

# **MATHEMATICS (AS)**

### Associate of Science

Transfer Program Interest Areas: Science, Tech., Engr. and Math

This program leads to careers in teaching, industry, government, actuarial work, or as support for many science disciplines. The mathematics background assumed for entry is four years of high school mathematics through pre-calculus and trigonometry. These entry-level courses, if needed, are also available through the college. Completion of the following courses normally fulfills the first half of bachelor degree requirements in Math. Course selections should be tailored to match requirements defined by intended transfer institutions.

#### **Contact Information:**

Math, Computer Science and Engineering Division Seiter Hall, Room 214 Phone: (208) 665-4521

Program Website (https://www.nic.edu/programs/math/)

## **Program Requirements**

Code	Title	Credits
General Educa	ation Requirements	
GEM 1 - Writter	6	
GEM 2 - Oral Co	3	
GEM 3 - Mathematical Ways of Knowing <sup>1</sup>		
GEM 4 - Scientific Ways of Knowing <sup>2</sup>		
GEM 5 - Humanistic and Artistic Ways of Knowing		
GEM 6 - Social and Behavioral Ways of Knowing		
GEM 7W - Wellness		
Select one of the following:		
GEM 7F - Firs	st Year Experience	
GEM 7I - Inst	itutionally Designated	
Program Requ	uirements	
CS-150	Computer Science I	4
MATH-170	Calculus I 🕸 🔤	4
MATH-175	Analytic Geometry and Calculus II	4
MATH-187	Discrete Mathematics	4
1ATH-275 Analytic Geometry and Calculus III		4
MATH-335	ATH-335 Linear Algebra	
MATH-370	IATH-370 Introductions to Ordinary Differentia Equations	
PHYS-211	Engineering Physics I 🕀 🔤	5
PHYS-212	Engineering Physics II	5
Total Credits		64-67

<sup>1</sup> This General Education Requirement is met by the Program Requirements.

<sup>2</sup> This General Education Requirement is partially met by the Program Requirements.

#### **Course Key**

$\bigcirc$	AAS	•	Ì
GEM	AAS Institutionally Designated	Gateway	Milestone

## **Program Outcomes**

Upon completion of the program, students will be able to:

- 1. Demonstrate fundamental manipulative skills in algebra, geometry, trigonometry, and calculus.
- 2. Formulate, solve, and interpret mathematical problems using appropriate mathematical language and notation.
- 3. Investigate and apply mathematical problems and solutions in a variety of contexts related to science, technology, business and industry, and illustrate these solutions using symbolic, numeric, or graphical methods.
- 4. Communicate mathematical ideas in oral, written, and symbolic forms.
- Assess and interpret complex situations, choose among several potentially appropriate mathematical methods of solution, and present full and clear solutions that include appropriate justification for their reasoning.

In addition to the program outcomes, students will meet the North Idaho College General Education (GEM) Requirements.