

## **2023-24 LBHC Program Review Report – Agriculture**

1. Date: July 9, 2024
2. Program name(s) (combine all degree options in one report): Associate of Science in Agriculture: Options – Livestock Management and Industry and Rangeland Ecology and Management
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".

From 2012-23, 338 enrollments in agriculture (AG) courses. The student success rate for the combined average of all AG courses was an average of 50%. The course success by discipline for the school years between 2017-23 was 43%. Although there has not been a significant change in student success in AG courses over the entire 2012-23 period between each year, the enrollment in AG courses has decreased.

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

There has been since the 2020-21 school year a reduction in the number of AG courses offered each semester, with only three AG courses being offered in the 2022-23 school year. During the time period of 2013-23 AG 100 Introduction to animal science (program entry level course) had a success rate of 36%, but there is an increase in success in the capstone course AG/SC 242 Natural resource ecology of 58%.

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

From 2017-23, there have been 154 enrollments in AG courses with a 43% success rate. The groups with the lowest success rate were students 30-39 years old and male students. There was not a significant difference between the success of students that were first-generation students or students that were not first-generation students.

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"

There have been 11 students who graduated with associates of science in agriculture degrees since 2012 through 2023. The number of students in either of the AG options is lower, usually 1-2 a year with four years not having graduates.

## 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?

The same

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

In AG courses, a very small portion of the courses integrated Crow knowledge, only a couple of AG courses were offered during this school year.

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.

None

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

Integrate more Crow botany knowledge into the AG 133 course, integrate place based and Crow perspective content into AG 134. AG 242/243 will have modules focused on Crow knowledge and perspectives. AG 230 will have Crow perspectives integrated into modules already developed. Try to integrate Crow community members into 1 credit courses. Increase number of courses taught yearly.

## 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?

The same

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

AG designated courses (only a couple taught) did not have active learning, but AG degree students did take SC courses that are co-listed with AG courses (although AG number wasn't used in scheduling) – These included SC 132/133 and SC 242/243. In SC 132, 73% of the assignments were taught through active learning/teaching and in SC 242, 32% of assignments were. Both SC 133 and SC 242 were 100% active learning as they were labs.

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.

In 2023-24, the strategies used for active teaching, learning, and assessment didn't change from previous years, the number of activities/assignments that included these strategies.

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

Active teaching, learning, and assessment strategies have increased over the past five years in science program courses (that were taken as co-listed as SC) and will continue to be a major component of those courses. Forms of active learning include case studies, in class assignments, laboratory activities, discussion forums, and response papers. For example, the percentage of active teaching/learning assignments and activities in SC 132 is currently 73%, out of 22 assignments 16 of them are active teaching/learning 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?

To increase active learning within the AG program, first more of the program courses will need to be taught. One credit labs can be taught with all active learning strategies, curriculum will need to be developed to incorporate the active learning. AG 132/133 will integrate new active learning with new hands on (in class activities and labs).

## Program Reflections

### 19. Program **areas of strength**

Some of the strengths of the program is that it is a program that directly impacts the Crow community as students enrolled often are already part of the agricultural community on the Crow reservation. The content of some of the courses involves directly community participants through integration of their knowledge into the teaching through presentations and workshops. The program has its own funding that supports students through scholarships. Currently the program is aligned with the agriculture degree programs at Montana State University (MSU) and there is regular communication between LBHC faculty and MSU faculty to develop ways for students to more easily and successfully transfer into 4-year degree programs at MSU.

### 20. Program **areas for improvement**

There has been a shortage of AG instructors at LBHC and therefore AG courses have not been taught consistently. Also there needs to be an increase in recruitment activities as student numbers are low in the AG program.

### 21. Program **next steps**

The most important step to take at LBHC is to find the support to hire a new AG instructor that can help ensure that all the AG courses can be taught every year. Student numbers are low so advertising the degree should be increased. Currently working with MSU faculty supports discussion on how to help our courses align with the courses needed to enter AG degrees at MSU at a junior year level. 2+2 agreements need to be finalized. New grants that support student research need to be applied for by LBHC faculty.

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

None