MATHEMATICS BA/BS

The Mathematics major is characterized by a balance between theory and application, beginning in the pre-calculus sequence and continuing through to upper division courses. Appropriate technology is integrated at all levels of the curriculum. At the end of the program students are prepared to enter graduate school or business and industry. Students may also complete courses required for secondary teaching certification.

Program Outcomes

Upon completion of this program, students will be well-prepared to:

- Demonstrate the ability to create, formulate, understand, and communicate mathematical conjectures, arguments and proofs;
- Demonstrate the ability to apply precise and logical reasoning to construct multi-step strategies to solve mathematical problems and effectively communicate those solutions;
- Demonstrate the ability to clearly communicate mathematical ideas verbally and in writing; and
- Demonstrate the ability to use numerical and symbolic mathematical software to aid in problem-solving and investigation as well as understand the limitations of such software.

General Education Requirements

Code	Title	Credits
Written Communication		
Select one of the following:		6.00
ENGL-101 & ENGL-102	WRITING AND RHETORIC I and WRITING AND RHETORIC II	
ENGL-109	COLLEGE WRITING AND RESEARCH	
Oral Communication		
Select one from the following:		3.00
COMM-101	FUNDAMENTALS OF ORAL COMMUNICATION	
COMM-203	SMALL GROUP COMMUNICATION	
COMM-204	PUBLIC SPEAKING	
Mathematical Ways of Knowing		
Select one of the following:		3.00-5.00
MATH-143	PRECALCULUS I: ALGEBRA	
MATH-147	PRECALCULUS	
MATH-170	CALCULUS I	
Humanistic & Artistic Ways of Knowing		
Select one course from two categories:		6.00-7.00
Literature		
ENGL-175	LITERATURE AND IDEAS	
ENGL-257	WORLD CLASSICS	
ENGL-258	INTERNATIONAL LITERATURE	
ENGL-260	NATIVE AMERICAN LITERATURE	
ENGL-261	MYTHOLOGIES	
Arts		
ART-100	INTRODUCTION TO ART	
HUM-101	THE ART AND HISTORY OF THE MOTION PICTURE	
HUM-150	INTRODUCTION TO THE ARTS	
MUS-101	SURVEY OF MUSIC	
MUS-102	MUSIC IN AMERICA	
MUS-150	WORLD MUSIC	
MUS-151	HISTORY OF MUSICAL THEATER	
THEA-101	SURVEY OF THE THEATER	
Language		
NP-101	NEZ PERCE LANGUAGE AND CULTURE	
NP-102	NEZ PERCE LANGUAGE AND HISTORY	

