Annual Academic Assessment Report

(BS/POULTRY SCIENCE)

(May 15, 2025)

Report annually to the Dean of the college/school the following:

Results of analysis of assessment of Student Learning Outcome

***Assessment Measure 1*.** Students will demonstrate knowledge of the basic principles of production, anatomy, physiology, genetics, nutrition, health, and disease identification as related to poultry.

Pre-test/Post-test: Initially, this measure was assessed in the fall of 2024 for the freshman in POSC 1033. The average was 47%. The post-test was administered in POSC 4343 Poultry Nutrition spring of 2025 for seniors and the average was 82.3%. The average was 84.5 when the 3+1 students were excluded; some of their poultry courses may have been taken at their home university. The post-test showed significant growth amongst students between fall 2024 for lower-classmen and spring of 2025 for upper-classmen.

Table 1. Senior Exit Survey: Student Self-Assessment of Core Competencies

Curriculum Competence Areas							
Semester	Anatomy & Physiology	Genetics	Nutrition	Meat Bird Production	Animal Welfare	Poultry Processing	Food Safety
Spring 2025[1]	4.33	4.08	4.58	4.17	4.67	4	4.33
2021-2025	4.1	3.5	3.8	4.2	4.5	4.1	4.2

[1]n=6 respondents

Scale: 1=does not meet expectations, 2=needs improvement, 3=meets expectations 4=above average, 5=exceeds expectations

Summary and Conclusions: Self-assessment by recent graduates receiving a B.S. in Poultry Science from our department ranked their competency in all seven curriculum emphasis areas as “above average.” The combined data from 2021-2025 indicates that 5 of the 7 competencies are considered “above average” while the remaining 2 (genetics and nutrition) “meet expectations. However, in 2024-2025, these competency areas were also improved to similar levels as other competencies.

Table 2. Senior Exit Survey: Student Self-Assessment of Degree Program Satisfaction

	Degree Program Satisfaction Areas						
Semester	Curriculum	Advising	Faculty	Extracurricular Activities	Industry Interaction	Scholarships	Employment Opportunities
Spring 2025[1]	4.67	4.5	5	4.33	4.33	5	4.33
2021-2025	4.5	4.5	4.9	4.3	4.3	4.8	4.6

[1]n=6 respondents
Scale: 1=does not meet expectations, 2=needs improvement, 3=meets expectations
4=above average, 5=exceeds expectations

Summary and Conclusions: Self-assessment by recent graduates receiving a B.S. in Poultry Science from our department ranked their overall satisfaction rating with our degree program was easily rated between "above average" and "exceeds expectations" in all categories. Overall, these data indicate an high degree of satisfaction with the B.S. in Poultry Science degree program at the University of Arkansas. Furthermore, this data is consistent with the combined data 2021-2025.

Table 3. Senior Exit Survey: Student Self-Assessment of Core Competencies

Competence Area	Spring 2025	2021-2025
Technical Competency	3.33	3.9
Environmental Awareness	4	4.3
Ethical Responsibility	4.83	4.6
Leadership Ability	4	4.6
Oral Communication	4	4.4
Written Communication	4.67	4.7
Critical Thinking / Problem Solving	4.67	4.5
Basic / Applied Research Understanding	4.33	4.5
Creativity	4.67	4.4
Writing / Presenting Scientific Information	4.33	4

[1]n=6 respondents
Scale: 1=does not meet expectations, 2=needs improvement, 3=meets expectations
4=above average, 5=exceeds expectations

Summary and Conclusions: Self-assessment by recent graduates receiving a B.S. in Poultry Science from our department ranked their competency in these 10 interpersonal or communication skills between "above average" and "exceeds expectations" ratings with the exception of "Technical Competency" which rated as "meets expectations." The combined data

from 2021-2025 indicates that all areas are considered "above average" with the exception of Technical competency which rates 3.9 out of 5, or "meets expectations." More attention the technical aspects of the program can be improved moving forward, but it acceptable.

***Assessment Measure 2*:** Students develop critical-thinking skills that apply to issues and problems faced by the poultry industry.

POSC 4213 Integrated Poultry Management Systems—Capstone, Learning Outcome 6.1 (Spring, 2025)

Assessment rubrics: the semester ending capstone project, which integrates all course objectives into on final comprehensive project for each student, were assessed using POSC assessment rubrics for undergraduate oral presentations and undergraduate written papers.

Table 4. Capstone Oral Presentations

Student	Presentation Quality	Presentation Breadth	Response to Questions	Overall
1	2	2	2	2
2	3	3	3	3
3	3	3	3	3
4	2	2	2	2
Mean:	2.5	2.5	2.5	2.5

Scale: 1=Does not meet expectations; 2=meets expectations; 3=exceeds expectations
n=4

Table 5. Capstone Written Essay

Student	Essay Quality	Essay Quality and Style	Overall
1	3	2	3
2	3	3	3
3	3	3	3
4	3	3	3
Mean:	3.0	3.0	3.0

Scale: 1=Does not meet expectations; 2=meets expectations; 3=exceeds expectations
n=4

Summary and Conclusions: Mean rankings from the chosen rubrics for both individual student oral presentations for semester ending capstone projects in the Spring 2025 semester ranged between "meets expectations" and "exceeds expectations" categories (means exceeding 2.0 on a scale of 3 in all categories; average 2.5 in all categories). The written scores were all exceeding expectations with a mean score of 3. These results suggest that students were well prepared to master oral and written assignments in a capstone project.

Assessment Measure 3: Students will be able to communicate summaries of lab activities, interpret results of problem-solving activities and summarize results of research in written and oral communication.

