Program Assessment Report (PAR)

Technical Study (TS): Agriculture (AGRI) Associate Degree

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ACADEMIC YEAR COVERED BY THIS REPORT: 2020-2021

I. PROGRAM LEARNING OUTCOMES

1. Students will demonstrate an applied knowledge of basic agronomic principles such as planting, harvesting, pesticide/herbicide use, soil science and basic marketing concepts.

2. Students will demonstrate applied knowledge of basic animal science principles such as breeding and reproductive cycles, animal nutrition concepts, animal husbandry, animal physiology, breeds and genetic concepts.

3. Students will demonstrate effective written and oral communication skills.

4. Students will demonstrate knowledge of current agricultural issues such as environmental stewardship, animal welfare, risk management, market fluctuation, and emerging technology.

5. Students will demonstrate applied knowledge of agricultural business and finance such as lending, regulations, laws, business planning, budgeting, and workforce management.

II. PROCEDURES USED FOR ASSESSMENT

A. Direct Assessment

1. Students will demonstrate an applied knowledge of basic agronomic principles such as planting, harvesting, pesticide/herbicide use, soil science and basic marketing concepts.
-Students are assessed during FAS 2040: Introduction to Agronomy.
-Students are evaluated with a final written assignment on agronomic crops using a rubric.
-Achievement of learning outcomes will be determined by randomly selecting 3 submissions per class and evaluating them (by a faculty member in the Agriculture Program who did not teach the course) using a single point rubric.

2. Students will demonstrate applied knowledge of basic animal science principles such as breeding and reproductive cycles, animal nutrition concepts, animal husbandry, animal physiology, breeds and genetic concepts.
-Students are assessed during FAS 2030: Introduction to Animal Science.
-Students are evaluated with a final cumulative exam given at the end of the semester.

3. Students will demonstrate effective written and oral communication skills.
-Students are assessed during FAS 1010: Agriculture Society.
-Students are evaluated with a written assignment on a current agricultural topic using a rubric.
-Achievement of learning outcomes will be determined by randomly selecting 3 submissions per class and evaluating them (by a faculty member in the Agriculture Program who did not teach the course) using a single point rubric.

4. Students will demonstrate knowledge of current agricultural issues such as environmental stewardship, animal welfare, risk management, market fluctuation, and emerging technology.
-Students are assessed during FAS 1010: Agriculture Society.
-Students are evaluated with a written assignment on a current agricultural issue using a rubric.
-Achievement of learning outcomes will be determined by randomly selecting 3 submissions per class and evaluating them (by a faculty member in the Agriculture Program who did not teach the course) using a single point rubric.

5. Students will demonstrate applied knowledge of agricultural business and finance such as lending, regulations, laws, business planning, budgeting, and workforce management.
-Students are assessed during FAS 2100: Farm Business Management.
-Students are evaluated with the final exam for the course.

B. Scoring of Student Work

1. Students will demonstrate an applied knowledge of basic agronomic principles such as planting, harvesting, pesticide/herbicide use, soil science and basic marketing concepts.
-Scoring by the course instructor of the final written assignment for the course FAS 2040: Introduction to Agronomy will be shared and will include the average student score as well as the range of student scores. The course instructor graded the assignment utilizing a rubric.
-Additionally, a random selection of 3 samples from the course will be evaluated by a program faculty member who did not teach this course to evaluate alignment with the learning objective by use of a single point rubric.

2. Students will demonstrate applied knowledge of basic animal science principles such as breeding and reproductive cycles, animal nutrition concepts, animal husbandry, animal physiology, breeds and genetic concepts.
-Scoring by the course instructor of the final exam for the course FAS 2030: Introduction to Animal Science will be shared and will include the average student score as well as the range of student scores. The course instructor graded the assignment utilizing an answer key.

3. Students will demonstrate effective written and oral communication skills.
-Scoring by the course instructor of the written assignment on a current agricultural topic for the course FAS 1010: Agricultural Society will be shared and will include the average student score as well as the range of student scores. The course instructor graded the assignment utilizing a rubric.
-Additionally, a random selection of 3 samples from the course will be evaluated by a program faculty member who did not teach this course to evaluate alignment with the learning objective by use of a single point rubric.

