathematics, provides an in-depth theoretical background focusing on the traditional core areas of mathematics. This program provides a foundation for graduate study or careers in fields using sophisticated quantitative and mathematical analysis. In particular, this program is suitable preparation for graduate study in mathematics.

Campus Location: Main

Program Code: ST-MATH-BS

Distinction in Major

To graduate with distinction in this major, a student must satisfy the following criteria:

- achieve a minimum 3.25 overall GPA;
- achieve a minimum 3.50 GPA in the Mathematics courses required for the major; and,
- achieve a minimum 3.50 GPA in the following courses:
 - MATH 3098
 - MATH 3141
 - MATH 3142
 - MATH 4051
 - Any additional course from the following:
 - MATH 3043
 - MATH 3044
 - MATH 3101
 - Any 4000-level course other than Individual Study.

Accelerated Programs

Accelerated programs provide a pathway for students to pursue both an undergraduate degree and an advanced degree in a shorter amount of time. Below is a list of available accelerated programs for students in the BS in Mathematics.

- BS in Mathematics / MEd in Middle Grades Education with a Concentration in Mathematics
- BS in Mathematics / MEd in Middle Grades Education with a Concentration in Mathematics and Science
- BS in Mathematics / MEd in Secondary Education with a Concentration in Mathematics Education
- BS in Mathematics / MS in Mathematics

Undergraduate Contact Information

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Learn more about the Bachelor of Science in Mathematics.

These requirements are for students who matriculated in academic year 2023-2024. Students who matriculated prior to fall 2023 should refer to the Archives to view the requirements for their Bulletin year.

Bachelor of Science Requirements

Summary of Requirements for the Degree

1. University Requirements (123 total s.h.)

- Students must complete all University requirements including those listed below.
- All undergraduate students must complete at least two writing-intensive courses for a total of at least six credits at Temple as part of their major. The specific writing-intensive course options for this major are:

Code	Title	Credit Hours
MATH 3098	Modern Algebra	3
MATH 4096	Senior Problem Solving	3

- Students must complete the General Education (GenEd) requirements.
 - See the General Education section of the *Undergraduate Bulletin* for the GenEd curriculum.
 - Students who complete CST majors receive a waiver for 2 Science & Technology (GS) and 1 Quantitative Literacy (GQ) GenEd courses.
 - Students must satisfy general Temple University residency requirements.
- #### 2. College Requirements
- A minimum of 90 total credits within the College of Science & Technology (CST), the College of Liberal Arts (CLA), and/or the College of Engineering (ENG).
 - A minimum of 45 of these credits must be upper-level (courses numbered 2000 and above).
 - Complete a one-credit first-year or transfer seminar.
 - SCTC 1001 CST First Year Seminar for every entering first-year CST student.
 - SCTC 2001 CST Transfer Seminar for every entering transfer CST student.

3. Major Requirements for Bachelor of Science (64-65 s.h.)

At least 9 courses required for the major must be completed at Temple. At least 8 Math courses must be completed at Temple.

Code	Title	Credit Hours
Computer Programming course		
Select one of the following:		3-4
CIS 1051 or CIS 1951	Introduction to Problem Solving and Programming in Python Honors Introduction to Problem Solving and Programming in Python	
CIS 1057	Computer Programming in C	
CIS 1068 or CIS 1968	Program Design and Abstraction Honors Program Design and Abstraction	
MATH 1033 & MATH 1034	Computing in MATLAB and Applications in MATLAB	
Mathematics courses		
MATH 1041 or MATH 1941	Calculus I Honors Calculus I	4
MATH 1042 or MATH 1942	Calculus II Honors Calculus II	4
MATH 2043 or MATH 2943	Calculus III Honors Calculus III	4
MATH 2045	Differential Equations with Linear Algebra (F)	4
MATH 2111	Basic Concepts of Math	3
MATH 3031	Probability Theory I	3
MATH 3051	Theoretical Linear Algebra (S)	4
MATH 3098	Modern Algebra (F)	3
MATH 3101	Topics in Modern Algebra (S)	3
MATH 3141	Advanced Calculus I (F)	3
MATH 3142	Advanced Calculus II (S)	3
MATH 4051	Complex Analysis (F)	3
MATH 4096	Senior Problem Solving	3
Three Mathematics electives at the 3000+level or above ¹		9
Physics courses		

