

Mathematics BA

Overview

The **Bachelor of Arts in Mathematics**, offered by the Department of Mathematics, provides a solid mathematical foundation and also allows for the most flexibility. This program prepares students for a variety of jobs in business and industry, as well as for graduate study in fields related to mathematics.

Campus Location: Main

Program Code: ST-MATH-BA

Distinction in Major

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

- achieve a minimum 3.25 cumulative GPA;
- achieve a minimum 3.50 major GPA;
- successfully complete MATH 3141, MATH 3142 and MATH 4051 instead of MATH 3137 and MATH 3138;
- successfully complete MATH 3098 instead of MATH 3096; 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 BA in Mathematics.

- BA in Mathematics / MEd in Middle Grades Education with a Concentration in Mathematics
- BA in Mathematics / MEd in Middle Grades Education with a Concentration in Mathematics and Language Arts
- BA in Mathematics / MEd in Secondary Education with a Concentration in Mathematics Education
- BA in Mathematics / MS in Mathematics

Undergraduate Contact Information

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Learn more about the Bachelor of Arts 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 Arts 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 3096	Introduction to 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).
 - A minimum of 6 of these credits must be upper-level (courses numbered 2000 and above) CLA credits.
- Successful completion or waiver from the second level of a foreign language.
- Complete a one-credit first-year seminar 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 Arts (53-55 s.h.)

At least 7 courses required for the major must be completed at Temple. At least 7 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 2101 or MATH 2103	Linear Algebra Linear Algebra with Computer Lab	3-4
MATH 2111	Basic Concepts of Math	3
MATH 3031	Probability Theory I	3
MATH 3096	Introduction to Modern Algebra	3
MATH 3137	Real & Complex Analysis I (F)	3
MATH 3138	Real & Complex Analysis II (S)	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 **53-55**

Code	Title	Credit Hours
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(F) - Fall only course

(S) - Spring only course

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(MATH 2041 or MATH 2941 or MATH 2045), MATH 2061, or MATH 2121 may be used to fulfill up to two of the Mathematics electives at the 3000 level or above.

Suggested Academic Plan

Bachelor of Arts 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	
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	

SCTC 1001	CST First Year Seminar	1
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ENG 0802 or ENG 0812 or ENG 0902	Analytical Reading and Writing or Analytical Reading and Writing: ESL or Honors Writing About Literature	4
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Elective 3-2

Credit Hours **15**

Spring

MATH 1042 or MATH 1942	Calculus II or Honors Calculus II	4
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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)	

IH 0851 or IH 0951	Intellectual Heritage I: The Good Life or Honors Intellectual Heritage I: The Good Life	3
GenEd Breadth Course		3
Elective		1
Credit Hours		15
Year 2		
Fall		
MATH 2043 or MATH 2943	Calculus III or Honors Calculus III	4
MATH 2101 or MATH 2103	Linear Algebra or Linear Algebra with Computer Lab	3-4
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)	
IH 0852 or IH 0952	Intellectual Heritage II: The Common Good or Honors Intellectual Heritage II: The Common Good	3
Elective		2-1
Credit Hours		16
Spring		
MATH 2111	Basic Concepts of Math	3
MATH 3031	Probability Theory I	3
GenEd Breadth Course		3
GenEd Breadth Course		3
Elective		3
Credit Hours		15
Year 3		
Fall		
MATH 3137	Real & Complex Analysis I (F)	3
3000+ Mathematics Elective ¹		3
Foreign Language 1001 - First Level		4
GenEd Breadth Course		3
Elective		3
Credit Hours		16
Spring		
MATH 3096	Introduction to Modern Algebra	3
MATH 3138	Real & Complex Analysis II (S)	3
3000+ Mathematics Elective ¹		3
Foreign Language 1002 - Second Level		4
GenEd Breadth Course		3-4
Credit Hours		16-17
Year 4		
Fall		
3000+ Mathematics Elective ¹		3
Upper-level CLA Course (numbered 2000 and above)		3
Elective		3
Elective		3
Elective		3
Credit Hours		15
Spring		
MATH 4096	Senior Problem Solving	3
Upper-level CLA Course (numbered 2000 and above)		3

Elective		3
Elective		3
Elective		3-2
	Credit Hours	15-14
	Total Credit Hours	123

Code	Title	Credit Hours
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(F) - Fall only course

(S) - Spring only course

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(MATH 2041 or MATH 2941 or MATH 2045), MATH 2061, or MATH 2121 may be used to fulfill up to two of the Mathematics electives at the 3000 level or above.