UNIVERSITY OF ARKANSAS
PULASKI TECH

Course-Level Assessment Report
Course: CHEM 1104
Academic Year: 2021-2022

Due to Chair/Program Director and Faculty Assessment Chair by September 15

1. Name of course: CHEM 1104 Fundamentals of Chemistry II Lab

2. Name of individual(s) compiling report: *George Lauster*

3. Date of submission: *2022 Sept 15*

4. Academic year: *2021-2022*

Course-Level Learning Outcomes

What are the Course-Level Outcomes (CLOs)?

Upon completion of this course,

1. Students will use instruments, reactants, and techniques correctly and safely.
2. Students will correctly communicate structural information about compounds, using correct nomenclature and properly built models.
3. Students will apply chemistry concepts to reactions and other processes in the lab setting.

Which CLOs were addressed for the academic year?

Number 2: Students will correctly communicate structural information about compounds, using correct nomenclature and properly built models.

Specifically, students would be able to communicate correct IUPAC name, molecular formula, total valence electrons, and draw uncondensed structure, condensed structure, and line formula. They were to use a branched alkane unique to each student. This complemented similar assessment with models in CHEM 1304, using alkene compounds.

Which CLOs are being addressed in your assessment plan in the upcoming academic year?

Number 3: Students will apply chemistry concepts to reactions and other processes in the lab setting.

Specifically recognizing, writing and drawing reactions common in biochemistry labs we conduct: hydration, dehydration, and hydrogenation.

How does this report connect or map to program-level or institutional-level outcomes?

(ILO link: https://uaptc.edu/college-academics/resources/student-learning-outcomes
PLO list will vary depending on your Program.)

These CLOs fall under number ILO 5

5. Use quantitative methods to solve problems. (Quantitative Reasoning)

For each Course Level Outcome assessed this academic year, please complete the chart below, providing the assessment data for both fall and spring, and then a total for the academic year.

Assessment Methods- How did you assess student learning (define direct assessment methods used) in relation to the course level outcome being reported? *Note: If more than one assessment method was used, you may insert an additional row.*	We use a direct method of a specific assignment given to all students in all sections. The course involves a great deal of three-dimensional thinking, so often these will involve use of molecular modelling kits or two-dimensional drawings. Students posted in a discussion information on a unique branched alkane not covered in the lab already. An example was provided. 1) Correct IUPAC name. 2) Molecular formula. 3) Total number of valence electrons in the molecule. 4) Attach a photo.	
Were indirect assessment methods also used to assess students? If 'yes', please describe the method used.		***No***
How do you define success for an individual student on the CLO assessment assignment or measure?	*Student scores 70% on the questions linked to the CLO*	

How do you define success for the course level outcome? What is the benchmark for the Course Level Outcome?	*70% of students in the course achieve success on the CLO assessment assignment or measure*	
How many students completed the assessment, and how many were successful?	***Fall*** *Not offered*	***Spring*** *2 students assessed* *2 successful* *(100% success rate)*
Academic Year Total (add the numbers from Fall and Spring)	*2 students assessed* *2 successful* *(100% success rate)*	
Was the benchmark/goal for this academic year met?	***Yes***	
Were standardized rubrics, tests, or checklists used?	***Yes***	

What is your analysis of the findings?

Student composition of the course is often small, and particularly small due to COVID outbreak. Two students dropped after getting COVID the first two weeks.

Student work, here and elsewhere, indicates the current course structure is adequately preparing students for CLO 2.

What is the action plan for the upcoming academic year? Explain.

Given the performance of students on this assessment, we will build on it by moving on to CLO 3, chemical reactions. This required students to adequately grasp the structural terminology and shapes covered by the assessment above.

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