## ABET ACCREDITATION

The Department of Civil, Architectural, and Environmental Engineering offers three undergraduate Bachelor of Science degree programs: B.S. in Civil Engineering (CE), B.S. in Architectural Engineering (ARCE), and B.S. in Engineering Management (EMGT).

Both the B.S. in Civil Engineering (CE) and Architectural Engineering (ARCE) programs are accredited by the Engineering Accreditation Commission of ABET Inc., <http://www.abet.org>.

The Program Educational Objectives (PEOs) and Student Outcomes (SOs) for each program are provided below, along with enrollment and graduation data for the last five years.

### Program Educational Objectives (PEOs) are broad statements that describe the career and professional accomplishments that the program is preparing graduates to achieve.

Student Outcomes (SOs) describe what students are expected to know and be able to do by the time of graduation. These relate to the skills, knowledge and behaviors that students acquire as they progress through the program.

## BACHELOR OF SCIENCE IN CIVIL ENGINEERING (CE)

### PROGRAM EDUCATIONAL OBJECTIVES (PEO)

* Graduates will meet or exceed the expectations of their employers.
* Graduates will continue to develop professionally by pursuing professional licensure and reach positions of leadership in a wide range of professional settings including consulting firms, industry, academia, or government.
* Graduates will pursue graduate studies in engineering and/or post-baccalaureate education in a professional degree program.

### STUDENT OUTCOMES (SO)

Graduates of the CE undergraduate program will have:

1. an ability to apply knowledge of mathematics, science, and engineering
2. an ability to design and conduct experiments, as well as to analyze and interpret data
3. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
4. an ability to function on multidisciplinary teams
5. an ability to identify, formulate, and solve engineering problems
6. an understanding of professional and ethical responsibility
7. an ability to communicate effectively
8. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
9. a recognition of the need for, and an ability to engage in life-long learning
10. a knowledge of contemporary issues
11. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

**ENROLLMENT AND GRADUATION DATA FOR THE CE PROGRAM**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 2019-20 | 2018-19 | 2017-18 | 2016-17 | 2015-16 |
| Enrolled | 131 | 146 | 134 | 149 | 180 |
| Graduated |  | 43 | 24 | 39 | 41 |

## BACHELOR OF SCIENCE IN ARCHITECTUAL ENGINEERING (ARCE)

### PROGRAM educational OBJECTIVES (PEO)

* Graduates will meet or exceed the expectations of their employers.
* Graduates will continue to develop professionally by pursuing professional licensure and reach positions of leadership in a wide range of professional settings including consulting firms, industry, academia, or government.
* Graduates will pursue graduate studies in engineering and/or post-baccalaureate education in a professional degree program.

### STUDENT OUTCOMES (SO)

Graduates of the ARCE undergraduate program will have:

1. an ability to apply knowledge of mathematics, science, and engineering
2. an ability to design and conduct experiments, as well as to analyze and interpret data
3. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
4. an ability to function on multidisciplinary teams
5. an ability to identify, formulate, and solve engineering problems
6. an understanding of professional and ethical responsibility
7. an ability to communicate effectively
8. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
9. a recognition of the need for, and an ability to engage in life-long learning
10. a knowledge of contemporary issues
11. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

**ENROLLMENT AND GRADUATION DATA FOR THE ARCE PROGRAM**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 2019-20 | 2018-19 | 2017-18 | 2016-17 | 2015-16 |
| Enrolled | 68 | 68 | 56 | 53 | 60 |
| Graduated |  | 18 | 4 | 9 | 14 |

## MAPPING TO 2019-2020 ABET ENGINEERING CRITERIA

## For both programs, the a-k SO map to the 2019-2020 ABET engineering criteria (1) through (7) SO as follows:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Student Outcome | (1) Math/Science | (2)Design | (3)Communication | (4)Ethics | (5)Teams | (6)Experiments | (7)Learning |
| a) Math/science | • |  |  |  |  |  |  |
| b) Experiments/analysis |  |  |  |  |  | • |  |
| c) Design |  | • |  |  |  |  |  |
| d) Function on teams |  |  |  |  | • |  |  |
| e) Problem solving | • |  |  |  |  |  |  |
| f) Ethics |  |  |  | • |  |  |  |
| g) Communication |  |  | • |  |  |  |  |
| h) Broad education |  |  |  | • |  |  |  |
| i) Life-long learning |  |  |  |  |  |  | • |
| j) Contemporary issues |  |  |  | • |  |  |  |
| k) Engineering tools | • | • |  |  |  | • |  |