Chemical Engineering, Graduate, PhD, Tampa

Assessment Cycle: 2019 Reporting

Overall Review: Report Approved   COMPLIANT

Mission Statement

The mission of the Department of Chemical and Biomedical Engineering is to prepare graduates with fundamental knowledge and contemporary skills for the development, economic design, and safe operation of chemical and biological systems, processes,products, and methods in a manner compatible with societal values.

Goal 1: Discipline-Specific Knowledge

Discipline Specific Knowledge and Skills

1a. Student Learning Outcome Statement   *Audit Review: AC*

- Graduates in this program in Chemical Engineering will demonstrate ability to analyze complex and multi-faceted data that arise in chemical engineering systems and make sound technical judgments regarding its

validity and use.

1b. Method of Assessment   *Audit Review: AC*

Each student in the program will be asked to give an dissertation research report to a faculty committee. The oral report will be evaluated by a faculty committee consisting of at least 5 members who will rate it using the following rubric. Program assessment will be done by a faculty committee who will review the evaluations. Wide disparities in ratings of any single report will be discussed with the evaluators. The assessment will focus on areas that need improvement.

To ensure reliability of the assessment instrument for this outcome, the members of the Departmental Graduate Committee reviews the rubric periodically and recommends/revisions if necessary.

- Rating of 5 (Excellent): This technical report was of high quality with excellent slides and clearly articulated ideas and commentary on the results obtained. The questions were answered in a clear and succinct manner. There were no identifiable flaws in the technical oral report.

- Rating of 4 (Very Good): The report delivered was of very good quality. The student was able to answer all questions correctly and to the point. Only minor flaws were noted in the presentation.
- Rating of 3 (Good): The report was of good quality. Most questions were answered correctly. There was clear demonstration of command of the subject and the topic was discussed in depth.
- Rating of 2(Fair): The report showed some weaknesses in oral presentation skills. The slides used were of low quality and there were clearly identifiable areas for improvement.
- Rating of 1 (Poor): The report showed a lack of preparation in oral presentation skills and a lack of understanding of the subject being discussed.

1c. Performance Targets   *Audit Review: AC*

It is the expectation that 80% of the students will earn a rating of 3.0 or more and that at least 20% will get a rating of 4.0 or more.

1d. Assessment Results   *Audit Review: AC*

After accounting for fall, summer, and spring 2019 results, a total of 10 students were assessed. The updated results submitted in the this revised report show that 100% of students scored above a rating of 3 and 80% scored a rating of 4 or higher.

1e. Use of Assessment Results   *Audit Review: AC*

The departmental faculty assessment looked at the results and no wide disparities among the ratings of a student were seen. Since the students were meeting the outcome, it was proposed that in addition to a student's ability to analyze complex and multi-faceted data, it is also important to assess their presentation skills.   Therefore, for the next cycle, the assessment committee decided to define a student learning outcome: "Graduates in the

chemical engineering doctoral program will be able to give effective oral technical presentations that demonstrate clear delivery of scientific and engineering research, design and use of high quality visuals to support the students' point of view, and exhibit a students' proficiency in answering questions."

Plan Review Comments

Report Review Comments

Assessment Methods

Course Related Assessments

Cumulative Assessments

Comprehensive Exam

Faculty Committee Evaluation of Dissertation, Thesis or Treatise

Performance Related Assessments

External-course Assessments

Standard Assessments