

ANNUAL PROGRAM REPORT

College	College of Science
Department	Chemistry and Biochemistry
Program	BS/BA Chemistry

Instrument: Submitted work (laboratory reports) by students.

Sampling Procedure: All submitted work.

Sampling Characteristics: Written products (lab reports).

Data Collection: The data was collected in Fall 2022 and Spring 2023.

Data Analysis: The submitted work was assessed for learning mastery by the instructor-in-charge using the university ILO Written Communication Rubric (ILO 2).

MS Program: PLO 1 was assessed in the academic year 2022–2023. The data was collected from Chem 631 (Graduate Organic Chemistry) in Spring 2023.

Instrument: Embedded final exam questions that map to the course SLOs.

Sampling Procedure: All submitted final exams.

Sampling Characteristics: Written products (final exam).

Data Collection: The data was collected in Spring 2023.

Data Analysis: The submitted work was assessed for learning mastery by the instructor-in-charge.

C. Summary of Assessment Results

Main Findings

For both courses (Chem 443 and Chem420), the submitted work was evaluated by the course instructors using the university ILO Written Communication Rubric that has 4 components and each component is scored from 1–4 (4 is the highest).

- i. **Chem 443 (Biochemistry Laboratory I):** learning mastery was assessed based on the submitted written laboratory reports that reflected their mastery of scientific communication. A total of 12 lab reports submitted by Biochemistry BS and BA candidates were assessed. The table below shows the number of submitted work that obtain a score of 3 or higher in each criterion on the ILO Written Communication Rubric.

Criteria	# of students that scored 3 or 4	# of students that scored 4	% of students with score 3 and above
Purpose, thesis or controlling idea(s)	11		

reports submitted by Chemistry BS candidates were assessed. The table below shows the number of submitted work that obtain a score of 3 or higher in each criterion on the ILO Written Communication Rubric.

Criteria	# of students that scored 3 or 4	# of students that scored 4	% of students with score 3 and above
Purpose, thesis or controlling idea(s)	6 out of 8	3 out of 8	75%
Organization, cohesion, and clarity	7 out of 8	3 out of 8	88%
Presentation of supporting ideas	5 out of 8	3 out of 8	63%
Language and Mechanics	7 out of 8	3 out of 8	88%

- iii. **Chem 320 (Bioanalytical and Forensic Instrumentation):** learning mastery was assessed based on the submitted written laboratory reports that reflected their mastery of scientific communication. A total of 2 lab reports submitted by Chemistry BA candidates were assessed. The table below shows the number of submitted work that obtain a score of 3 or higher in each criterion on the ILO Written Communication Rubric.

Criteria

3. describe different types of reactive intermediates and their importance in reactions

D. Assessment Plan for Next Year

The BA/BS assessment plan for the academic year 2023–2024 is PLO 1 which aligns with ILO 6 (Specialized Discipline). The data will be collected in Chem 332 (Organic Chemistry II), Chem 0 g0 GnETQq0.00000912