

# The Charles V. Schaefer, Jr. School of Engineering

**GEORGE P. KORFIATIS, DEAN**  
**KEITH SHEPPARD, ASSOCIATE DEAN**  
**DINESH VERMA, ASSOCIATE DEAN**  
**SOURAN MANOOCHERI, ASSOCIATE DEAN**

## **Bachelor of Engineering**

The Degree of Bachelor of Engineering (BE) is offered in the following nine programs. The areas of focus can be achieved by selecting appropriate elective courses.

### **Biomedical Engineering Program**

### **Chemical Engineering Program\***

Areas of Focus:

- Chemical Engineering
- Biochemical Engineering
- Materials Engineering

### **Civil Engineering Program\***

Areas of Focus:

- Construction Management
- Water Resources Engineering
- Structural Engineering
- Environmental Engineering
- Ocean Engineering
- Geotechnical Engineering

### **Computer Engineering Program\***

Areas of Focus:

- Computer Systems and Architectures
- Data Networks and Information Systems
- Software/Software Engineering
- Digital Systems

### **Electrical Engineering Program\***

Areas of Focus:

- Telecommunications
- Data Networks
- Signal Processing
- Electronic Circuits

### **Engineering Program\***

**Concentrations:**

- Biomedical Engineering
- Information Systems Engineering
- Naval Engineering

### **Engineering Management Program\***

Areas of Focus:

- Information Systems Management
- Systems Engineering

### **Environmental Engineering Program\***

Areas of Focus:  
Groundwater Pollution  
Environmental Hydrodynamics  
Biological and Physicochemical Processes

### **Mechanical Engineering Program\***

Areas of Focus:  
Design and Manufacturing  
Energy Systems  
Machine Systems  
Robotics

\* Note: The asterisk indicates programs which are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 — Tel (410) 347-7700

### **Minors**

Biochemical Engineering  
Chemical Engineering  
Coastal Engineering  
Computer Engineering  
Electrical Engineering  
Engineering Management  
Environmental Engineering  
Structural Engineering  
Water Resources

### **Master of Engineering**

#### **Chemical Engineering**

— Chemical Engineering  
— Polymer Engineering

#### **Civil Engineering**

— Geotechnical/Geoenvironmental Engineering  
— Structural Engineering  
— Water Resources Engineering  
— Construction Management (Interdisciplinary)

#### **Computer Engineering**

— Computer Systems  
— Data Communications and Networks  
— Digital Systems Design  
— Image Processing and Multimedia  
— Software Engineering

#### **Electrical Engineering**

— Computer Architecture and Digital System Design  
— Microelectronics and Photonics Science and Technology (Interdisciplinary)  
— Signal Processing for Communications  
— Telecommunications Engineering

#### **Engineering Management**

— Systems Engineering

#### **Environmental Engineering**

— Environmental Process  
— Groundwater and Soil Pollution Control

— Inland and Coastal Environmental Hydrodynamics

**Integrated Product Development**

- Armament Engineering
- Electrical and Computer Engineering
- Manufacturing Technologies
- Systems Reliability and Design

**Materials Engineering**

- Microelectronics and Photonics Science and Technology (Interdisciplinary)

**Mechanical Engineering**

- Manufacturing Systems

**Networked Information Systems**

- Data Communication Networks
- Information Networks
- Multimedia Information Systems
- Multimedia Technologies
- Network Systems Technologies
- Networked Information Systems
- Networked Information Systems: Business Practices
- Secure Network Systems

**Ocean Engineering**

- Coastal Engineering
- Hydrodynamics
- Naval Architecture
- Oceanography

**Systems Engineering**

- Agile Systems Engineering
- Systems Design and Operational Effectiveness
- Systems Engineering and Architecturing Systems Supportability
- Engineering Value Chain Enterprise Systems

**Master of Science**

**Construction Management (Interdisciplinary)**

**Maritime Systems**

- Environmental Engineering
- Structural Engineering
- Management
- Marine Transportation

**Engineer**

Chemical Engineer  
Civil Engineer  
Computer Engineer  
Electrical Engineer  
Mechanical Engineer

**Doctor of Philosophy**

Chemical Engineering  
Civil Engineering  
Computer Engineering  
Electrical Engineering  
Engineering Management  
Environmental Engineering  
Materials Engineering

Mechanical Engineering  
Ocean Engineering  
Systems Engineering