Wildlife Ecology Minor

Goal 1- Mastery of Key Disciplinary Knowledge

Goal Description:

Students will exhibit mastery of key disciplinary knowledge in animal science and animal production.

Providing Department: Wildlife Ecology Minor

RELATED ITEMS/ELEMENTS

RELATED ITEM LEVEL 1

Goal 1- Objective 1: Advanced Animal Science Knowledge

Learning Objective Description:

Students will develop factual and fundamental knowledge relative to the science of domestic livestock. Upon completion of the course, students will be able to apply the gained factual and fundamental knowledge relative to animal science and apply the information regarding animal nutrition and management.

RELATED ITEM LEVEL 2

Goal 1- Objective 1. Indicator 1: Embedded Test Questions in ANSC 3373

Indicator Description:

All students enrolled in the Animal Science program must complete Animal Nutrition (ANSC 3373), which is an advanced animal science course. This course addresses key concepts of nutrition and management that are relevant to the field of animal science. Further, this course presents knowledge that is considered necessary for all animal science graduates. Embedded test questions (n= 398) were developed and administered during the 4 exams offered each semester. Questions are classified as factual, fundamental, and application knowledge. Whereas, factual knowledge is presented in to students for the first time during 3373, fundamental knowledge is knowledge learned in prior coursework, and application knowledge involves the utilization of both factual and fundamental knowledge. Student scores on questions are categorized on a scale of 1 - 5 with 3 "meets expectations," 4 "exceeds expectations," and 5 "far exceeds expectations."

Criterion Description:

Although there are fluctuations from year to year and a general trend for improvement, we are still working on achieving the goal of 70% of students scoring a 3 out of 5 in all areas. The addition of 2 pre-requisites (chemistry 1406 and a "c" or better in ANSC 1319) was recent, and there are still students being "grandfathered" in under old requirements in order to not delay graduation. Therefore, we will retain our goal of 70% of students meeting expectations (scoring 3 out of 5) in all areas.

Findings Description:

We will update this part shortly.

The assessment of 184 students enrolled in ANSC 3373 in Fall 2020 and Spring 2021 with 398 embedded questions from 4 exams across 2 semesters. The 398 questions were classified as factual, application or fundamental knowledge. Factual questions were based on facts learned about animal nutrition in the course; fundamental questions required the student to recall information learned in pre-requisite courses or should be fundamental knowledge for an advanced, upper level animal science student, application questions required the student to apply the factual and fundamental knowledge into everyday animal husbandry situations or biochemical and physiological processes. The majority of the questions were factual (54.62%) followed by fundamental (23.29%) and application (22.09%). All exams had a combination of all three-question types with an increased expectation of the student to apply the information through application questions.

Majority (76.51%) of the students answered the questions in a way that exceeded the expectations of 3 or greater (acceptable/adequate knowledge or better), a marginal (.22% point decrease) from the previous assessment period. Overall, 59.84%, an increase of over 7% from the previous year) of students answered questions that indicated substantial or exceptional knowledge and understanding (Score of 4 or 5) of animal nutrition. Fundamental knowledge score fell short of expectations, students, on average, scored lower on the fundamental knowledge questions, overall, with a decrease from 73.1% to 66.38% for this period, scoring a 3 or higher.

With the implementation of a Chemistry pre-requisite, a C or better in ANSC 1319, and delaying “first semester” transfer students from taking Nutrition, improvement in overall scores were noted, even when remote delivery methods were mandated in fall of 2020 due to COVID-19. However, fundamental knowledge remains the low performing area in the course with no improvement and decreased performance. Continued monitoring of ANSC 1319 content is warranted and ensure that content is equitable across all sections with differing instructors.

The table below shows the previous years' data and the percentage of students averaged across years.

Component	2017-2018 n=226	2018-2019 n=154	2019-2020 n=211	3 year average	2020-2021 n=184	4 year average
Factual	57%	75%	53%	60%	59.8%	63%
Fundamental	52%	62%	73.1%	62%	66.4%	67%
Application	57%	71%	76.7%	68%	76.5%	74%

RELATED ITEM LEVEL 3

Goal 1- Objective 1, Indicator 1: Embedded Test Questions in ANSC 3373

Action Description:

To develop a comprehensive analysis of student performance on the embedded test questions in ANSC 3373 to identify areas of improvement and inform targeted interventions.

New Update to Previous Cycle's Plan for Continuous Improvement Item

Previous Cycle's Plan For Continuous Improvement (Do Not Modify):

Closing Summary

We will continue the program as planned and monitor the students. We believe we need more data to have more reliable findings and decide on proper actions required.

Update of Progress to the Previous Cycle's PCI:

The first step in the plan for continuous improvement is to analyze students' performance in the Animal Science program, particularly in the Animal Nutrition course (ANSC 3373). We will do that by evaluating the scores of the embedded test questions administered during the exams. By examining the results, the department can identify areas where students excel and where improvement is needed. This analysis will provide valuable data to determine the effectiveness of the current curriculum and teaching methods. Additionally, it will help identify specific topics or concepts within animal science that may require additional emphasis or support.

Based on the analysis of student performance, the department will implement targeted interventions and adjustments to improve student outcomes. For instance, if it is observed that a significant number of students are consistently scoring below expectations in certain areas, the department can consider implementing supplemental instruction sessions, providing more resources for self-study, or incorporating interactive

teaching methodologies to enhance understanding and application of the material. Moreover, the department will closely monitor the impact of any interventions implemented and make adjustments as necessary based on ongoing assessment and feedback from students and instructors.

New Plan for Continuous Improvement Item

Closing Summary:

Our plan for continuous improvement involves a cycle of assessment, analysis, intervention, and reassessment to ensure that the program effectively equips students with the necessary knowledge and skills in animal science and animal production. By continually monitoring student performance, making data-informed decisions, and implementing targeted interventions, the Wildlife Ecology Minor program can strive towards mastery of critical disciplinary knowledge.