

**Program Assessment Report  
DBCALFS ANSC BS Program  
University of Arkansas  
Academic Year 2019-2020**

**1. Animal Science Department, B111 AFLS, 575-3745**

**2. Department Mission:**

The Department of Animal Science shall be a leading authority of animal agriculture by means of innovative research, teaching and extension programs for all Arkansans and the world.

- 3. Program Goals:** The Department of Animal Science will 1) perform research from discovery to application that benefits the production efficiency, animal health/well-being, food safety/security, and sustainability of animal agriculture, **2) recruit, educate, and prepare for the future, a new generation of citizens that will provide expertise in food production, animal health/well-being, as well as human health and nutrition,** and 3) provide research-based livestock and forage information through non-formal educational methods for the sustainability and management of agricultural production systems to improve Arkansans quality of life.

**4. Student Learning Outcome #1**

Students will demonstrate an understanding of scientific knowledge and gain a basic foundation in the general animal sciences, including physiology, genetics, nutrition, muscle foods, as well as demonstrate production management skills

**A. Assessment Measure 1 – Direct**

- a. Not reported this year

**B. Assessment Measure 2 - Indirect**

- A self-assessment student survey was administered to graduating seniors to determine understanding and knowledge related to the animal sciences.
- A 26 question survey was developed by the student assessment committee. This survey was administered to outgoing seniors by appointment for fall graduating seniors. In the spring the invitations to participate had just been sent when campus was closed due to Covid-19. The survey was moved to Blackboard and invitations were sent for graduating seniors to participate. In total 5 students submitted surveys.
- An invitation to have an Exit Interview with the Department Head was also extended to survey participants.

Do you have a pre-professional/pre-vet concentration?      **2 (40%) Yes**

Do you have an equine concentration/minor?                      **2 (40%) Yes**

Of the 5 students there was 1 (20%) with a double major (HNHI); and there were 2 (40%) with minors (1 in AGBS, 1 in BIOL).

On a scale of 1 – 5, please rate your general competence in the areas listed below.

1 = I don't feel competent in this area; 5 = I feel I have a general competence in this area

	Area of Competence	Score (1-5)
1	Physiology	3.6
2	Genetics	3.8
3	Nutrition	3.6
4	Meat Production	2.6
5	Animal production management & animal welfare and sustainability practices	4.2
6	Animal handling, restraint and general animal care skills	4
7	Technical competency	3.8
8	Environmental consciousness	3.8
9	Ethical responsibility	4.2
10	Leadership ability	4.6
11	Oral communication	4.2
12	Written communication	4.6
13	Critical thinking/problem solving skills	4.4
14	Basic and applied research skills	3.4
15	Creativeness	4.2
16	Writing and presenting scientific information in a professional manner	3.4

**For Equine concentration/minor ONLY:**

17	Equine reproduction management	4.0
18	Fundamentals of equine care	4.0
19	Equine evaluation	4.0
20	Equine marketing	3.0

**For Pre-professional, Pre-vet ONLY:**

21	General knowledge of advanced disciplines of basic sciences and mathematics	5.0
22	Fundamentals of animal health	5.0

Have you applied to vet or grad school?

2 Yes (40%)

Have you been accepted to vet or grad school?

1 Yes (20% of total, 50% of applied)

If not attending grad/vet school, do you have an offer of employment? 2 Yes (50% of 4 respondents)

Post-graduation plans are asked about on the survey, in addition this year, because of low survey response rate, some faculty were asked about students' plans. The following schools into which students were accepted or companies that had offered them employment, were given:

Vet School/ Grad School	Employment
Oklahoma State	Amstutz Farm Camp
Univ. of Missouri	
Univ. of Tennessee	
Louisiana State University	
Kansas State Univ.	
Mississippi State Univ.	
Lincoln Memorial Univ.	
Midwestern Univ.	
Ross Univ.	
Univ. of Arkansas	
Univ. of Delaware	

6/22/2020

- On the survey, students were also given the opportunity to comment on content areas that they felt the ANSC department should improve and on strengths of the ANSC department.
  - Strengths:
    - 4 of 5 students had comments on some variation of the theme that the department was a warm, welcoming, friendly, family-like environment where faculty/advisors and staff were willing to assist students in any way possible. The professors/advisors were “Nurturing yet challenging, provides a span of classes with hands-on experience”.
    - The other identified strength was “great equine classes and great pre-professional classes”.
  - Areas for improvement:
    - Content areas where there students suggested improvements included Genetics, Parasitology, and Companion Animal Diseases; and a student requested “updated info for some of the older professors”.
    - A student was dissatisfied with advising.

