

# CIVIL ENGINEERING

BACHELOR OF SCIENCE

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING



## 4-YEAR ADVISING SCHEME

Students seeking the Bachelor of Science in Civil Engineering must complete a minimum of 120 credit hours comprised of core courses in engineering (66 credits), science and mathematics courses (35 credits), free electives (3 credits), social science and humanities courses (6 credits), an African American Studies elective (3 credits), and general curriculum courses (7 credits).

### FALL SEMESTER 1

| Number               | Course Title                   | Credits   |
|----------------------|--------------------------------|-----------|
| EGPP 101             | Intro to Engineering           | 2         |
| MATH 156             | Calculus I                     | 4         |
| ENGW--               | English First-Year Writing (1) | 3         |
| CHEM 003             | General Chemistry I Lecture    | 4         |
| CHEM 005             | General Chemistry I Lab        | 1         |
| <b>Total Credits</b> |                                | <b>14</b> |

### SPRING SEMESTER 1

| Number               | Course Title                                | Credits   |
|----------------------|---|-----------|
| CIEG 104             | Civil Engineering Software and Design       | 3         |
| MATH 157             | Calculus II                                 | 4         |
| ENGW--               | English First-Year Writing (2)              | 3         |
| PHYS 013             | Physics I Lecture (Science and Engineering) | 3         |
| PHYS 023             | Physics I Lab (Science and Engineering)     | 1         |
| --                   | ROTC/Physical Education                     | 1         |
| <b>Total Credits</b> |   | <b>15</b> |

### FALL SEMESTER 2

| Number               | Course Title                                 | Credits   |
|----------------------|--|-----------|
| --                   | Basic Science Elective                       | 3         |
| CIEG 202             | Statics                                      | 3         |
| MATH 158             | Calculus III                                 | 4         |
| PHYS 014             | Physics II Lecture (Science and Engineering) | 3         |
| PHYS 024             | Physics II Lab (Science and Engineering)     | 1         |
| <b>Total Credits</b> |  | <b>14</b> |

### SPRING SEMESTER 2

| Number               | Course Title               | Credits   |
|----------------------|----------------------------|-----------|
| --                   | Humanities                 | 3         |
| CIEG 302             | Dynamics                   | 3         |
| CIEG 351             | Probability and Statistics | 3         |
| MATH 159             | Differential Equations     | 4         |
| MEEG 209             | Materials Science          | 3         |
| <b>Total Credits</b> |                            | <b>16</b> |

### FALL SEMESTER 3

| Number               | Course Title                   | Credits   |
|----------------------|--------------------------------|-----------|
| CIEG 207             | Environmental Engineering I    | 3         |
| CIEG 301             | Mechanics of Materials Lecture | 3         |
| CIEG 303             | Mechanics of Materials Lab     | 1         |
| CIEG 311             | Fluid Mechanics Lecture        | 3         |
| CIEG 313             | Fluid Mechanics Lab            | 1         |
| --                   | Social Science Elective        | 3         |
| --                   | Free Elective                  | 3         |
| <b>Total Credits</b> |                                | <b>17</b> |

### SPRING SEMESTER 3

| Number               | Course Title                | Credits   |
|----------------------|-----------------------------|-----------|
| CIEG 314             | Basic Structural Analysis   | 3         |
| CIEG 354             | Engineering Economics       | 3         |
| CIEG 352             | Water Resources Engineering | 3         |
| CIEG 416             | Transportation Engineering  | 3         |
| CIEG 434             | Soil Mechanics Lecture      | 3         |
| CIEG 438             | Soil Mechanics Lab          | 1         |
| <b>Total Credits</b> |                             | <b>16</b> |

### FALL SEMESTER 4

| Number               | Course Title                   | Credits   |
|----------------------|--------------------------------|-----------|
| CIEG 439             | Senior Design I                | 2         |
| CIEG--               | CIEG Discipline Elective 1     | 3         |
| CIEG--               | CIEG Discipline Elective 2     | 3         |
| CIEG--               | CIEG Discipline Elective 3     | 3         |
| CIEG 464             | Engineering Project Management | 3         |
| <b>Total Credits</b> |                                | <b>14</b> |

### SPRING SEMESTER 4

| Number               | Course Title                      | Credits   |
|----------------------|-----------------------------------|-----------|
| CIEG 441             | Senior Design II                  | 2         |
| CIEG--               | CIEG Discipline Elective 4        | 3         |
| --                   | Technical Elective 1              | 3         |
| --                   | Technical Elective 2              | 3         |
| --                   | African American Studies Elective | 3         |
| <b>Total Credits</b> |                                   | <b>14</b> |

**Total Credits: 120**

#### More Information :

The 4-Year Advising Scheme is a guide for students to successfully complete the program in four years of study. It is not a substitution for academic advising. Students are expected to check-in with their academic advisor every semester.

The prerequisite structure for courses and technical elective options are available in the program handbook.

Courses may not be offered in semesters in which they do not appear listed on the scheme.