SPAN-101	ELEMENTARY SPANISH I	
SPAN-102	ELEMENTARY SPANISH II	
Scientific Ways of Knowing		
PHYS-211	PHYSICS FOR SCIENTISTS AND ENGINEERS I	5.00
Select one of the following:		3.00-4.00
BIOF-100	INTRODUCTION TO BIOINFORMATICS	
BIOL-100	CONCEPTS OF BIOLOGY	
BIOL-120	PLANTS AND PEOPLE	
BIOL-123	BIOLOGY IN FILM	
BIOL-175	HUMAN BIOLOGY	
BIOL-227	HUMAN ANATOMY AND PHYSIOLOGY I	
CHEM-100	CONCEPTS OF CHEMISTRY	
CHEM-105	GENERAL, ORGANIC AND BIOCHEMISTRY	
CHEM-111	PRINCIPLES OF CHEMISTRY I	
CS-108	INTRODUCTION TO COMPUTER SCIENCE	
ENGR-108	SEMICONDUCTORS, SCIENCE, AND SOCIETY	
FSCI-101	INTRODUCTION TO FORENSIC SCIENCE	
GEOL-101	PHYSICAL GEOLOGY	
GEOL-120	INTRODUCTION TO EARTH SYSTEMS	
GIS-271	GEOGRAPHIC INFORMATION SYSTEMS	
ID-160	WATER AND ENERGY	
ID-240	INTEGRATED SCIENCE II	
NS-140	INTEGRATED SCIENCE I	
NS-150	INTRODUCTION TO NATURAL SCIENCES [1]	
NS-174	NATURAL SCIENCE FOR ELEMENTARY EDUCATOR	
PHYS-111	GENERAL PHYSICS I	
or PHYS-112	GENERAL PHYSICS II	
PHYS-171	PHYS SCIENCES FOR ELEMENTARY EDUCATORS	
PHYS-205	DESCRIPTIVE ASTRONOMY	
Social & Behavioral Ways of Knowing		
Select one course from two disciplines:		6.00
ANTH-102	CULTURAL ANTHROPOLOGY	
ANTH-120	WORLD PREHISTORY	
ANTH-170	INTRODUCTION TO NATIVE AMERICAN STUDIES	
ECON-201	PRINCIPLES OF MACROECONOMICS	
ECON-202	PRINCIPLES OF MICROECONOMICS	
GEOG-102	INTRODUCTION TO GEOGRAPHY	
HIST-101	WORLD HISTORY I	
HIST-102	WORLD HISTORY II	
HIST-111	UNITED STATES HISTORY I	
HIST-112	UNITED STATES HISTORY II	
HRPT-184	DIVERSITY IN ORGANIZATIONS	
HRPT-185	HUMAN RELATIONS IN ORGANIZATIONS	
POLS-101	AMERICAN NATIONAL GOVERNMENT	
POLS-237	INTERNATIONAL POLITICS	
POLS-285	COMPARATIVE GOVERNMENT	
PSYC-101	INTRODUCTION TO GENERAL PSYCHOLOGY	
PSYC-205	LIFESPAN DEVELOPMENTAL PSYCHOLOGY	
SOC-101	INTRODUCTION TO SOCIOLOGY	
SOC-102	SOCIAL PROBLEMS	
SS-184	DIVERSITY IN ORGANIZATIONS	
SS-185	HUMAN RELATIONS IN ORGANIZATIONS	

Global Perspectives		
Select one of the following:		3.00-4.00
ANTH-102	CULTURAL ANTHROPOLOGY	
ANTH-120	WORLD PREHISTORY	
ANTH-170	INTRODUCTION TO NATIVE AMERICAN STUDIES	
ANTH-360	RACE AND ETHNICITY	
COMM-345	INTERCULTURAL COMMUNICATION	
ENGL-258	INTERNATIONAL LITERATURE	
ENGL-474	NATIVE AMERICAN WRITTEN LITERATURE	
GEOG-102	INTRODUCTION TO GEOGRAPHY	
HIST-101	WORLD HISTORY I	
HIST-102	WORLD HISTORY II	
HIST-111	UNITED STATES HISTORY I	
HIST-112	UNITED STATES HISTORY II	
HRPT-184	DIVERSITY IN ORGANIZATIONS	
ID-300C	ETHICS AND IDENTITY	
KIN-220	SOCIAL-CULTURAL ASPECTS OF SPORTS	
NP-101	NEZ PERCE LANGUAGE AND CULTURE	
NP-102	NEZ PERCE LANGUAGE AND HISTORY	
POLS-285	COMPARATIVE GOVERNMENT	
SOC-101	INTRODUCTION TO SOCIOLOGY	
SPAN-101	ELEMENTARY SPANISH I	
SPAN-102	ELEMENTARY SPANISH II	
SPAN-201	INTERMEDIATE SPANISH I	
SPAN-202	INTERMEDIATE SPANISH II	
SS-184	DIVERSITY IN ORGANIZATIONS	
Integrative Seminar: Ethics & Values		
Select one of the following:		3.00
ID 300A - 300Z (see course descriptions for options)		
ID-301A	HELLS CANYON INSTITUTE	
Foreign/Heritage Language		
Select 16 credits of language if selecting Bachelor of Arts Degree		16.00
Total Credits		**38.00-43.00**