For several years, the Department Head of Animal Science has conducted exit interviews with graduating seniors. This is a summary of five (of 35 students that applied for graduation through the Dean’s office; 14% of graduating seniors are represented in the comments below) vis-à-vis interviews conducted by the Department Head.

- Virtually all graduating seniors were complimentary of the quality of advising and instruction in the Department of Animal Science, and the availability of faculty and one-on-one care for students. They expressed that faculty and staff created a “family and home” atmosphere. The interviews showed that most students approved of overall quality of instruction, curricula design, staff interactions, and student satisfaction. Again this year, it was mentioned that there needs to be a greater effort to incorporate/overlap more with poultry science courses.
- Students particularly appreciate courses and activities where they get ‘hands on’ experience with livestock or in the laboratory. Some ‘favorite’ courses mentioned were: Diseases, Applied Nutrition, Animal Behavior, Comparative Veterinary Anatomy, and Equine-Assisted Activities and Therapy. Some difficult and/or ‘not favorite’ courses included Reproductive Physiology and Parasitology. Specific activities mentioned included: Livestock Judging Team, Ranch Horse Team, REPS (Recruiting, Educating, Promoting Scholars), Quadrathlon Team, and Honors/Undergraduate Research Projects.
- Most of the students interviewed did not take advantage of the study abroad/international experiences. Students’ main reasons for not getting involved included expense and time commitment. Students that did participate in study abroad thoroughly enjoyed it and would highly recommend to other students. Students were very complimentary of the Honors program and their Honors mentor. A few students suggested a more structured timeline of due dates and a need to improve overall communication from the Honors office.

- A majority of the exiting students interviewed had been accepted into veterinarian medicine schools, graduate programs or industry workforce.
- **In summary:**
  - Students are deeply appreciative of the atmosphere within the department.

#### 5. Student Learning Outcome #2:

Students will possess problem solving skills.

- Not reported this year.

#### 6. Student Learning Outcome #3:

Students will possess critical thinking skills and objectively make decisions about contemporary issues based upon scientific facts rather than emotion.

##### A. Assessment Measure 4 – Direct

- A rubric for **critical thinking** skills (a scale of 1 to 4, with 1 = Benchmark and 4 = Capstone) was developed and distributed to appropriate course instructors. This critical thinking rubric is within the Written and Oral Presentation rubrics (attached to report).
- Rubric was used to assess graduating seniors in ANSC senior level courses.
- Results: Scores for this rubric were returned by 3 faculty (for 5 courses).

Course	Number of Seniors	Mean Score	% students receiving a score of:			
			4	3	2	1
ANSC 4252	8	3.5	50%	50%	0%	0%
ANSC 4272 & 4652	9	3.44	56%	33%	11%	0%
ANSC 401V & 410V	2	3.5	50%	50%	0%	0%
<b>Total</b>	<b>19</b>	<b>3.47</b>	<b>52%</b>	<b>42%</b>	<b>5%</b>	<b>0%</b>

- **In summary:**
  - The target for the Department was that 70% of graduating seniors would score an average or above. In 2020, 94% of the students assessed with the rubric scored  $\leq 3$ , thus the department met this goal.

#### 7. Student Learning Outcome #4.

Students will demonstrate basic oral (Outcome 4a) and written (Outcome 4b) communication skills and demonstrate the ability to write and present information in a professional manner.

##### A. Assessment Measure 5 - Direct

- A rubric has been created to assess **oral communication** skills. It contains 6 performance areas with a 1 to 4 scale within each of those areas (attached to report).
- Rubric was used to assess graduating seniors in ANSC senior level courses.
- Results: Scores for this rubric were returned by 2 faculty (for 3 courses).

Course	Number of Seniors	Mean Score	% students receiving a score of:			
			4	3	2	1
ANSC 4252	8	3.8	100%	0%	0%	0%
ANSC 401V & 410V	2	3.62	50%	50%	0%	0%

<b>Total</b>	<b>10</b>	<b>3.22</b>	<b>90%</b>	<b>10%</b>	<b>0%</b>	<b>0%</b>
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- **In summary:**

- The target for the Department was that 70% of graduating seniors would score an 'average' or above. In 2020, 90% of the students assessed with the rubric scored  $\leq 3$ , thus the department met this goal.

#### B. Assessment Measure 6 – Direct

- A rubric has been created to assess **written communication** skills. It contains 6 performance areas with a 1 to 4 scale within each of those areas (attached to report).
- Rubric was used to assess graduating seniors in ANSC senior level courses.
- Results: Scores for this rubric were returned by 2 faculty (for 3 courses).

