



## Associate in Engineering PRE-ENGINEERING

This program will prepare you for a bachelor's degree in engineering. You will obtain a general background in mathematics and the physical sciences, and will be introduced to the concepts and methods of engineering. This program is not a professional degree and does not prepare you for specific job opportunities. It does, however, provide a broad educational background on which to build a career through additional education or work experience.

### **The program objectives are the following:**

1. Graduates will have demonstrated knowledge and skills to pursue an engineering bachelor program.
2. Graduates will have demonstrated involvement in high technical roles.

### **Completion of this program should result in the following student outcomes:**

1. An ability to apply knowledge of mathematics, science, and engineering.
2. An ability to function on multidisciplinary teams.
3. An ability to communicate effectively.
4. Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
5. A knowledge of contemporary issues.
6. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

## **GENERAL EDUCATION (38 CRS)**

### **Area I: Communications (9)**

- ENG 111 English Composition I (3)
- ENG 116 Technical Writing (3)
- SPCH 130 Public Speaking (3)

### **Area II: Mathematics (11)**

- MATH 145 Introduction to Probability & Statistics (3)
- MATH 162 Calculus I (4)
- MATH 163 Calculus II (4)

### **Area III: Laboratory Science (12)**

- CHEM 121/L General Chemistry with lab (4)
- PHYS 215/L Engineering Physics I with lab (4)
- PHYS 216/L Engineering Physics II with lab (4)

### **Area IV: Social/Behavioral Sciences (3)**

- ECON 201 Microeconomics (3)

### **Area V: Humanities and Fine Arts (3)**

- PHIL 220 Ethics (3)

### **Health, Physical Education & Recreation (1 cr)**

- Electives (1)

## **PROGRAM REQUIREMENTS (27 CRS)**

### **Business (3)**

- BA Lower-Division Elective (3)

**Engineering (24)**

- EECE 152L Computer Programming I (4)
- EECE 203L Circuit Analysis I (4)
- EECE 231 Intermediate Programming I (3)
- EECE 238L Computer Logic Design (4)
- ME 160L General Engineering Design I (3)
- ME 202 Engineering Statics (3)
- ME 260L Engineering Design II (3)

**TOTAL CREDITS        66**

**SUGGESTED SEQUENCE OF COURSES****First Semester (17 crs)**

- ENG 111 English Composition I (3)
- MATH 162 Calculus I (4)
- MATH 145 Introduction to Probability and Statistics (3)
- ECON 201 Microeconomics (3)
- CHEM 121/L General Chemistry I (4)

**Second Semester (15 Ccrs)**

- ENG 116 Technical Writing (3)
- MATH 162 Calculus II (4)
- PHYS 215/L Engineering Physics I with Lab (4)
- ME 160L Gen. Eng. Design I (3)
- HPER Elective (1)

**Third Semester (17 crs)**

- SPCH 130 Public Speaking (3)
- PHYS 216/L Engineering Physics II with Lab (4)
- ME 260L Engineering Design II (3)
- EECE 152/L Computer Programming I (4)
- BA Elective (3)

**Fourth Semester (17 crs)**

- EECE 238/L Computer Logic Design (4)
- EECE 203L Circuit Analysis I (4)
- PHIL 220 Ethics (3)
- ME 202 Engineering Statics (3)
- EECE 231 Intermediate Programming I (3)