

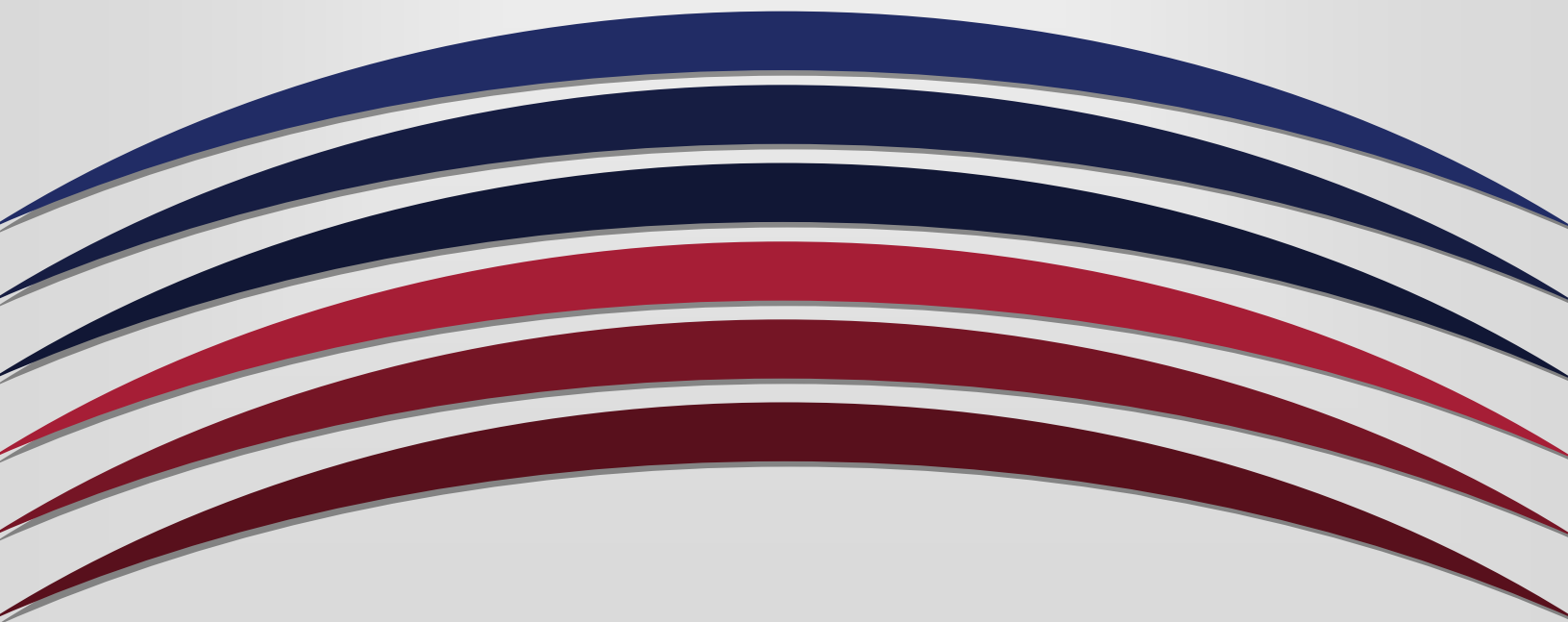
UNIVERSITY OF ARKANSAS
PULASKI TECH

Course-Level Assessment Report

Course: CHEM 1303

Academic Year: 2022-2023

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



1. Name of course: CHEM 1303 Fundamentals of Chemistry I
2. Name of individual(s) compiling report: George Lauster
3. Date of submission: 2023 Sept 22 (deadline extended by assessment lead)
4. Academic year: 2022-2023

Course-Level Learning Outcomes

What are the Course-Level Outcomes (CLOs)?

Upon completion of this course, the student should be able to:

1. Student will describe measurable properties of matter by applying the metric and American systems of measurement, correct significant figures and scientific notation.
2. Student will apply the knowledge of the structure of the atoms and compounds, by utilizing the periodic table, different types of bonds, and nomenclature.
3. Student will apply the knowledge of thermodynamics, activation energy, equilibrium and stoichiometric quantities to a variety of reaction types.
4. Student will apply the chemical principles of compounds and reactions, using correct terminology and concepts, as related to gases, solutions, acids and bases, and radioactive materials.

Which CLOs were addressed for the academic year?

Faculty conducted assessment of CLO 2, focusing on ability to determine concentration from given data and chosen formula. These were eight questions given as part of the final comprehensive exam.

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

We are going to continue working on these since the success rate was below 70% for the year, and this is a crucial skill in many of professional programs are students are headed. We will create a separate assessment tool to discern which skills are the issue with students: choosing proper formula, arrangement of given data, calculation, or other issues.

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.

<p>Assessment Methods- How did you assess student learning (define direct assessment methods used) in relation to the course level outcome being reported?</p> <p><i>Note: If more than one assessment method was used, you may insert an additional row.</i></p>	<p>Direct. Faculty conducted assessment of ability to determine concentration from given data and chosen formula. These were specific questions given as part of the final exam.</p>	
<p>Were indirect assessment methods also used to assess students? If 'yes', please describe the method used.</p>		<p>No</p>
<p>How do you define success for an individual student on the CLO assessment assignment or measure?</p>	<p><i>Student scores 70% on the questions linked to the CLO</i></p>	
<p>How do you define success for the course level outcome? What is the benchmark for the Course Level Outcome?</p>	<p><i>70% of students in the course achieve success on the CLO assessment assignment or measure</i></p>	
<p>How many students completed the assessment, and how many were successful?</p>	<p>Fall 30 students assessed 42 successful (71% success rate)</p>	<p>Spring 22 students assessed 33 successful (67% success rate)</p>

Academic Year Total (add the numbers from Fall and Spring)	52 students assessed 75 successful (69% success rate)	
Was the benchmark/goal for this academic year met?	No	
Were standardized rubrics, tests, or checklists used?	Yes	

What is your analysis of the findings?

Student results were barely sufficient for this important skill, being right below our goal of 70% pass rate. Possible reasons are not choosing the correct formula, not arranging data correctly in the formula, incomplete use of the formula, and improper calculation.

In the spring 2023 semester there was a tornado that passed through multiple cities that UAPTC serve and in which students live. It is unclear how much this major disruption affected results.

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

Given questions do not allow use to discern possible causes, so we are designing a new tool. Since we were close to success, we expect quick improvement.