UNIVERSITY OF ARKANSAS
PULASKI TECH

Course-Level Assessment Report
Course: __CHEM 1306____
Academic Year: __2021-2022____

Due to Chair/Program Director and Faculty Assessment Chair by September 1

1. Name of course: General Chemistry 2

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

3. Date of submission: *9/20/2022*

4. Academic year: *2021-2022*

Course-Level Learning Outcomes

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

GC2CLO 1 – Intermolecular Forces & Colligative Properties - Students will utilize the intermolecular force model to predict and explain substance properties including colligative properties.

GC2CLO 2 – Chemical Kinetics - Students will utilize the rate laws to monitor the kinetic behavior of substances undergoing a chemical reaction and justify the reaction mechanism proposed by others.

GC2CLO 3 – General Equilibria & Solid Equilibria – Students will construct equilibrium expression equations, ICF, ICE diagrams and predict equilibrium shifts and amounts involved in equilibrium reactions. Students will apply all equilibrium concepts to both heterogeneous and homogeneous systems in the calculation of values involved in solid equilibria.

GC2CLO 4 – Acid / Base Chemistry & Acid / Base Equilibria - Students will recognize the specific identifiers of the acid base theories. Students will construct equilibrium expression equations, ICF, ICE diagrams and predict equilibrium shifts and amounts involved in acid base equilibrium reactions. Students will appraise titration curve graphs to make conclusions about the identity and amounts involved with substances being titrated.

GC2CLO 5 – Thermodynamics, REDOX & Electrochemistry - Students will define and calculate thermodynamic quantities. Students will recall the steps involved in balancing complex oxidation-reduction reaction equations in acidic solution using half-reactions. Students will label both galvanic and electrolytic electrochemical cells and construct these cells as they pertain to half reactions and the production on electricity related to the redox process.

2. Which CLOs were addressed for the academic year?

GC2CLO 1 – Intermolecular Forces & Colligative Properties - Students will utilize the intermolecular force model to predict and explain substance properties including colligative properties.

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

GC2CLO 1 – **Intermolecular Forces & Colligative Properties** - Students will utilize the intermolecular force model to predict and explain substance properties including colligative properties.

4. 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.)

Discipline/Program Learning Outcomes

The Biology, Chemistry, Health, and Physical science disciplines, consistent with the College's mission and the School's objectives, encourage the success of its students in all technical fields and academic disciplines by:

1. Demonstrate critical and independent thinking through scientific investigation
2. Demonstrate professionalism in communication and collaboration
3. Analyze the influence of scientific thought on individuals and society
4. Demonstrate proper use of scientific instrumentation and laboratory techniques

This CLO corresponds to PLO 1

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.*	*Students across all sections completed a common comprehensive final exam. Questions were linked to specific course learning outcomes. Item analysis was performed to determine proficiency.*	
Were indirect assessment methods also used to assess students? If 'yes', please describe the method used.		***No*** **no**
How do you define success for an individual student on the CLO assessment assignment or measure?	*Student scores 75% 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*** *13 students assessed* *10 successful* *(77% success rate)*	***Spring*** *16 students assessed* *13 successful* *(81% success rate)*
Academic Year Total (add the numbers from Fall and Spring)	*29 students assessed* *23 successful* *(79% success rate)*	

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Was the benchmark/goal for this academic year met?	***Yes***	
Were standardized rubrics, tests, or checklists used?	***Yes***	

5. What is your analysis of the findings?

For CLO 1.

Although we had a low class size, the students did well on this CLO; surpassing the 75% threshold.

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

We will work to improve our direct measurement and reporting rates.

A new exam is scheduled to be written as we move to a new book in the fall.

Instructors will meet at the end of the fall semester to review results and data will be examined across modalities to determine any necessary changes for spring. Instructors will meet again after the spring semester ends to identify trends and consider adjustments for the next academic year.

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