UNIVERSITY OF ARKANSAS
PULASKI TECH

Course-Level Assessment Report
Course: ____CHEM 1105__
Academic Year: _2020-2021_____

Due to Chair/Program Director and Faculty Assessment Chair by September 4

1. Name of course: Chem 1105 General Chemistry 1 Lab

2. Name of individual(s) compiling report: Dr Michael Julian

3. Date of submission: 9/30/2021

4. Academic year: Fall 2020 - Spring 2021

Course-Level Learning Outcomes

1. What are the Course-Level Outcomes (CLOs)?

GC1CLO 1 – Math Concepts & Chemical Nomenclature – Students will utilize measurable properties and apply Metric/American conversions using correct significant figures and scientific notation during calculations. Students will apply the rules of chemical nomenclature as it pertains to bond type.
GC1CLO 2 – Chemical Reactions & Stoichiometry – Students will utilize all aspects of the chemical reaction and apply stoichiometric calculations to predict theoretical yield.
GC1CLO 3 – Gas Behavior & Thermal Energy – Students will utilize all aspects of gas behavior and apply the gas laws to predict amounts involved in gas samples. Students will apply stoichiometry to predict heat flow amounts in a reaction.
GC1CLO 4 – Chemical Bonding & 3D Chemical Structure – Students will predict the 3D-Structure of molecules and ions and describe the bonding within.

2. Which CLOs were addressed for the academic year?

CLO 1

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

CLO 1

4. Explain the assessment cycle.

During the previous spring semester, professors meet to discuss the CLOs and assessment needs for the next fall. At the beginning of the fall semester, faculty meet prior to the start of classes to finalize changes in the assessment methods. As the lab data is collected, the totals are shared via email among the faculty. The faculty then meet to discuss the results and any problems in the methods or rubrics. At the end of the semester, results are distributed.

Prior to the start of the spring semester, the faculty meet again to discuss the previous findings and address any changes that are needed.

5. What are the assessment methods? Are they direct or indirect?

The students' performance on the identification of an unknown liquid is analyzed. This gives a direct measurement of their performance for CLO 1.

6. What are the assessment goal(s), including benchmarks?

We should have 70% of students achieve "Exceeds Expectations" or "Meets Expectations" for our lab rubric.

7. What were the findings for the academic year?

Fall 2020: 27 data points, 70.4% exceeding or meeting expectations.
Spring 2021: 22 data points 72.7% exceeding or meeting expectations.

8. What is your analysis of the findings?

This academic year was particularly difficult to gather data because of the Covid-19 pandemic, loss of professors mid semester, and loss of professors at the end of the semester. For instance, some sections had 3 different instructors throughout the semester in fall 2020. Most of the students managed to meet or exceed our expectations for the unknown ID lab. We also struggled with gathering the data using electronic submissions instead of paper copies.

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

The method of collecting data will be addressed during a future meeting with the assessment team. The rubric used matches the one used in Fundamental Chemistry 1 Lab but needs a little fine tuning to be easier to understand.