Idaho State University

Catalog Year 2026-2027
B.S., Applied Mathematics
The program starts in even-numbered years.

(For internal use only)
☐ *No change*
☐ *UCC proposal*

A Major Academic Plan (MAP) is one way to complete a degree in a set number of semesters. The *example* below is only one strategy. Actual plans for individual students will vary based on advisor recommendations and academic needs. Official Program Requirements including Major, General Education, Electives, and university requirements (see pg.2) are based on Catalog Year.

Course Subject and Title	Cr.	Min. Grade	*GE, UU or UM	**Sem. Offered	Prerequisite	Co-Requisite
Semester One						
GE Objective 3: MATH 1170 Calculus I	4	C-	GE	F, S, Su	Math 1144 or Math 1147 or appropriate placement score	
GE Objective 1: ENGL 1101 English Writing and Rhetoric I	3	C-	GE	F, S, Su	Appropriate placement score	
GE Objective 4:	3		GE	F, S, Su		
GE Objective 6:	3		GE	F, S, Su		
Free Electives	1					
Total	14					
Semester Two						
MATH 1175 Calculus II	4	C-		F, S, Su	Math 1170	
MATH 2240 Linear Algebra	3	C-		F, S, Su	Math 1170	
GE Objective 7: CS 1181 CS & Programming I	3	C-	GE	F, S	Math 1143 or Math 1144 or Math 1147 or CS 1111 and Math 1108 or MGT 1116	
GE Objective 1: ENGL 1102 Writing and Rhetoric II	3		GE	F, S, Su	ENGL 1101 or equivalent	
GE Objective 4:	3		GE	F, S, Su		
Total	16					
Semester Three						
MATH 2275 Calculus III	4	C-		F, S	Math 1175	
MATH 3360 Differential Equations	3	C-	UM	F, S	Math 1175; MATH 2240 or Math 2275 recommended	
GE Objective 2:	3		GE	F, S, Su		
GE Objective 5: No lab	3		GE	F, S, Su		
Free Electives	2					
Total	15					
Semester Four						
MATH 3326 Elementary Analysis	3	C-	UM	F, S	Math 1175 and either Math 2240 or Math 2287	
MATH 3310 Mathematical Modeling	3			S	Math 1175, and either CS1181 or ME 1165	
GE Objective 6:	3		GE	F, S, Su		
GE Objective 9:	3		GE	F, S, Su		
Free Electives	3					
Total	15					
Semester Five						
MATH 4421 Advanced Engineering Mathematics***	3	C-	UM	F	Math 3360	
MATH 4423 Introduction to Real Analysis***	3	C-	UM	F	Math 2240 and Math 3326	
GE Objective 5: w/lab	4		GE	F, S, Su		
Free Electives	5					
Total	15					
Semester Six						
MATH 3352 Introduction to Probability***	3	C-	UM		Math 1175	
Applied Mathematics Elective (see list)	3		UM		See Catalog.	
Free Electives	9		GE	F, S, Su		
Total	15					
Semester Seven						
MATH 4441 Introduction to Numerical Analysis I***	3	C-	UM	OF	Math 2240, Math 3326, Math 3360	
Applied Mathematics Elective (see list)	3		UM	F	See Catalog.	
Free Electives	9					
Total	15					
Semester Eight						
Applied Mathematics Elective (see list)	3		UM		See Catalog.	
Upper Division Free Electives	6		UU			
Free Electives	6					
Total	15					

* GE=General Education Objective, UU=Upper Division University, UM= Upper Division Major
** See Course Schedule section of Course Policies page in the e-catalog (or input F, S, Su, etc.)
*** This course will be a prerequisite for some of the elective options within this major.

2024-2025 Major Requirements	CR
MAJOR REQUIREMENTS	**41**
Mathematics Core	14
MATH 1170 Calculus I (4 credits counted in Objective 3)	
MATH 1175 Calculus II	4
MATH 2275 Calculus III	4
MATH 2240 Linear Algebra	3
MATH 3326 Elementary Analysis	3
CS 1181 CS & Programming I (3 credits counted in Objective 7)	
Major Requirements	**27**
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
Choose 1 of the following two courses:	
Either MATH 4421 Advanced Engineering Mathematics I	3
Or MATH 4465 Partial Differential Equations	
Choose 9 Upper Division credits from list below:	**9**
MATH 3327 Vector Analysis	3
MATH 3362 Introduction to Complex Analysis	3
MATH 4405 Numerical Linear Algebra	3
MATH 4422 Advanced Engineering Mathematics II	3
MATH 4424 Introduction to Real Analysis II	3
MATH 4442 Introduction to Numerical Analysis II	3
MATH 4445 Optimization Methods and Their Applications	3
MATH 4450 Mathematical Statistics I	3
MATH 4451 Mathematical Statistics II	3
MATH 4463 Topics in Applied Mathematics	3

GENERAL EDUCATION OBJECTIVES Satisfy Objectives 1,2,3,4,5,6 (7 or 8) and 9		**36 cr. min**
1. Written English (6 cr. min)	ENGL 1101	3
	ENGL 1102	3
2. Spoken English (3 cr. min)	COMM 1101 or BIOL 1104	3
3. Mathematics (3 cr. min)	MATH 1170	4
4. Humanities, Fine Arts, Foreign Lang. **(2 courses; 2 categories; 6 cr. min)**		
5. Natural Sciences **(2 lectures-different course prefixes, 1 lab; 7 cr. min)**		
6. Behavioral and Social Science **(2 courses-different prefixes; 6 cr. min)**		
One Course from EITHER Objective 7 OR 8 **(1course; 3 cr. min)**		
7. Critical Thinking	CS 1181	3
8. Information Literacy		
9. Cultural Diversity **(1 course; 3 cr. min)**		
General Education Elective to reach 36 cr. min. **(if necessary)**		
Total GE		**38**

Undergraduate Catalog and GE Objectives by Catalog Year
http://coursecat.isu.edu/undergraduate/programs/

MAP Credit Summary	**CR**
Major	41
General Education	38
Upper Division Free Electives to reach 36 credits	6
Free Electives to reach 120 credits	35
TOTAL	120

Graduation Requirement Minimum Credit Checklist	**Confirmed**
Minimum 36 cr. General Education Objectives (15 cr. AAS)	X
Minimum 15 cr. Upper Division in Major (0 cr. Associate)	X
Minimum 36 cr. Upper Division Overall (0 cr. Associate)	X
Minimum of 120 cr. Total (60 cr. Associate)	X

Advising Notes

1. Student must select additional Upper Division credits to reach 36.
2. Two courses (ME 1165 and ME 2266) may be substituted for CS 1181.
3. With department approval, up to 3 of the 9 required Upper Division credits may be completed by taking an (not listed) Upper Division course in this or another department.

MAP Completion Status (for internal use only)

	Date
Department:	
CAA or COT:	
Registrar:	

Form Revised 5.12.2026