

# 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.

Program Website ([https://www.nic.edu/programs/viewprogram.aspx?program\\_id=45](https://www.nic.edu/programs/viewprogram.aspx?program_id=45))

## Program Requirements

Code	Title	Credits
<b>General Education Requirements</b>		
GEM 1 - Written Communication		6
GEM 2 - Oral Communication		3
GEM 3 - Mathematical Ways of Knowing <sup>1</sup>		0
GEM 4 - Scientific Ways of Knowing <sup>2</sup>		4
GEM 5 - Humanistic and Artistic Ways of Knowing		6
GEM 6 - Social and Behavioral Ways of Knowing		6
GEM 7 - Institutionally Designated		4-6
<b>Program Requirements</b>		
CS-150	Computer Science I	4
MATH-170	Analytic Geometry and Calculus I   	4
MATH-175	Analytic Geometry and Calculus II	4
MATH-187	Discrete Mathematics	4
MATH-275	Analytic Geometry and Calculus III	4
MATH-335	Linear Algebra	3
MATH-370	Introductions to Ordinary Differential Equations	3
PHYS-211	Engineering Physics I  	5
PHYS-212	Engineering Physics II	5
Total Credits		65-67

<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



GEM



WCHE



AAS  
Institutionally  
Designated



Gateway



Milestone

## Program Outcomes

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

- Demonstrate fundamental manipulative skills in algebra, geometry, trigonometry, and calculus.
- Formulate, solve, and interpret mathematical problems using appropriate mathematical language and notation.
- 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.
- 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.