

**Degree:** Associate of Science  
**Major:** Mathematics, Physical Science, & Pre-Engineering  
**Division:** Math and Science

Program Code: (029, MPSE.AS)

Minimum Ret/Grad GPA . . . . . 2.00

Minimum Total Hours . . . . . 61-63

## **GENERAL EDUCATION REQUIREMENTS.....37 HOURS**

### **English Composition - 6 hours**

1. ENGL-1113 Freshman Composition I
2. ENGL-1213 Freshman Composition II

### **U.S. History - 3 hours**

1. HIST-1483 Am His 1492-1865 or HIST-1493 Am His 1865-Pr

### **U.S. Government - 3 hours**

1. POS-1113 American Federal Government

### **Biological Science - 4 hours**

1. BOT-1114 or ZOO-1114

### **Physical Science - 5 hours**

1. CHEM-1115<sup>2</sup>

### **Orientation - 1 hour**

1. ORI-1111 Freshman Orientation or ORI-1112 Freshman Orientation

### **Mathematics - 3 hours**

1. MATH-1513 College Algebra (Pre-Calculus)

### **Humanities - 6 hours**

1. HUM-2113, 2223; ART-1113; DRMA-1213; HIST-1113, 1123; MUS-1113; PHIL-1113, 2123; RLED-1113, 1123, 2113; or ENGL literature
2. HUM-2113, 2223; ART-1113; DRMA-1213; HIST-1113, 1123; MUS-1113; PHIL-1113, 2123; RLED-1113, 1123, 2113; or ENGL literature

### **Computer Proficiency – 3 hours**

1. CS-1103 Microcomputer Applications

### **Approved Electives - 3 hours**

1. Elective (PSY, HIST, POS, SOC, ECON, GEOG, SPAN, CHER, CHOC, ART, MUS, DRMA, HUM, PHIL, RLED, SPCH, ENGL literature)

## **MAJOR REQUIREMENTS.....24-26 HOURS**

### **MAJOR CORE COURSES**

#### **Required Courses in Major – 13 hours**

1. MATH-1613 Plane Trigonometry
2. MATH-2265 Analytic Geometry and Calculus I
3. MATH-2275 Analytic Geometry and Calculus II

#### **ELECTIVE COURSES .. (Select Option, Select 3 courses)**

#### **Mathematics Option – 11-13 hours**

1. CHEM-1215 General Chemistry II<sup>3</sup>
2. PHYS-1114 or PHYS-2014<sup>1</sup>
3. PHYS-1214 or PHYS-2114<sup>1</sup>

#### **Pre-Engineering Option – 11-13 hours**

1. PHYS-2014 - Engineering Physics I
2. PHYS-2114 - Engineering Physics II
3. CHEM-1215 General Chemistry II<sup>3</sup>

#### **Physical Science Option (Chemistry & Physics) – 11-13 hours**

1. CHEM-1215 General Chemistry II<sup>3</sup>
2. PHYS-1114 Gen Physics I or PHYS-2014 Eng Physics I<sup>1</sup>
3. PHYS-1214 Gen Physics II or PHYS-2114 Eng Physics II<sup>1</sup>

Notation:

<sup>1</sup>Receiving institution's degree plan should be consulted to see which Physics (General or Engineering) is required.

<sup>2</sup>CHEM-1115 has a co-requisite of MATH-1513, or, MATH-1513 may be taken prior to taking CHEM-1115.

<sup>3</sup>Math Ed majors may need GEOG-2243 Fundamentals of Human Geography, instead of CHEM-1215.

Notes to Advisee:

Sequence: MATH-1513 is prerequisite to MATH-1613 which is prerequisite to MATH-2265 which is prerequisite to MATH-2275.

Fall only courses: MATH-2265, PHYS-1114, PHYS-2014 || Spring only courses: MATH-2275, PHYS-1214, PHYS-2114

### Semester-by-Semester Degree Plan

#### Math, Physical Sciences, and Pre-Engineering, AS (029, MPSE.AS)

*Students are required to complete the following General Education and Major Requirement courses. Students who complete this associate's degree are prepared to transfer and continue their education at a four-year college/university. Students should consult with their academic advisor and refer to the 4-semester-by-semester program planning guide to understand course sequencing.*

Course Number – Course Description	Hours
<b>Freshman Year 1<sup>st</sup> Semester – Fall</b> <input type="checkbox"/> ORI-1111 Freshman Orientation or ORI-1112 Freshman Orientation <input type="checkbox"/> ENGL-1113 Freshman Composition I <input type="checkbox"/> Biological Science - (BOT-1114 or ZOO-1114) <input type="checkbox"/> MATH-1513 College Algebra (Pre-Calculus) <input type="checkbox"/> CS-1103 Microcomputer Applications <input type="checkbox"/> Humanities – (ART, ENGL, HUM, MUS, PHIL, OR RLED) <b>Total:</b>	 1 3 4 3 3 3 17
<b>Freshman Year 2<sup>nd</sup> Semester – Spring</b> <input type="checkbox"/> ENGL-1213 Freshman Composition II <input type="checkbox"/> CHEM-1115 General Chemistry I <input type="checkbox"/> MATH-1613 Plane Trigonometry <input type="checkbox"/> HIST-1483 or 1493 American History <input type="checkbox"/> Elective in General Education: PSY-1113 Intro to Psychology (RECOMMENDED) <b>Total:</b>	 3 5 3 3 3 17
<b>Sophomore Year 1<sup>st</sup> Semester – Fall</b> <input type="checkbox"/> MATH-2265 Analytic Geometry and Calculus I <input type="checkbox"/> Elective in Major Option: CHEM-1215 General Chemistry II <u>or</u> GEOG-2243 Fund. Of Human Geography <sup>1</sup> <input type="checkbox"/> Elective in Major Option: PHYS-1114 General Physics <u>or</u> PHYS-2014 Engineering Physics I <sup>2</sup> <b>Total:</b>	 5 3-5 4 12-14
<b>Sophomore Year 2<sup>nd</sup> Semester – Spring</b> <input type="checkbox"/> POS-1113 American Federal Government <input type="checkbox"/> MATH-2275 Analytic Geometry and Calculus II <input type="checkbox"/> Elective in Major Option: Physics 1214 General Physics II <u>or</u> PHYS-2114 Engineering Physics II <sup>2</sup> <input type="checkbox"/> Humanities – (ART, ENGL, HUM, MUS, PHIL, OR RLED) <b>Total:</b>	 3 5 4 3 15

*Program Requirements: 61-63 cr-hrs, 2.00 GPA*

**Total Hours: 61-63**

<sup>1</sup> Math Ed majors may need GEOG-2243 Fundamentals of Human Geography, instead of CHEM-1215.

<sup>2</sup> Receiving institution's degree plan should be consulted to see which Physics (General or Engineering) is required.

**How to Use this "Semester-by-Semester Degree Plan":** Courses are listed in the order they should be taken and in what term the course should be taken. Enrollment into developmental courses will add to the total credit hour count, and may alter English, math and science enrollment rotations. Students should use this as a guide in pre-enrollment, study the Course Schedule and then visit with an academic advisor.

**Estimated Program Cost:** Students can complete this degree in four semesters (15-17 per semester).

The estimated cost of this program is approximated at: 61 credit-hours x \$146.00 per credit hour = \$ 8,906.00 (Please know that this cost does not include textbooks, supplies, developmental coursework, and other expenses, and is designed as an ESTIMATE only).

Actual program cost is based on Fall 2024 in-state tuition amounts and final costs will vary from this estimate.