

B.S. Applied Mathematics

The Bachelor of Science program in Applied Mathematics is designed to prepare students to take positions in industry or pursue graduate training. Students must fulfill the university's General Education Requirements (a minimum of 36 credits – see the General Education Requirements (<http://coursecat.isu.edu/undergraduate/academicinformation/generaleducation/>) in the Academic Information section of this catalog).

Program Admissions Requirements

There are no program admission requirements for the BS Applied Mathematics.

General Education

The listing below includes program requirements that also fulfill General Education requirements.

Code	Title	Credits
Objective 1		6
Objective 2		3
Objective 3 - MATH 1170		4
Objective 4		6
Objective 5		7
Objective 6		6
Students must fulfill Objective 7 or Objective 8		3
Objective 7 - CS 1181		
Objective 8		
Objective 9		3
Total Credits		38

Mathematics Core

All bachelor's degrees offered in the Department of Mathematics and Statistics have a common core consisting of the following six courses:

Code	Title	Credits
CS 1181	Computer Science and Programming I (satisfies General Education Objective 7) ¹	3
MATH 1170	Calculus I (satisfies General Education Objective 3)	4
MATH 1175	Calculus II	4
MATH 2275	Calculus III	4
MATH 2240	Linear Algebra	3
MATH 3326	Elementary Analysis	3
Total Credits		21

¹ Students may take both ME 1165 Structured Programming and ME 2266 Symbolic Programming instead of CS 1181.

Major Requirements

Code	Title	Credits
MATH 3310	Mathematical Modeling	3
MATH 3352	Introduction to Probability	3
MATH 3360	Differential Equations	3
MATH 4423	Introduction to Real Analysis I	3
MATH 4441	Introduction to Numerical Analysis I	3

Plus one of the following two courses: 3

MATH 4421 Advanced Engineering Mathematics I

MATH 4465 Partial Differential Equations

A student must take nine additional credits from the following list to complete the degree:² 9

MATH 3362 Introduction to Complex Variables

MATH 4405 Numerical Linear Algebra

MATH 4422 Advanced Engineering Mathematics II

MATH 4424 Introduction to Real Analysis II

MATH 4442 Introduction to Numerical Analysis II

MATH 4450 Mathematical Statistics I

MATH 4451 Mathematical Statistics II

MATH 4463 Topics in Applied Mathematics

Total Credits 27

² With departmental approval, up to three of these credits may be completed by taking an appropriate course in this or another department.

Degree Totals

Code	Title	Credits
	Program Admission Requirements	0
	General Education	38
	Mathematics Core (Required General Education credits removed.)	14
	Major Requirements	27
	Upper Division Free Electives	6
	Free Electives	35
	Total Credits	120

ISU Degree Requirements (<http://coursecat.isu.edu/undergraduate/degree requirements/>)

ISU General Education (<http://coursecat.isu.edu/undergraduate/academicinformation/generaleducation/>)

Major Academic Plan (MAP) (<https://www.isu.edu/advising/maps/>)