2023-24 LBHC Program Review Report – Science (Applied)

1. Date: July 3, 2024

2. Program name(s) (combine all degree options in one report): Associates of Science in Science: Options Pre-Med, Pre-Nursing, Community Health

3. People who contributed to this report (preferably 2 or more): Sara Plaggemeyer

Reflections on Data

Go to lbhc.edu > DATA & REPORTS > Student Success Data

Reflect on the data in the links below and describe what the data tell you about student success. Avoid restating the data; rather report the significant themes, stories, and trends reflected in the data.

4. **Course data (by discipline):** Under the heading, "Course success", click on the link that says, "By discipline".

    Over the years of 2012-23, the science (SC) courses offered at LBHC have had an average of 55% success rate, with 5,794 enrollments in these courses. The number of students each year has varied, currently there is a slight decrease in the number of students enrolled.

5. **Course data (all courses):** Under the heading, "Course success", click on the link that says, "All courses".

    SC courses include program courses for the associates of science in science and courses that are required in core curriculum for all students receiving a degree from LBHC. Courses taken as core courses by non-major students include SC 114/115, SC 116/117, SC 132/133, and SC 244. The data shows an average of a 49% success rate in these courses. The success rates varied from 44%-71%. Program courses for the four programs included in this review were broken down into entry level courses and courses considered capstone courses. Program entry level courses included SC 160/161, SC 121/125 and SC 141/142 had an average of a 52% success rate. Capstone course had an average of a 69% success rate and included the data from the courses: SC 242/243, SC 211, SC 143/144, SC 122/123, and SC 250/251. The range of average success for these capstone courses as a range of 53%-83%. The average success rate in entry level program and capstone program courses was higher than that of core courses, with an increase also in the program courses over the progression of students through the science programs.

6. **Course data (discipline by demographics):** Under the heading, "Course success", click on the link that says, "Discipline by demographics"

    The data included in this analysis, discipline by demographics were success rates of students from the school years of 2017-18 – 2022-23 focused on science courses. During this time period the average success rate was 51% (2, 798 science course enrollments during this time). The age group that had the lowest success rate were the students that fell into the 30-39 years with an average of 40%. The largest age group enrolled in these courses was the age range of 20-29 with around three times as many students as the other age groups. There was an overall lower success rate for males. There wasn't a significant difference in the success rate of first-generation students and students not first-generation students. There was almost as twice as many enrollments in courses by not first-generation students than first-generation. Success of students without dependents was higher with a 63% success rate than those with dependents (50%).

7. **Retention rates:** Under the heading, "Retention rates", click on the link that says, "Fall-to-spring and fall-to-fall retention rates"

   The data for the retention rates for science courses were taken from the years of 2012-23. The data shows that the fall-to-fall retention rates were lower than the fall-to-spring retention rates. Part time students tended to have the lowest retention rates for both fall-to-fall and fall-to-spring. Students with dependents had retention rate drop more from fall-to-fall (26%) than retention rates from fall-to-spring (47%).

8. **Graduation rates and numbers:** Under the heading, "Graduation rates and numbers", click on the link that says, "Graduation rates and numbers"

   The data for the graduation rates for science programs were taken from the school years of 2012-23. There were 134 students that graduated in all of the science programs this includes biology, natural resources / environmental science, environmental health, tribal natural resources / environmental science, pre-med, pre-nursing and community health. The most drastic changes in graduation rates were during the school years of 2018-19 – 2020-21. Males and part-time students had the lowest 3-year graduation rates of all groups for the last five years.

Reflections on Integrating Apsáalooke Perspectives and Knowledge

9. Do you feel you are integrating Apsáalooke perspectives and knowledge into your classes more, the same, or less than you did in 2019?

   Same

10. In 2023-24, estimate the % of your class time you feel you integrated Crow perspectives and knowledge.

    5%

11. Provide examples of **new ways** you integrated Crow perspectives and knowledge in your classes in 2023-24 that you had not done before.

    None

12. Provide examples of how you integrated Crow perspectives and knowledge in your classes in 2023-24.

    Crow terminology has been incorporated into applied science program courses such as anatomy and physiology.

13. What do you plan to do in 2024-25 to increase the integration of Crow perspectives and knowledge into your classes?

    Add to curriculum more crow perspectives to labs and lectures and potentially creation of a course which focuses more heavily on Crow culture knowledge in the medical field.

Reflections on Integrating Active Learning, Teaching, and Assessment Strategies

Active teaching, learning, and assessment strategies include times where faculty are not lecturing and where students are actively doing something interactive, meaningful, and relevant (including in their assessments).

Examples of active teaching, learning, and assessment strategies include think-pair-share, one sentence summaries, role plays, case studies, problem-solving, the muddiest point, game-based learning, labs, creating something, etc.

14. Do you feel you are using active teaching, learning, and assessment strategies in your classes more, the same, or less than you did in 2019?

    Same

15. In 2023-24, estimate the % of your class time you feel you used active teaching, learning, and assessment strategies.

    30% of class time is spent as active learning and teaching practices in the applied science programs.

16. Provide examples of **new ways** you used active teaching, learning, and assessment strategies in your classes in 2023-24 that you had not done before.

    During lecture in SC 160 new case study assignments were introduced into the curriculum.

17. Provide examples of how you used active teaching, learning, and assessment strategies in your classes 2023-24.

    Science courses often have a lab associated with the lecture, so active learning is utilized heavily in these labs. Additionally, classroom group activities add to the active learning strategies. There also has been field trips to cadaver labs for applied science programs students. Study nights with faculty teaching courses listed in the program courses in the applied science programs are also available for students to attend if they need help with assignments.

18. What do you plan to do in 2024-25 to increase the use of active teaching, learning, and assessment strategies in your classes?

    Increase the number of group activities and case studies in course curriculum.

Program Reflections

19. Program **areas of strength**

   The program has many students enrolled. The program has a good student to faculty ratio so it is easy for the students to get help from instructors on coursework.

20. Program **areas for improvement**

   Areas for improvement in the applied sciences are increasing Crow knowledge in the curriculum. More active learning activities can be incorporated into lecture course curriculum. More science faculty to teach all the program courses needed.

21. Program **next steps**

   Reevaluate the programs to incorporate more activities such as field trips to other institutions that have lab resources that LBHC does not. Apply for funding to increase LBHC's equipment and models related to courses in the program, such as an increase in chemistry and anatomy and physiology. Apply for funding to increase community programs.

22. Suggestions for improving this report or process (if any)

   None