**Annual Assessment Report for 2018-2019 AY**

Reports completed on assessment activities carried out during the 2018-2019 AY will be due September 30th 2019 and must be e-mailed to the Director of Assessment, Dr. Melissa Jordine (mjordine@mail.fresnostate.edu).

Provide detailed responses for each of the following questions within this word document. Please do NOT insert an index or add formatting. Furthermore, only report on two or three student learning outcomes even if your external accreditor requires you to evaluate four or more outcomes each year. Also be sure to explain or omit specialized or discipline-specific terms.

Department/Program: \_Animal Sciences\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Degree \_\_B.S.\_\_\_

Assessment Coordinator: \_\_Randy C. Perry\_\_\_\_

**1. Please list the learning outcomes you assessed this year.**

This past year we performed two assessment activities, the same two that have been performed for a number of years. We intend to incorporate additional assessment activities, but finding the time to incorporate these additional measures into our assessment program has been the problem. Listed below are the two assessment activities and the specific learning outcomes that were assessed with each activity.

**Senior Exit Survey**

Specific Learning Outcomes – 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.4, 5.1, 7.1 and 7.2

In addition to the specific learning outcomes that were assessed, the senior exit survey also gathered data concerning the value of other activities within the department such as the internship program, judging teams, involvement at the farm laboratory units, and the quality of advising provided by the department and the Jordan College Advising Center.

**Culminating Project Presentations – Senior Seminar Course**

Specific Learning Outcomes – 1.2, 7.1, 7.2 and 7.3

**2. What assignment or survey did you use to assess the outcomes and what method (criteria or rubric) did you use to evaluate the assignment?** **Please describe the assignment and the criteria or rubric used to evaluate the assignment in detail and, if possible, include copies of the assignment and criteria/rubric at the end of this report.**

The two assessment activities are the senor exit survey and the culminating project as part of the senior seminar course.

**Senior Exit Survey**. The senior exit survey instrument was developed during the 2008-09 academic year. It was sent to graduating seniors during the spring 2009 semester for the first time and has been used again during most of the following academic years. The survey instrument is administered via the internet. Students are contacted and the results are submitted electronically.

During the first year, 85 seniors were contacted and 29 students responded for a response rate of 34%. During the spring of 2010, 31 students were contacted and 13 students responded for a response rate of 42%. During the spring of 2011, 29 students were contacted and 16 students responded for a response rate of 55%. In 2012, 28 students were contacted and only 3 students responded for a very poor response rate of 11%. At that time, we decided to start sending the survey to students currently enrolled in our senior seminar course during either the fall or spring semester instead of all graduating seniors.

In the fall of 2013, 39 students were contacted and 26 students responded for a response rate of 67%. During the spring semester of 2015, 31 students were contacted and 26 students responded for an excellent response rate of 84%. During the spring semester of 2016, 34 students were sent the electronic survey and 32 students responded for an excellent response rate of 94%. During the spring semester of 2017, 30 students were sent the electronic survey and 16 students responded for a response rate of only 53%, one of the poorer response rates that we have experienced.

In the spring of 2018, 85 students were contacted and 47 students responded resulting in a response rate of 55.3%, very comparable to 2017. Last spring (2019), 46 students were contacted and 43 students responded resulting in an excellent response rate of 93.5%. Our benchmarks for the level of preparation in subject matter areas and core coursework areas have been 4.0 on a 5 point scale. For the most part, we have exceeded those benchmarks in most subject matter areas and in most years.

**Culminating Project – Senior Seminar Course.** The senior seminar course (A Sci 186) is a required course that all of our students take during their senior year. In the past, students were required to do career development activities such as development of a resume and cover letter and practice interviewing. In addition, they presented a short oral seminar on a topic of interest. Students are still required to do the career development activities, however, the oral seminar has been replaced by a culminating project that is done on a group basis.

For the first 3 semesters (Fall 2009, Spring 2010 and Fall 2010), students were evaluating real world production operations. This activity was patterned after The Dairy Challenge Team Contests in which our department participates. These contests involve student teams that visit an actual production operation, analyze production and financial records, and interview employees. The teams summarize the information and make a formal oral presentation consisting of strengths and weaknesses of the operation and suggestions for improvement including financial impacts of their recommendations.

These presentations served as excellent assessment measures of student’s oral and written communication skills and critical thinking skills. However, in addition, we were attempting to use these presentations as an assessment of student abilities in the areas of animal physiology and management. The problem was that some of the students were working in species areas that were not their areas of expertise or in areas in which they had not taken an advanced management course. This created problems as the students simply did not have the animal production background to answer the questions that were being asked of them.

