

UNIVERSITY OF ARKANSAS
PULASKI TECH

Course-Level Assessment Report

**Course: BIOL 1102 Biological
Science Lab**

Academic Year: 2020-2021



1. Name of course: _____BIOL 1102 Biological Science Lab ____
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3. Date of submission: _____September 3, 2021_____
4. Academic year: _____2020-2021_____

Course-Level Learning Outcomes

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

CLO 1 test hypothesis Test a hypothesis that is formulated from observations

CLO 2 Microscope use Use of microscope and other lab equipment.

2. Which CLOs were addressed for the academic year?

Both CLOs were assessed this year, although only CLO 1 data was collected and analyzed.

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

We plan on collecting the CLO 1 data again.

Students will still complete the microscope use test, though we do not plan on collecting data. The committee will decide in spring 2022 if we will resume collection of data for the next cycle.

4. Explain the assessment cycle.

The assessment cycle consists of analyzing data collected in the fall and spring semesters of each academic year. This data is reported to the course lead and disseminated to the full-time faculty members in the discipline. This committee forms the working group responsible for decision making for future assessment cycles. Each academic year uses the plan decided upon in spring of the prior academic year.

To illustrate this cycle:

Fall semester 2020 – data collection.

Spring semester 2021 – data collection

Spring and fall 2021 – analysis of data from the academic year; any modifications or changes are derived from the data from the prior year. Effectiveness of class assessment materials is also scrutinized.

Fall 2021 – the assessment plan for the 2021-2022 academic year are shared.

In spring of 2021 – the cycle begins anew.

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

CLO 1 is measured directly through a student paper. The collected experimental data is used to prepare a journal style scientific paper.

CLO 2 is measured directly through a student examination and laboratory practical.

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

Successful completion of CLO 1 is considered as scoring a 70% or higher on the osmosis paper.

The CLO 2 assessment is also considered successful as a scoring of 70% or higher.

7. What were the findings for the academic year?

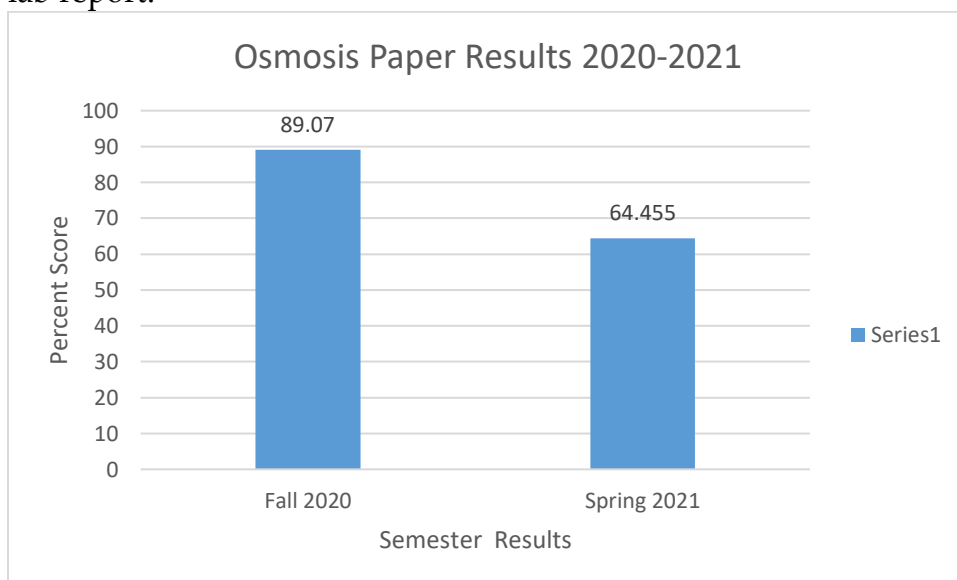
The 2020-2021 assessment data is from a year in which our normal operations were greatly disrupted. Fall semester 2020 and Spring semester 2021 each had different structures and modalities. These changes in instruction structure and methodology were necessary to provide a safer learning environment.

These changes, and adaptations, resulted in different methods of collection for our data. Fall semester was structured such that students could chose virtual attendance, or to attend lab on scheduled weeks with a small, socially distanced cohort. The faculty developed online and in person resources to support this. Throughout the semester, due to unforeseen illness and quarantine, some students had to change from on campus to virtual.

Data analysis of this year's data must bear in mind that the structure of classes differed from the past semesters. Comparisons between the 2020-2021 data and prior years must also be done with caution.

The microscope assessment data (CLO 2) was not collected, although faculty members were required to complete it.

The graph below presents the departmental average for the osmosis, journal style lab report.



The data indicate that the departmental assessment goals for fall 2020 were met. The spring 2021 data indicate that the 70% departmental goal fell short. At the present time the faculty have not come to a consensus on the root cause. As of this writing it has been noted that student participation decreased over the past academic year.

As of September 2021, the faculty are working in an environment more similar to semesters prior to the pandemic. At the present time faculty members are

attempting to discern the reason for the fall in performance in spring, 2021. We hope the more familiar environment will increase student participation and engagement.

8. What is your analysis of the findings?

The data indicate the assessment methods appear to be meeting our desired needs. This is the second year we have used this method. In pre-pandemic times we would be able to compare this data directly to the prior year.

The fall 2020 and spring 2021 semesters were conducted with a different learning structure, and the myriad of changes made to provide a safer learning environment seems to have impacted our performance from fall to spring.

In the data presented earlier, there is a difference in attainment between spring and fall semesters. At this moment the faculty feel that the difference can be attributed to the sudden change in modality and delivery methods between the fall and spring semesters. The lower attainment in spring 2021 is of concern and prior to administering the osmosis paper in fall 2021, the faculty will meet and discuss the matter.

In preliminary discussions of the overall assessment plan, the faculty have been thinking about ways to improve. The consensus at this point is to wait until the fall 2021 data are in. The past academic year was so disrupted that direct comparison to the 2019-2020 academic year are difficult. Additional changes were made between fall 2020 and spring 2021 make comparing fall 2020 to spring 2021 difficult.

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

Explain.

The faculty will meet in fall 2021 to discuss the results of the spring semester. At that time, we will look at the laboratory exercise and methodology and attempt to determine the reason that spring 2021 was below expectations. In the last assessment cycle the laboratory paper had met benchmarks. The 2020 – 2021 Academic year was so disrupted that while the comparison isn't exact, there needs to be discussion on how to improve this fall's section averages.

At the time of this writing it appears the paper assignment is adequate to the task, although the results of spring 2021 did not meet our benchmark.

In the past semesters we decided the microscope assessment was consistently at benchmark, and focused on other course objectives. In our annual meeting the discussion will consider if microscope data needs to be collected and analyzed to ensure that the course is meeting objectives. At the present time it is not anticipated that this data will be collected in this year.

It is of note that the spring assessment data is more difficult to compare to prior semesters. The nation experienced Covid-19, and in mid semester classes moved from the regular forms of delivery to a completely online presentation. This was done to help prevent spreading the virus.

The plan adopted for the 2020-2021 academic year continues the overall assessment plan of collecting data for the paper requirement. This will be further examined in the next semester.

Throughout the Covid year of 2020-2021 faculty members noticed a trend of students not participating in class activities, including assessment.