UNIVERSITY OF ARKANSAS
PULASKI TECH

Course-Level Assessment Report

Course: _Chem 1306 - General Chemistry 2 Lecture_____

Academic Year: __2022-2023____

1. Name of course: _____ Chem 1306 General Chemistry 2 Lecture _____

2. Name of individual(s) compiling report: ____Dr. Michael Julian_____

3. Date of submission: _____9/15/2023_____

4. Academic year: _____2022-2023_____

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?

CLOs 1

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

CLOs 1

4. Explain the assessment cycle.

During the previous spring semester, professors meet to discuss the CLOs and assessment needs for the next fall. Modifications to final exam are discussed for the fall.
At the beginning of the fall semester, faculty meet prior to the start of classes to finalize changes in the assessment methods. The results from the previous semesters final exam are addressed. The faculty then meet to discuss the results and any problems in the methods or rubrics. At the end of the semester, results from the final exam are collected and 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.

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

The 70 question final exam was used as direct assessment of the CLOs. The data was obtained by using Item Analysis in Blackboard.

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

An overall % correct of 70% for each CLO is desired.

7. What were the findings for the academic year?

Fall 2022 9 student entries, 100% proficient.
Spring 2023 16 student entries, 81.25% proficient.

8. What is your analysis of the findings?

Students continue to struggle with larger class sizes. This Spring class was split between extroverted enthusiastic and quiet students. This left some students not seeking the extra help they apparently needed with the early chapters of the material.

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

A new book will eventually be adopted for this course. In the meantime, the current final will continue to be used to collect more data now that the exams have been moved into Blackboard. A few questions were flagged by Blackboard's Item Analysis tool as needing revision. Those questions will be closely monitored during the fall semester for possible revision at the end of the spring semester.