Those problems led us to refine this activity during the Spring 2011 semester to a format in which student groups debated a current industry issue or problem. We feel this activity has worked extremely well since that time. It has been conducted 12 times since then.

This activity will continue to be used as an assessment of communication skills, critical thinking skills, and industry knowledge. Examples of some of the issues that have been debated include the Horse Slaughter Act, organic livestock and dairy production, influence of confinement on animal welfare, proper animal handling procedures to reduce animal stress, surgical procedures for cosmetic reasons, radiation of food animal products for food safety purposes, regulations concerning veterinary procedures and commodity pricing, federal milk marketing order, and the use of genetically modified organisms in livestock production.

In addition to the faculty member that teaches the seminar course during the specific semester, we try to get additional faculty members to come in and do evaluations of the student presentations. We have a core group of faculty members that have listened to the majority of these presentations over the years. Thus their input and analyses of the results and trends is very valuable to the department and the program.

We use two different rubrics as part of this activity. One in the area of critical thinking and one in the area of oral communication skills. Those rubrics are included as part of this report as Appendix 1. When we first started this activity, the benchmark was a 3.0 on a 4 point scale. The only time that we did not achieve that benchmark was for oral delivery during the first year of our revised activity. Over the years, we have raised our benchmark to 3.25 on a 4 point scale.

**3. What did you discover from the data? Please include sample size (how many students were evaluated) and indicate how many students (number or percentage instead of a median or mean) were designated as proficient.**

**Senior Exit Survey.** Our initial plan was to conduct this survey each spring and then evaluate the results every 3rd or 4th year. We have discussed the results each year during a retreat or during departmental meetings devoted to outcomes assessment. We now have 10 years of data. A copy of the survey results from the Spring 2019 semester is included with the written comments included as part of this report as Appendix 2. These results have been remarkably consistent in many areas from the first year that we started collecting data through the last time that the survey was conducted last spring.

The most important or significant things that have been learned from this activity are described below:

1. The farm laboratory is an important component of our program in terms of providing practical, “hands on” experience. In addition, it is valued very highly by our students. This result has been consistent in every assessment activity that we have ever conducted in the department.
2. The quality of advising in our department has improved since we first engaged in outcomes assessment. Although advisement is not part of outcomes assessment, we have chosen to include this in our report because of the strong relationship between teaching and advising. We have always regarded ourselves as good and very dedicated advisors. When we first started conducting this survey we were surprised to learn that a higher percentage of our students regarded our faculty members as good or average advisors as compared to excellent advisors. This is the same thing that happened this year and something we will address if it happens again next year.
3. Our benchmarks for the level of preparation in subject matter areas and core coursework areas have been 4.0 on a 5 point scale. For the most part we have exceeded those benchmarks in most subject matter areas and in most years. The ranking for different areas have varied over the years which is to be expected in our opinion. In the last few years, we had either 3 or 4 subject matter areas each year that failed to reach the benchmark. This is true again this year as we had 3 areas that did not reach the benchmark and they were only slightly below the benchmark.
4. The other result that has been consistent over the years is that our students think that we have too many science courses in our curriculum. That result is something that we would expect as many our students like the production courses much better than they do the more difficult science-based courses.

**Culminating Project – Senior Seminar Course.** This activity has been conducted a number of times and we feel we have learned a great deal from it. We have continued to refine it and make it a more useful assessment activity for the program and the department. We now have it refined to the point where we believe it is a valuable assessment activity.

At the end of each semester, we prepare a numerical summary of this activity. The summary for the Fall 2018 semester is included as part of this report as Appendix 3 and the summary for the Spring 2019 semester is included as Appendix 4.

The most important or significant things that have been learned from our involvement in this assessment activity are listed below:

1. Students that have been involved in industry internships and/or have traveled to industry conferences as part of our extra-curricular clubs and activities have a much broader depth of knowledge of industry issues and/or problems. This result does not show up in the numerical data but rather is something that was apparent to those faculty members that were doing the evaluations in comparing the performance of the students that had this experience versus those that did not.
2. Our students have improved their oral communication skills significantly since the department first starting getting involved in outcomes assessment. The average score by semester clearly indicate this trend. When we first started this activity, the benchmark was 3.0 on a 4 point scale. The only time that we did not achieve that benchmark was for oral delivery during the first year of our revised activity. Over the years, we have raised our benchmark to 3.25 on a 4 point scale. We have individual group presentations fall below this benchmark in certain areas. However, during the last eleven semesters that we have conducted this assessment activity, the average scores for all of the presentations during each semester have exceeded the benchmark in every area that we evaluate.

