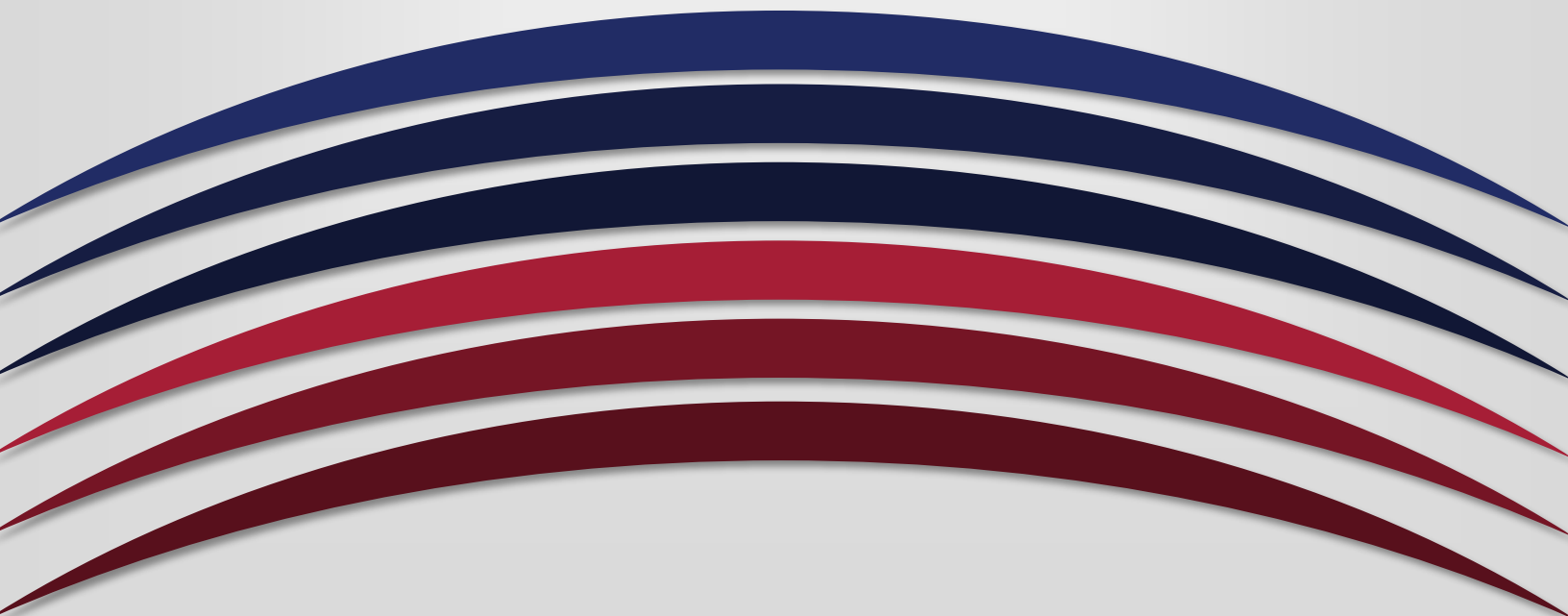




UNIVERSITY OF ARKANSAS  
**PULASKI TECH**

**Assessment Report:**  
**2019-2020:**  
**(CHEM 1303 Fundamental Chemistry I)**



1. Name of individual compiling report: Dr. Michael Julian

2. Date of submission: 9/30/20

3. Is the assessment plan (*Check or highlight one*)

☐ an initial plan for the  
program

☒ a revision of an old plan

☐ unaltered from  
previous year

## Course-Level Learning Outcomes-

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

1. Student will describe measureable 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 material.

### 2. Which CLOs were addressed for this academic year? (2019-2020)

CLOs 1-4

### 3. Which CLOs are being addressed in your assessment plan next academic year? (2020-2021)

CLOs 1-4

#### 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, blackboard assessment, and information literacy 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. As the lab and information literacy 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 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. The faculty then meet after the information literacy data has been collected. This meeting is also utilized to vote on any changes for the next fall. During finals week, the data for the final exam is generated and distributed. Instructors informally discuss the findings and suggestions for late changes for the next fall.

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

The CLOs were assessed based on the final exam. Fall 2019 through scantron results and Spring 2020 through Blackboard Item analysis. The comprehensive final exam is a direct measurement with each of the 65 questions aligning to a CLO.

#### 6. What are the assessment goal(s)?

The students should show proficiency in each CLO through obtaining an average score of 70% or above on questions given in blackboard and on the final exam.

#### 7. What were the findings for this academic year? (2019-2020)

Fall 2019

CLO    % correct    65 Students

1	80.8
2	73.6
3	71.8
4	74.0

Spring 2020

CLO % correct 47 students

1	90.2
2	90.2
3	78.2
4	66.6

## 8. What is your analysis of the findings?

We experienced serious difficulties in this academic year. The fall was beset by budget cuts in paper and Scantron supplies. This led to most faculty unable to collect assessment data from their final exam. These difficulties were compounded by our course being separated into a lab and class course. Overall, our students we were able to obtain data on did quite well. This being our first semester with the new course format and CLOs we are pleased with the results for the fall semester.

The spring semester experienced two main difficulties. The final exam was switched to blackboard with the understanding that we could pull the data through a batch command. The person who indicated this possibility left the university before we could implement that data collection. We had planned to continue in person testing until we could get those data collection tools in place, but because of the COVID 19 pandemic, the school finished the semester virtually with all students required to take the exam online. The sudden switch to online learning caused many students difficulties. This trend can clearly be seen as the shift happened between CLO 2 and CLO 3 timewise during the lectures. The sharp drop in that performance is likely due those difficulties for all involved. The data sample is small because we were unfamiliar with how to collect the data. I was able to collect the data for my students, but could not access the data for other classes.

## 9. What is the action plan for the next academic year? (2020-2021) Explain.

This fall and next spring will be centered around HYFLEX education. This means our courses have to be taught in person, in hybrid format, and completely

virtually. This has led us to adopt fully online testing, with item analysis being used at the end of the semester to pull data for each course individually. This data will then be compiled so that we get a clearer understanding of our performance across the department. A new final exam will be written to address a few concerns with the previous questions and to enable easier point per question assignment in a digital format.