4. Students will demonstrate knowledge of current agricultural issues such as

environmental stewardship, animal welfare, risk management, market fluctuation, and emerging technology.
-Scoring by the course instructor of the written assignment on a current agricultural issue for the course FAS 1010: Agricultural Society will be shared and will include the average student score as well as the range of student scores. The course instructor graded the assignment utilizing a rubric.
-Additionally, a random selection of 3 samples from the course will be evaluated by a program faculty member who did not teach this course to evaluate alignment with the learning objective by use of a single point rubric.

5. Students will demonstrate applied knowledge of agricultural business and finance such as lending, regulations, laws, business planning, budgeting, and workforce management.
-Scoring by the course instructor of the final exam for the course FAS 2100: Farm Business Management will be shared and will include the average student score as well as the range of student scores. The course instructor graded the assignment utilizing an answer key.

C. Indirect Assessment

In the fall of 2022, an alumni survey was developed and distributed to alumni (earliest graduation was Fall 2019) of the Agriculture Program (BTAS and ATS Agriculture Concentrations). Additionally, this survey was shared on the program Facebook page to all alumni of the program. We plan to share this survey at the end of the spring semester in all following years to recent graduates. Please see attached document: IndirectAssessmentTool_AlumniSurvey_2022

III. ASSESSMENT RESULTS/INFORMATION:

AY 2020/2021: Learning outcome 5 was selected for assessment.

AY 2020/2021: For the selected course (FAS 2100) the final exam grades will be shared for program assessment. The average score for the final exam was 73.66% with a range of 48 to 100%. There were 21 students in the course, but 3 of these students did not complete the final exam and therefore their scores of 0% have been omitted from this assessment. Overall, 11 out of 18 students earned a grade of C or better (70% or above) indicating that just under two-thirds of the class (61%) earned a passing grade. Final course grades resulted in an average grade of 81.88% (range 20.23% to 96.33%) with only three students not passing the course with grades below 70%. One note that is important to make is that this course being evaluated occurred in the Spring of 2021, which was still during the COVID-19 pandemic.

Many of our students struggled due to learning disruptions caused by the pandemic which may be observed in the three students failing to complete the final exam and earning non-passing grades. Overall, these results indicate that learning outcome 5 is being met by the majority of our students. In the future we have made plans to move this course to a face-to-face offering rather than an online, fully asynchronous module as our students have indicated a preference for in-person classes to better support their learning.

IV. ACTIONS TO IMPROVE STUDENT LEARNING

In December of 2021 and 2022 the advisory board for the Agriculture Program was called to meet to share the current events of the program as well as gain feedback from stakeholders within the local agricultural community. Agendas for both meetings can be viewed in the supplemental documents included in this report, but key items of feedback that we received were that students need additional training in written communication, verbal communication, and applied mathematics. In the most recent meeting of the advisory board there were many suggestions of increasing networking between students and the local community and many of the board members provided the names of individuals who would be excellent hosts for class trips and guest speakers. In the future we plan to hold meetings with the advisory board on an annual basis. In addition, in the fall of 2022 we administered a current student survey to gain insight on student interests in the classroom (report included in supplemental documents) and we plan to offer this survey annually to gain student feedback on the program as a whole while they are in the program. By combining this feedback with knowledge gained through assessment of learning outcomes, we will be able to make changes as needed to ensure that students are being supported throughout their education. We plan to continue inviting guest speakers into the classroom, engaging in field trips, and hands-on learning as these were class activities that were favorably viewed by students as supportive to their learning. The next step for program improvement is to evaluate the Agriculture concentration requirements to identify if further structure is needed to help students fully achieve learning outcomes. Alumni survey (report included in supplemental documents) indicated that knowledge of areas relating to the 5 learning objectives was overall moderate or above, but in the cases of students who elected to not take additional courses in a certain area (for example animal science), they ranked their knowledge lower in those instances.

V. SUPPORTING DOCUMENTS

Additional documentation, when provided, is stored in the internal Academic Program Assessment of Student Learning SharePoint site.