UNIVERSITY OF ARKANSAS
PULASKI TECH

Course-Level Assessment Report
Course: Non-Majors Biology (class)
BIOL 1300
Academic Year: 2020-2021

Due to Chair/Program Director and Faculty Assessment Chair by September 4

1. Name of course: BIOL 1300 Non-Majors Biology

2. Name of individual(s) compiling report: Paula Miles

3. Date of submission: September 14

4. Academic year: 2020-2021

Course-Level Learning Outcomes

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

Course Learning Outcomes: BIOL 1300 (Class)

1. Define the levels of the organization and related functions of bacteria, plants, and animals
2. Describe the characteristics and basic needs of living organisms
3. Analyze the processes of growth and inheritance in individuals and populations.
4. Test a hypothesis that is formulated from observations

2. Which CLOs were addressed for the academic year?

CLO # 2 - Describe the characteristics and basic needs of living organisms
CLO #3 - Analyze the processes of growth and inheritance in individuals and populations.

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

CLO # 2 - Describe the characteristics and basic needs of living organisms
CLO #3 - Analyze the processes of growth and inheritance in individuals and populations.

4. Explain the assessment cycle.

Standardized assessments for CLOs 2 and 3 will be continued for Fall 2021 and Spring 2022 and then every other year
Standardized assessments for CLOs 1 and 4 will be conducted every other year (next time will be Fall 2022 and Spring 2023)

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

CLO #2 - Describe the characteristics and basic needs of living organisms. Indirect.
Bloom's Taxonomy level of 1 and 2. Information Literacy project which is a paper on an Endangered Species. The paper is divided into sections that can be analyzed separately. We collect the average scores for the sections being analyzed in the paper from all 1300 sections. We are currently looking at Taxonomy and Range.

CLO #3 - Analyze the processes of growth and inheritance in individuals and populations.
Indirect. Bloom's Taxonomy level 1 and 2. Standardized Test. Each student in Non-Majors Biology will answer the same 10 multiple choice questions embedded in Exam 4. These questions will be testing their knowledge and understanding of cell division (mitosis and meiosis). Face to face classes will be tested either online through Blackboard or on paper within the class.

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

Our target is a grade of 70% or better on the standardized test over mitosis and meiosis. Our target for the paper is a grade of 70% on the selected parts of the paper.

7. What were the findings for the academic year?

We received data on the exam questions (10) on cell division from 52 students in 3 sections of **BIOL 1300 in Fall 2020** taking the exam out of 67 total students. Looking at each question separately, all questions were answered at an average over 70% except one. The class average ranged from 63.3 to 97.7%. The overall average for all sections and all 10 questions was 86.5%. This exceeded our target of 70% success except for the individual question, which I will address later.

We received data on the exam questions (10) on cell division from 119 students in 8 sections of **BIOL 1300 in Spring 2021** who took the exam out of 142 total students. Looking at each question separately, all questions were answered at an average over 70% except 3 questions. The class average ranged from 59.3 to 91.1%. The overall average for all sections and all 10 questions was 78.8%. This exceeded our target of 70% except for the 3 individual questions, which I will address later.

In the **BIOL 1300 in Fall of 2020**, 51 papers on an endangered species were turned in from 3 sections with 67 total students. The average over all sections on the taxonomy part was 7.7 out of 10 and the average for the range part was 7.2 out of 10. This was barely exceeding our target of 70%.

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In **BIOL 1300 in Spring 2021**, 118 paper were submitted out of a total of 142 students. The average over all sections on the taxonomy part was 8.3 out of 10, and the average for the range part was 7.8 out of 10. This exceeded our target of 70% success.

8. What is your analysis of the findings?

We exceeded our target of 70% overall success in both assessments for both semesters, so the evidence shows that students are successfully learning biological concepts in BIOL 1300 for non-majors. There were a few problem questions in the mitosis/meiosis where students sent below the 70% threshold, while the combined 10 question average was well above 70%. These particular questions need to be examined to see if there is a problem with the questions or if we need to emphasis this content more. Also, the paper still seems to have issues with the students understanding what range is because that average was low.
The COVID 19 pandemic began in March 2020, and the campus closed as all learning pivoted online, with instructors and students working from home. We continue to have reduced face to face classes and mask mandates that we must all live with at school and at work. This has affected the BIOL 1300 classes as we used to be able to do more face-to-face classes with them but most prefer online now which is more difficult for most students.

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

CLO # 2 - Describe the characteristics and basic needs of living organisms
CLO #3 - Analyze the processes of growth and inheritance in individuals and populations.

We will assess cell division, protein synthesis, and the endangered species report in Fall 2021 and Spring 2022, looking at CLO 2 & 3 in more detail. We will review ways to cover the material on the problem questions for the cell division assessment or rewrite the questions if needed.
We will work on ways to be sure students have access to more information on ranges for animals and perhaps offer websites they could use.

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