Course	Number of Seniors	Mean Score	% students receiving a score of:			
			4	3	2	1
ANSC 4272 & 4652	9	3.78	33%	67%	0%	0%
ANSC 401V & 410V	2	3.6	50%	50%	0%	0%
<b>Total</b>	<b>11</b>	<b>3.75</b>	<b>36%</b>	<b>64%</b>	<b>0%</b>	<b>0%</b>

- **In summary:**

- The target for the Department was that 70% of graduating seniors would score an 'average' or above. In 2020, 100% of the students have a score  $\leq 3$  and thus the department met this goal.

### 8. Overall Recommendations

There were greater than 70% of the seniors that were rated acceptable in critical thinking, and communication (both oral and written) skills based on the rubrics developed by the Assessment Committee. It was a challenge to gather this data from the ANSC seniors this year. After students left campus due to Covid-19, engaging them with a Blackboard survey proved fruitless.

### 9. Action Plan

At a teaching retreat in May 2019 a plan to add a senior capstone course to the department's curriculum was developed. A single senior capstone course, required for graduation, has been developed over this academic year and is scheduled to be taught in Fall 2022, ANSC 4993 -- Animal Science Capstone should be taught both fall and spring semesters after this initial offering. The degree plans for all concentrations within the Animal Science program were also revised and approvals for those revisions have been pursued this academic year. This capstone course will enhance our ability to collect the necessary data for the assessment report. The rationale is that this class is for students preparing to graduate with a degree in Animal Science regardless of concentration (pre-professional, equine or animal enterprise), and this course will meet Goal 6 and Learning Outcome 3.4 of the University General Education Core Curriculum. Students will be asked in this course to demonstrate and refine their ability to research, synthesize, integrate and apply knowledge developed throughout their undergraduate years.

<b>Performance Area</b>	<b>Capstone 4</b>	<b>Milestone 3</b>	<b>Milestone 2</b>	<b>Benchmark 1</b>
<b>Organization</b>	Organizational pattern (introduction, conclusion, sequenced material in the body, transitions) clearly/ consistently observable and make the presentation cohesive.	Organizational pattern (introduction and conclusion, sequenced material in the body, & transitions) clearly and consistently observable within the presentation.	Organizational pattern (introduction and conclusion, sequenced material in the body, & transitions) intermittent within the presentation.	Organizational pattern (introduction and conclusion, sequenced material in the body, & transitions) is not observable within the presentation.
<b>Central message</b>	Central message is compelling (precisely stated, repeated, memorable, strongly supported.)	Central message is clear and consistent with the supporting material.	Central message is understandable but is not often repeated and not memorable.	Central message can be deduced, but is not explicitly stated in the presentation.
<b>Delivery &amp; Preparedness</b>	Delivery techniques (posture, gesture, eye contact, expressiveness) make the presentation compelling. Speaker polished, confident, prepared and rehearsed.	Delivery techniques (posture, gesture, eye contact, expressiveness) make the presentation interesting. Speaker comfortable. Speaker satisfactorily prepared and rehearsed.	Delivery techniques (posture, gesture, eye contact, expressiveness) make the presentation understandable. Speaker tentative, adequately prepared and rehearsed.	Delivery techniques (posture, gesture, eye contact) detract from understandability of presentation. Speaker uncomfortable, read from notes, inadequately prepared.
<b>Style &amp; Timing</b>	Language choices imaginative, memorable, compelling and enhance the effectiveness of the presentation. Variety of supporting materials effectively utilized. Presentation length appropriate, met criteria.	Language choices thoughtful and generally support effectiveness of the presentation. Supporting materials were satisfactorily utilized. Presentation length appropriate and met criteria.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Supporting materials were adequately utilized. Presentation length was appropriate, met criteria.	Language choices are unclear and minimally support the effectiveness of the presentation, not appropriate to audience. Supporting materials were insufficiently utilized. Length was over or under the set criteria.
<b>Critical Thinking</b>	Accurately interprets evidence. Identifies the salient arguments pro and con. Thoughtfully analyzes and evaluates major alternative points of view. Draws warranted conclusions. Justifies results and procedures, explains assumptions and reasons.	Accurately interprets evidence. Identifies relevant arguments pro and con. Offers analyses and evaluations of obvious alternative points of view. Justifies some results, explains reasons. Fairmindedly follows where evidence and reasons lead.	Misinterprets evidence. Fails to identify strong, counter-arguments. Superficially evaluates obvious alternative points of view. Justifies few results, seldom explains reasons. Maintains or defends views based on preconceptions	Offers biased interpretations of evidence. Fails to identify/ dismisses relevant counter-arguments. Superficially evaluates alternative points of view. Argues using false/ irrelevant reasons. Defends views based on preconceptions.
<b>Problem Solving</b>	Constructs clear problem statement & multiple ways to solve problems. Thoughtful solution(s) proposed, elegant evaluation. Complete understanding of solution, reviews results thoroughly & specific consideration for further work	Problem statement adequate, some strategies apply. Proposal(s) indicate understanding, evaluations adequate. Implements solution on the surface, some consideration of further work needed	Begins to define problem, identifies only a single approach. Proposal doesn't address problem, evaluation brief. Implements solution but ignores relevant factors, little consideration of further work needed	Limited ability to define problem or strategies. Vague proposal, superficial evaluation. Does not directly address problem statement, superficial review of results
<b>Total Points</b>				