POSC 4821 Seminar-Problem Solving (Spring 2025)

Module 3: Problem Solving & Communication on the Farm (Contract Producer / Service Tech)

Objective: Problem solving and communication involving potentially difficult dialogue. Students were placed by Dr. Caldwell into 2 groups of 3 or 4 students per group. Each group was presented a management related problem in the commercial live production environment that will require representatives of the production company (service tech) to implement solutions with the contract producer (family farmer). This problem was conceived and delivered to each group by an industry representative (live production manager) of a broiler integrator in NWA. On occasions, difficult dialogue resulted when the contract producer was asked to implement solutions to the observed problem that are either contradictory to normal operating procedures or require significant financial investment. In addition to problem solving, each group engaged in role play for either company personnel and/or family farmers (poultry growers). Deliverables: 1) Each group had individual members engage in difficult dialogue while role playing company personnel (e.g. broiler or breeder service techs) engaged in discussions with family farmers (growers) related to relevant issues currently facing the industry (house equipment, annual grower contracts, following biosecurity protocols, and other relevant SOPs); and 2) each student submitted a one-page written overview of the discussions from both perspectives. **Assessment rubrics:** for this module, POSC assessment rubrics for problem solving, oral communication, and written communication were used.

Table 6. Problem Solving Rubric

	Define Problem	ID Strategies	Provide Solutions	Evaluate Solutions	Implement Solutions	Evaluate Outcomes
Group 1	4	3	4	4	4	3
Group 2	4	3	3	4	4	4
Mean	**4**	**3**	**3.5**	**4**	**4**	**3.5**

Scale: 1=Benchmark; 2=Milestones (low); 3=Milestones (high); and 4=Capstone

Table 7. Oral Communication Rubric

	Organization	Language	Delivery	Supporting Materials	Central Message
Group 1	4	4	4	4	4
Group 2	4	3	4	4	4
Mean	**4**	**3.5**	**4**	**4**	**4**

Scale: 1=Benchmark; 2=Milestones (low); 3=Milestones (high); and 4=Capstone

Table 8. Written Communication Rubric

Student	Context and Purpose	Content Development	Genre	Sources and Evidence	Syntax and Mechanics
1	4	4	4	4	4
2	4	4	3	4	3
3	3	3	3	3	3
4	3	4	3	4	3
5	4	3	3	3	3
6	4	4	4	4	4
7	3	4	3	4	3
Mean	**3.57**	**3.71**	**3.28**	**3.71**	**3.28**

Scale: 1=Benchmark; 2=Milestones (low); 3=Milestones (high); and 4=Capstone

Module 4: Problem Solving & Communication in Further Processing or Health and Management

Objective: Problem solving, and communication related to further processing and food technology. Students were placed by Dr. Caldwell into 2 groups of 3 or 4 students per group. Each group was presented a problem to solve. Group 1 received a problem specific to an issue with product quality in a further processing facility dealing primarily with prepared poultry products for food service establishments in NWA. Group 2 received a problem stemming from management issues in a commercial live production facility that was affecting flock health. These problems required members of each group to solve the problem and recommend solutions to the company producing both products for the food service industry. Deliverables: 1) Each group was responsible for presenting a detailed assessment of the specific problem, identifying potential causes, recommending solutions to the company for correcting each problem, recommending strategies for implementing these solutions, and assessing the effectiveness of the proposed solutions; and 2) each student submitted a one-page written overview of the module.

Table 9. Problem Solving Rubric

	Define Problem	ID Strategies	Provide Solutions	Evaluate Solutions	Implement Solutions	Evaluate Outcomes
Group 1	4	4	4	3	3	4
Group 2	4	4	4	4	4	4
Mean	**4.0**	**4**	**4.0**	**3.5**	**3.5**	**4.0**

Scale: 1=Benchmark; 2=Milestones (low); 3=Milestones (high); and 4=Capstone

Table 10. Oral Communication Rubric

	Organization	Language	Delivery	Supporting Materials	Central Message
Group 1	4	4	4	4	4

Group 2	4	4	4	4	4
Mean	**4.0**	**4**	**4.0**	**4.0**	**4.0**

Scale: 1=Benchmark; 2=Milestones (low); 3=Milestones (high); and 4=Capstone

Table 12. Written Communication Rubric

Student	Context and Purpose	Content Development	Genre	Sources and Evidence	Syntax and Mechanics
1	3	3	3	3	3
2	4	4	4	4	4
3	4	4	4	4	3
4	4	4	4	4	4
5	3	4	3	3	3
6	3	4	4	4	3
7	4	4	4	4	4
Mean	**3.57**	**3.86**	**3.71**	**3.71**	**3.43**

Scale: 1=Benchmark; 2=Milestones (low); 3=Milestones (high); and 4=Capstone

Summary and Conclusions: Mean rankings from the chosen rubrics for both group oral presentations, group problem solving, and individual writing assignment for both problem-solving modules that were evaluated in the Spring 2025 semester ranged between "milestones (high)" and "capstone" categories. Improvements, even though slight, were observed from Module 3 to Module 4, indicating a improvement in student performance mastering problem solving, communication, and critical thinking at this stage in their academic career. This is also important since Module 4 contained more challenging problems compared to Module 3.

Any changes to degree/certificate planned or made based on the assessment and analysis

We will evaluate the technical aspects of the program to determine improvements that can be made.

Any changes to the assessment process made or planned.

A new category of "Industry Interaction" was included in the degree satisfaction survey. We strive to provide many opportunities for industry interactions for our students. This will provide us a measure of that satisfaction.