

# Annual Academic Assessment Report

## Bachelor of Science in Chemical Engineering (BSCHE)

AY 2022-2023

### **Student Learning Outcomes:**

At the time of graduation, students obtain the following outcomes in support of the program's educational objective to prepare the students to enter the professional practice of engineering:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. an ability to apply the engineering design process to produce solutions that meet specified needs with consideration for public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. an ability to communicate effectively with a range of audiences.
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgement to draw conclusions.
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

### **Assessment and Evaluation: AY 2021-2022**

The faculty of the Ralph E. Martin Department of Chemical Engineering evaluated Student Learning Outcome assessment data at its annual faculty meeting, held August 16, 2023. The results of the analysis include the following:

- **Outcome 1:**
  - The ABET Student Outcome Self-Assessment Summary and Faculty Course Evaluations for Fall 2022 and Spring 2023 identified no problems in the students' ability to meet this Student Outcome (SO) at the desired target level. Student confidence in this area increased as the students matriculated through the curriculum.
- **Outcome 2:**
  - The ABET Student Outcome Self-Assessment Summary and Faculty Course Evaluations for Fall 2022 and Spring 2023 identified no problems in the students' ability to meet this SO at the desired target level. Consideration of all factors was included in the assessment. Student confidence in this area increased as the students matriculated through the curriculum.
  - Student performance quizzes from CHEG 3233 and CHEG 4443 also demonstrated competence in this area.

- **Outcome 3:**
  - The ABET Student Outcome Self-Assessment Summary and Faculty Course Evaluations for Fall 2022 and Spring 2023 identified no problems in the students' ability to meet this SO at the desired target level. Audiences have been defined by the program as peers and the public. Student confidence in this area increased as the students matriculated through the curriculum.
  - Student performance quizzes from CHEG 2113 and CHEG 4443 also demonstrated competence in this area.
- **Outcome 4:**
  - The ABET Student Outcome Self-Assessment Summary and Faculty Course Evaluations for Fall 2022 and Spring 2023 identified no problems in the students' ability to meet this SO at the desired target level. All contexts were included in the assessment. Student confidence in this area increased as the students matriculated through the curriculum.
  - Student performance quizzes from CHEG 2113, CHEG 3233 and CHEG 4332 also demonstrated competence in this area.
- **Outcome 5:**
  - The ABET Student Outcome Self-Assessment Summary and Faculty Course Evaluations for Fall 2022 and Spring 2023 identified no problems in the students' ability to meet this SO at the desired target level.. Student confidence in this area increased as the students matriculated through the curriculum.
  - Student performance quizzes from CHEG 3233, CHEG 4332 and CHEG 4443 also demonstrated competence in this area.
- **Outcome 6:**
  - The ABET Student Outcome Self-Assessment Summary and Faculty Course Evaluations for Fall 2022 and Spring 2023 identified no problems in the students' ability to meet this SO at the desired target level.. Student confidence in this area increased as the students matriculated through the curriculum.
  - Student performance quizzes from CHEG 3233 and CHEG 4332 also demonstrated competence in this area.
- **Outcome 7:**
  - The ABET Student Outcome Self-Assessment Summary and Faculty Course Evaluations for Fall 2022 and Spring 2023 identified no problems in the students' ability to meet this SO at the desired target level.. Student confidence in this area increased as the students matriculated through the curriculum.
  - Student performance quizzes from CHEG 2113, CHEG 4332 and CHEG 4443 also demonstrated competence in this area.

### **Changes to the Degree Program – Planned or Considered**

There are no changes to the BSChE degree program planned or considered based on the assessment and evaluation process.

### **Changes to the Assessment Process – Planned or Completed**

There are no changes to the BSChE assessment process planned or considered based on the assessment and evaluation process.