Program Requirements

Code	Title	Credits
Major Courses		
CS-111	COMPUTER SCIENCE 1	4.00
MATH-170	CALCULUS I (Required if not taken as core)	
MATH-175	CALCULUS II	4.00
MATH-254	STATISTICAL METHODS	4.00
MATH-275	CALCULUS III	4.00
MATH-300	INTRODUCTION TO MATHEMATICAL REASONING	3.00
MATH-320	PROBABILITY AND STATISTICS	3.00
MATH-340	LINEAR ALGEBRA	3.00
MATH-460	ABSTRACT ALGEBRA I	3.00
MATH-480	REAL ANALYSIS I	3.00
PHYS-212	PHYSICS FOR SCIENTISTS AND ENGINEERS II	5.00
Electives		
Select 9 credits numbered 200 or above		9.00
Select 4 credits of 300/400 level from the following course prefixes: BIO, BIOF, CHEM, CS, CYB, GIS, MATH, NS, or PHYS.		4.00

Select 34 elective credits	34.00
Total Credits	**83.00**

Sequential Plan of Study

Course	Title	Credits
First Year		
Fall		
ENGL-101	WRITING AND RHETORIC I	3.00
CORE	MATH-143, MATH-147 or MATH-170	3.00-5.00
CORE	Humanistic & Artistic Ways of Knowing	3.00
CORE	Oral Communication	3.00
CORE	Social & Behavioral Ways of Knowing	3.00
SD-107	FIRST YEAR FOUNDATIONS	1.00
	Credits	**16.00-18.00**
Spring		
ENGL-102	WRITING AND RHETORIC II	3.00
CORE	Humanistic & Artistic Ways of Knowing	3.00
MATH-175	CALCULUS II	4.00
MATH-254	STATISTICAL METHODS	4.00
Program Requirement	MATH 200/300/400 Level	3.00
	Credits	**17.00**
Second Year		
Fall		
CORE	Social & Behavioral Ways of Knowing	3.00
CS-111	COMPUTER SCIENCE 1	4.00
PHYS-211	PHYSICS FOR SCIENTISTS AND ENGINEERS I	5.00
	Credits	**12.00**
Spring		
CORE	Scientific Ways of Knowing	3.00
CORE	Global Perspectives	3.00
MATH-275	CALCULUS III	4.00
PHYS-212	PHYSICS FOR SCIENTISTS AND ENGINEERS II	5.00
	Credits	**15.00**
Third Year		
Fall		
CORE	Integrative Seminar: Ethics & Values	3.00
MATH-300	INTRODUCTION TO MATHEMATICAL REASONING	3.00
MATH-320	PROBABILITY AND STATISTICS	3.00
Program Requirement	MATH 200/300/400 Level	3.00
Elective	Elective Credits	4.00
	Credits	**16.00**
Spring		
MATH-340	LINEAR ALGEBRA	3.00
MATH-460	ABSTRACT ALGEBRA I	3.00
Program Requirement	MATH 200/300/400 Level	3.00
Elective	Elective Credits	4.00
Elective	Elective Credits	4.00
	Credits	**17.00**
Fourth Year		
Fall		
Program Requirement	Select MATH or Science course 300/400 Level	4.00
Elective	Elective Credits	4.00

Elective	Elective Credits	4.00
	Credits	**12.00**
Spring		
MATH-480	REAL ANALYSIS I	3.00
Elective	Elective Credits	4.00
Elective	Elective Credits	4.00
Elective	Elective Credits	4.00
	Credits	**15.00**
	Total Credits	**120.00-122.00**

Graduates with a BA/BS in Mathematics go on to obtain careers in a variety of fields:

- Industry
- Market Research
- Education
- Government
- Banking
- Actuarial Science
- Data Science
- Business, Management, Consulting
- Graduate Studies