Select one of the following: 4

PHYS 1061	Elementary Classical Physics I
PHYS 1961	Honors Elementary Classical Physics I (F)
PHYS 2021	General Physics I
PHYS 2921	Honors General Physics I (F)

Select one of the following: 4

PHYS 1062	Elementary Classical Physics II
PHYS 1962	Honors Elementary Classical Physics II (S)
PHYS 2022	General Physics II
PHYS 2922	Honors General Physics II (S)

Total Credit Hours 64-65

Code	Title	Credit Hours
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(F) - Fall only course

(S) - Spring only course

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Must be approved by Mathematics faculty advisor.

Suggested Academic Plan

Bachelor of Science in Mathematics

Suggested Plan for New Students Starting in the 2023-2024 Academic Year

Year 1

Fall Credit Hours

MATH 1041 or MATH 1941	Calculus I or Honors Calculus I	4
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Select one of the following: 3-4

CIS 1051 or CIS 1951	Introduction to Problem Solving and Programming in Python or Honors Introduction to Problem Solving and Programming in Python	3-4
CIS 1057	Computer Programming in C	
CIS 1068 or CIS 1968	Program Design and Abstraction or Honors Program Design and Abstraction	
MATH 1033 & MATH 1034	Computing in MATLAB and Applications in MATLAB	

Select one of the following: 4

PHYS 1061	Elementary Classical Physics I
PHYS 1961	Honors Elementary Classical Physics I (F)
PHYS 2021	General Physics I
PHYS 2921	Honors General Physics I (F)

SCTC 1001 CST First Year Seminar 1

GenEd Breadth Course 4-3

Credit Hours 16

Spring

MATH 1042 or MATH 1942	Calculus II or Honors Calculus II	4
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Select one of the following: 4

PHYS 1062	Elementary Classical Physics II
PHYS 1962	Honors Elementary Classical Physics II (S)
PHYS 2022	General Physics II
PHYS 2922	Honors General Physics II (S)

ENG 0802 or ENG 0812 or ENG 0902	Analytical Reading and Writing or Analytical Reading and Writing: ESL or Honors Writing About Literature	4
GenEd Breadth Course		3
Credit Hours		15
Year 2		
Fall		
MATH 2043 or MATH 2943	Calculus III or Honors Calculus III	4
MATH 2111	Basic Concepts of Math	3
MATH 2045	Differential Equations with Linear Algebra (F)	4
IH 0851 or IH 0951	Intellectual Heritage I: The Good Life or Honors Intellectual Heritage I: The Good Life	3
GenEd Breadth Course		3
Credit Hours		17
Spring		
MATH 3031	Probability Theory I	3
MATH 3051	Theoretical Linear Algebra (S)	4
IH 0852 or IH 0952	Intellectual Heritage II: The Common Good or Honors Intellectual Heritage II: The Common Good	3
GenEd Breadth Course		3
Elective		2
Credit Hours		15
Year 3		
Fall		
MATH 3098	Modern Algebra (F)	3
MATH 3141	Advanced Calculus I (F)	3
GenEd Breadth Course		3
Elective		3
Elective		3
Credit Hours		15
Spring		
MATH 3101	Topics in Modern Algebra (S)	3
MATH 3142	Advanced Calculus II (S)	3
3000+ Mathematics Elective ¹		3
Elective		3
Elective		3
Credit Hours		15
Year 4		
Fall		
MATH 4051	Complex Analysis (F)	3
3000+ Mathematics Elective ¹		3
Elective		3
Elective		3
Elective		3
Credit Hours		15
Spring		
MATH 4096	Senior Problem Solving	3
3000+ Mathematics Elective ¹		3
Elective		3
Elective		3

Elective	3
Credit Hours	15
Total Credit Hours	123

Code	Title	Credit Hours
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(F) - Fall only courses

(S) - Spring only courses

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Must be approved by Mathematics faculty advisor.