

## **Department of Mathematics and Science**

### **Mission**

The mission of the Mathematics and Science Department is to provide a rigorous education that will prepare students for further study and careers involving mathematics, science, and engineering.

### **Vision**

The vision of the Mathematics and Science Department is to offer a group of courses that will provide students with a solid foundation in calculus, chemistry, engineering, and physics, including both theory and real-life experiences. The department aims to prepare students for:

- A seamless transition to another institution with junior standing in mathematics, engineering, or a science-related major
- Entry into the technical work force

### **Goals**

The goals of the Mathematics and Science curricula are to:

- Provide an opportunity for students of all socioeconomic and academic backgrounds to pursue an education in science and/or mathematics
- Develop the student's ability to apply knowledge of calculus, chemistry, engineering, and physics
- Advance the student's analytical thinking and problem solving skills
- Instill in students the ability to use the techniques, skills, materials, modern equipment, and tools necessary for competency in math, science, and engineering fields
- Enhance the student's teamwork and communication skills essential to success in a technical career

### **Associate of Science Degree in Mathematics and Science**

The goals of the curriculum in the Associate of Science Degree in Mathematics and Science are two-fold:

- Prepare the student to transfer to a Baccalaureate program in math, science, engineering, and related fields at another institution
- Provide the student with basic knowledge and skills in mathematics and science to enter the workforce

### ***Completion Requirements***

To meet the academic requirements for graduation with an Associate of Science Degree in Mathematics and Science, the student must complete a minimum of 70 units of college credit, including:

- A minimum of 32 units of General Education to satisfy the GE Breadth requirement
- 4 units of NHU Core Courses
- All required Mathematics and Science Courses (or their equivalent), 34 units
- Attain an overall GPA of "C" (2.0) or higher

## ***Degree Requirements***

- NHU Core Courses ..... 4 units
- General Education Courses ..... 32 units
- Mathematics and Science Courses..... 34 units

**Total = 70 units**

## ***Curriculum***

### **NHU Core Courses (4 units)**

- SCI 100 Computer Applications for Scientists & Engineers (3)
- INF 100 Information Competency (1)

### **General Education Courses (32 units)**

- See the General Education section of this catalog.

### **Mathematics and Science Courses (34 units)**

- CHE 150A General Chemistry for Scientists and Engineers I (5)
- CHE 150B General Chemistry for Scientists and Engineers II (5)
- MAT 121 Calculus and Analytic Geometry II (4)
- MAT 122 Calculus and Analytic Geometry III (4)
- PHY 150A General Physics I (Mechanics) (4)
- PHY 150B General Physics II (Electricity & Magnetism) (4)
- PHY 150C General Physics III (Heat & Light) (4)
- PHY 150D General Physics IV (Atomic Physics) (4)

## **Associate of Science Degree in Mathematics and Science with Engineering Concentration**

The curriculum in the Associate of Science Degree in Mathematics and Science with Engineering Concentration is designed to:

- Prepare the student to enter a four-year university to obtain a Bachelor's degree for professional careers in related fields
- Provide the student with the knowledge and skills to enter the workforce

## ***Completion Requirements***

To meet the academic requirements for graduation with an Associate of Science Degree in Mathematics and Science with Engineering Concentration, the student must complete a minimum of 73 units of college credit, including:

- A minimum of 33 units of General Education to satisfy the GE Breadth requirement
- 4 units of NHU Core Courses
- All required mathematics, science, and engineering courses (or their equivalent), 36 units
- Attain an overall GPA of "C" (2.0) or higher

## ***Degree Requirements***

- NHU Core Courses ..... 4 units
- General Education Courses ..... 33 units
- Mathematics and Science Courses..... 36 units

**Total = 73 units**

## ***Curriculum***

### **NHU Core Courses (4 units)**

- INF 100 Information Competency (1)
- SCI 100 Computer Applications for Scientists & Engineers (3)

### **General Education Courses (33 units)**

- See the General Education section of this catalog.

### **Mathematics and Science Courses (36 units)**

- EGR 100 Introduction to Engineering (3)
- EGR 200 Engineering Mechanics – Statics (2)
- EGR 225 Introduction to Materials (3)
- EGR 250 Introduction to Circuit Analysis (4)
- MAT 121 Calculus and Analytic Geometry II (4)
- MAT 122 Calculus and Analytic Geometry III (4)
- MAT 220 Differential Equations (4)
- PHY 150A General Physics I (Mechanics) (4)
- PHY 150B General Physics II (Electricity & Magnetism) (4)
- PHY 150C General Physics III (Heat & Light) (4)

## ***Program Data***

NHU is committed to providing the information students need to make an informed decision about where they pursue their education. Please follow the link below for detailed information relating to program costs, types of occupations this program may lead to, completion rate, and median loan debt of students who have graduated from this program.

**Occupations** - This program generally prepares students to enter the types of occupations listed below, depending upon the concentration chosen. For more information on these specific occupations, visit [www.onetonline.org](http://www.onetonline.org). In addition to this list, there are other career options that graduates of this program may choose to pursue.

<b>Occupation Name*</b>	<b>Occupation Code*</b>
Natural Sciences Managers	11-9121
Mathematical Science Occupations, All Other	15-2099

*\*The "occupation name" is a general job title. "Occupation code" refers to the US Bureau of Labor Statistics' Standard Occupation Classification.*

**Program Completion** - This program had fewer than 10 graduates during July 1, 2009, to June 30, 2010. As a result, NHU does not disclose this information in order to protect students' privacy per U.S. Department of Education guidelines.

**Program Costs** - The total program costs are the estimated average costs over the duration of the program, excluding any scholarship or tuition reductions, for students completing the program on time. These costs can vary based on the number of units. Typically, tuition and fees are subject to change annually.

- Tuition and Fees ..... \$23,190
- Books and Supplies..... \$3,400
- Room and Board.....Not applicable

**Median Loan Debt** - This program had fewer than 10 graduates during July 1, 2009, to June 30, 2010. As a result, NHU does not disclose this information in order to protect students' privacy per US Department of Education guidelines.