

## **Curriculum**

### **Major**

1. Total Credits: 69 or more
2. Required Courses for major: 27 credits
3. Elective Courses for Major: 42 credits or more

### **Double Major**

1. Total Credits: 39 or more
2. Required Courses for major: 15 credits
3. Elective Courses for Major: 24 credits or more

### **Minor**

1. Total Credits: 21 or more from Civil and Environmental Engineering.
2. Recommended Courses: Fluid Mechanics And Practice, Applied Mechanics and Lab 2, Environmental Engineering and Lab, Soil Mechanics, Structural Mechanics

## **1-1 Spring Semester**

### **Required**

- Freshmen Seminar A
- Writing and Presentation for Problem-solving
- The Universe, Nature and Mankind
- Basics of Software and Coding
- Calculus 1
- Physics 1
- Chemistry 1

## **1-2 Fall Semester**

### **Required**

- Freshmen Seminar B
- Western Philosophy: Issue and Discussion
- College English
- Application of Advanced Programming Language
- Calculus 2
- Introduction to Creative Design

## **2-1 Spring Semester**

### **Required**

- Artificial Intelligence and Big Data
- Mathematics for Engineers 1
- Environmental Engineering and Lab
- Fluid mechanics and Practice
- Applied Mechanics and Lab 1

## **2-2 Fall Semester**

### **Required**

- Advanced Artificial Intelligence
- Mathematics for Engineers 2
- Applied Mechanics and Lab 2
- Soil Mechanics

### **Elective**

- Numerical Analysis in Civil and Environmental Engineering
- Hydraulics

### **3-1 Spring Semester**

Required

- Concrete Engineering
- Structural Engineering

Elective

- Disaster Mitigation Engineering
- Steel structural engineering
- Water treatment engineering
- Surveying

### **3-2 Fall Semester**

Elective

- Constructing Management
- Hydrology
- Concrete Structures Design
- Water Reclamation and Waste Recycle
- Foundation Engineering
- Composite Structure Design

### **4-1 Spring Semester**

Elective

- Independent Study and Career Skills 1
- Highway Engineering
- Water Resource Engineering
- Autocad
- Earthquake Engineering
- Coastal and Harbor Engineering

### **4-2 Fall Semester**

Required

- Capstone Design

Elective

- Independent Study and Career Skills 2
- Bridge Design
- Measurement & Testing
- Laboratory Testing of Construction Material
- Renewable Energy