**4. What changes, if any. do you recommend based on assessment data?**

The most significant changes that have been made in response to the outcomes assessment findings are described below. Most of these have been similar during a number of our previous reports as again assessment results continue to be consistent from year to year.

1. We completed a revision of our curriculum during the 2013-14 academic year. We also did some minor modifications during the 2017-18. We made some very significant modifications during the 2018-19 academic year. All of these curricular revisions were in response to assessment results and feedback that we received from our departmental advisory committee.
2. The farm laboratory continues to be a centerpiece of our animal sciences program. Having a group of faculty members that have both the experiences and the interest in staying engaged in the management of the farm laboratory units continues to be a major advantage for us versus other animal sciences programs in the state. Outcomes assessment results have not changed the direction of our program but rather continue to indicate to us the importance of this “hands-on” experiences for our students.
3. In the area of advising, we have made a number of changes. We formalized the assignment of advisors by option. We added group advising nights and also group advising sessions over the lunch hour. The Jordan College added an advising center and the written comments from students as part of the senior survey indicate the advising support by the center has been popular with students. We believe that all of these changes have improved the level of student success in the program.
4. We have continued to maintain the subject matter areas and scientific core courses that make up the real substance of our animal science core curriculum. Again in this area, we have not made major changes as assessment results have indicated to us that these areas were important and valuable to our students. In general, the students feel they have been adequately trained in these areas.
5. We have added student clubs in the area of Equine Science and also Animal Welfare and have also added an upper division core course in Animal Welfare and Handling. These clubs were added to increase involvement, knowledge and experiences in these industries. Our evaluations of the student presentations is what led us to the realization that these student clubs and extra-curricular activities enhance the program greatly.
6. We are encouraged by the improvements that our students have made in the area of communication and critical thinking skills.

**5. If you recommend any changes in your responses to Question 4 in last year’s assessment report, what progress have you made on implementing these changes? If you did not recommend making any changes in last year’s report please write N/A as your answer to this question.**

N/A

**6. What assessment activities will you be conducting in the 2019-20 academic year?**

A number of assessment activities that were included in our Student Outcomes Assessment Plan have not yet been formally conducted. We have conducted informal assessments during different semesters as part of the laboratory practicums in our lower division production courses. We have also conducted informal assessments as part of our advanced management courses. Neither of these assessment activities has been formalized to the point where assessment results can be summarized.

The two other assessment activities that have not been conducted are an alumni survey and an employer survey. We have been planning on conducting both of these activities the last few years, but have failed to follow thru and complete the activities. We began working on developing both survey instruments last year. Hopefully during the current year, we can finalize those instruments and complete these important assessment activities.

In addition, we will continue to conduct the senior exit survey and the assessments of the culminating project as part of our senior seminar course. With the addition of new faculty members, our hope is that we will have some additional energy that can be devoted in part to engagement in outcomes assessment activities. This has been the case with our graduate program as one of our younger faculty members has “stepped up” and assumed the role of assessment coordinator of our graduate program.

**7. What progress has been made on items from your last program review action plan?**

Described below are the changes that were made in response to the recommendations associated with our previous program review conducted in 2008. Our program was reviewed again during the spring 2019 semester. We have responded to that report and are waiting for the University Program Review Committees to issue their final reports in response to the review committee’s report and our department’s and the dean’s responses to that report.

**Increase level of involvement in outcomes assessment**. The program has increased the level of involvement in outcomes assessment activities significantly since 2008.

**Increase level of scholarly activity within the department.** The younger faculty members in our department are much more engaged in research activities and have improved significantly the level of scholarly activity in our program and the department.

**Increase use of current technology both in the classroom and on the farm laboratory.** Our programhas increased the use of new technology significantly both in the classroom and on the farm laboratory.

**Limit the growth of your program**. Although we did not respond favorably to this recommendation back in 2008, we now realize that we cannot continue to grow. We are presently serving approximately 800 majors in the department (animal sciences and agricultural education combined) with approximately the same number of tenure and tenure-track faculty that we had when our department had 250 majors. Fortunately, we have been able to add a significant number of both full time and part time lecturers and those people have been great additions to our faculty.

With impaction, we have been aggressive in setting higher enrollment requirements for our program. Enrollment numbers this fall indicate that we are now starting to decrease the numbers of incoming students. We have definitely noticed during the last 2 years that the quality of our incoming students appears to be improving significantly.

**Development of a Micro 20 course in the department**. We started the process of developing a microbiology course, but decided to not pursue the development any further. This decision was made because of the following two reasons: 1) cost of delivering such a course and 2) limited facilities in the Jordan College to deliver such a course.