<b>Performance Area</b>	<b>Capstone 4</b>	<b>Milestone 3</b>	<b>Milestone 2</b>	<b>Benchmark 1</b>
<b>Context of and Purpose</b>	Demonstrates thorough understanding of context, audience & purpose. Responsive to assigned task(s). Focuses on elements of work	Demonstrates adequate consideration of context, audience and purpose and a clear focus on the assigned task(s)	Demonstrates awareness of context, audience, purpose and to the assigned task.	Demonstrates minimal attention to context, audience, purpose and to the assigned task(s)
<b>Content Development</b>	Uses appropriate, relevant and compelling content to illustrate mastery of subject, convey understanding, shaping the whole work.	Uses appropriate, relevant and compelling content to explore ideas within the context of the discipline and shape the whole work.	Uses appropriate and relevant content to develop and explore ideas through most of the work	Uses appropriate and relevant content to develop simple ideas in some parts of the work
<b>Disciplinary Conventions</b>	Demonstrates attention to and successful execution of a range of conventions particular to a specific discipline and/or writing task(s) including organization, content, presentation, formatting and style	Demonstrates consistent use of important conventions particular to a specific discipline and/ or writing task(s) including organization, content, presentation and stylistic choices	Follows expectations appropriate to a specific discipline and/ or writing task(s) for basic organization, content and presentation	Attempts to use a consistent system for basic organization and presentation
<b>Sources and Evidence</b>	Demonstrates skillful use of high quality, relevant sources to develop ideas that are appropriate for the discipline and genre of the writing	Demonstrates consistent use of credible, relevant sources to support ideas that are situated within the discipline and genre of the writing	Demonstrates an attempt to use credible/ relevant sources to support ideas that are appropriate for the discipline and genre of the writing	Demonstrates an attempt to use sources to support ideas in the writing
<b>Syntax and Mechanics</b>	Uses graceful language that skillfully communicates meaning to readers with clarity and fluency, virtually error free	Uses straightforward language that generally conveys meaning to readers. The language has few errors	Uses language that generally conveys meaning to readers with clarity, although writing may include some errors.	Uses language that sometimes impedes meaning because of errors in usage.
<b>Critical Thinking</b>	Accurately interprets evidence. Identifies the salient arguments pro and con. Thoughtfully analyzes and evaluates major alternative points of view. Draws warranted conclusions. Justifies results and procedures, explains assumptions and reasons.	Accurately interprets evidence. Identifies relevant arguments pro and con. Offers analyses and evaluations of obvious alternative points of view. Justifies some results, explains reasons. Fairmindedly follows where evidence and reasons lead.	Misinterprets evidence. Fails to identify strong, counter-arguments. Superficially evaluates obvious alternative points of view. Justifies few results, seldom explains reasons. Maintains or defends views based on preconceptions	Offers biased interpretations of evidence. Fails to identify/ dismisses relevant counter-arguments. Superficially evaluates alternative points of view. Argues using false/ irrelevant reasons. Defends views based on preconceptions.
<b>Problem Solving</b>	Constructs clear problem statement & multiple ways to solve problems. Thoughtful solution(s) proposed, elegant evaluation. Complete understanding of solution, reviews results thoroughly & specific consideration for further work	Problem statement adequate, some strategies apply. Proposal(s) indicate understanding, evaluations adequate. Implements solution on the surface, some consideration of further work needed	Begins to define problem, identifies only a single approach. Proposal doesn't address problem, evaluation brief. Implements solution but ignores relevant factors, little consideration of further work needed	Limited ability to define problem or strategies. Vague proposal, superficial evaluation. Does not directly address problem statement, superficial review of results
<b>Total Points</b>				