

Annual Academic Assessment Report

(BS/POULTRY SCIENCE)

(May 15, 2024)

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 2023 for the freshman in POSC 1033. The average was 43%. The post-test was administered in POSC 4343 Poultry Nutrition spring of 2023 for seniors and the average was 80.5%. The post-test showed significant growth amongst students between fall 2023 for lower-classmen and spring of 2024 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 2024 ¹	4.33	3.33	4.33	4	4.33	4.33	5

¹n=5 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 six of these seven curriculum emphasis areas as “above average” and one competence area as “meets expectation”. The lowest ranking area is in the discipline of Genetics with a 3.33, respectively, ranking for Spring 2024 graduates. However, this is an improvement over 2023 where both Poultry Nutrition and Genetics were considered between needs improvement and meets expectations. With a new instructor (new faculty member) for Poultry Nutrition (course taken Spring senior year), an improvement was observed. All of our other core areas (anatomy and physiology, meat bird production, animal welfare, processing, and food safety/microbiology)_were considered above average with several of the students surveyed considering these areas as exceeds expectations.

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

Degree Program Satisfaction Areas						
Semester	Curriculum	Advising	Faculty	Extracurricular Activities	Scholarships	Employment Opportunities
Spring 2024 ¹	4.33	4.67	5	4.67	4.67	5

¹n=5 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.

Table 3. Senior Exit Survey: Student Placement at Graduation

Placement Categories					
Semester	Number of Graduates (B.S. POSC)	Industry	Professional School	Graduate School	Uncertain
Spring 2024 ¹	12	7 (58%)	3 (25%)	1 (8.5%)	1* (8.5%)

Summary and Conclusions: Table 3 reports placement data for our May 2024 graduates receiving a B.S. in Poultry Science. All students have been placed either directly into positions in the commercial industry or they are pursuing post-graduate studies in either graduate school or professional school. The one senior identified in the “uncertain” category has one more class to complete and has not shared her career plans. As such, our “known” placement rate stands at 92% for the May class of 2024; however, 100% of the students completing degrees have placement in industry or in graduate school.

Table 4. Senior Exit Survey: Student Self-Assessment of Core Competencies

Competence Area	Spring 2024
Technical Competency	4
Environmental Awareness	5
Ethical Responsibility	4.67

Leadership Ability	5
Oral Communication	5
Written Communication	5
Critical Thinking / Problem Solving	4.67
Basic / Applied Research Understanding	4.67
Creativity	4.33
Writing / Presenting Scientific Information	4.33

¹n=5 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.

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, 2024)

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 5. Capstone Oral Presentations

Student	Presentation Quality	Presentation Breadth	Response to Questions	Overall
1	2	2	2	2
2	3	2	3	3
3	3	2	3	3
4	2	2	3	3
5	3	2	3	3
6	2	2	2	2
Mean:	2.5	2.0	2.7	2.4

Scale: 1=Does not meet expectations; 2=meets expectations; 3=exceeds expectations
n=6

Table 6. 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
5	3	3	3
6	3	3	3
Mean:	3.00	3.00	3.00

Scale: 1=Does not meet expectations; 2=meets expectations; 3=exceeds expectations
n=6

Summary and Conclusions: Mean rankings from the chosen rubrics for both individual student oral presentations for semester ending capstone projects in the Spring 2024 semester ranged between “meets expectations” and “exceeds expectations” categories (means exceeding 2.0 on a scale of 3 in all categories; range 2.0-2.7). 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 2024)

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 4 or 5 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 7. 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	3	3	3	3	4	4
Mean	3.5	3	3.5	3.5	4	3.5

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

Table 8. Oral Communication Rubric

	Organization	Language	Delivery	Supporting Materials	Central Message
Group 1	4	3	4	4	4
Group 2	4	3	4	4	4
Mean	4	3.0	4.0	4	4

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

Table 9. Written Communication Rubric

Student	Context and Purpose	Content Development	Genre	Sources and Evidence	Syntax and Mechanics
1	4	4	3	4	3
2	3	4	3	4	3
3	3	3	3	3	3
4	3	3	3	3	3
5	3	3	3	3	3
6	4	4	4	4	3
7	3	4	3	4	3
8	4	3	3	3	3
9	3	3	3	3	3
Mean	3.33	3.44	3.11	3.44	3

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 4 or 5 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 10. 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	3	4	4
Mean	4.0	4	4.0	3	3.5	4.0

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

Table 11. 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	3	4	3
4	4	4	4	4	4
5	3	4	3	3	3
6	3	4	4	4	3
7	4	3	4	4	3
8	3	4	4	3	3
9	4	4	3	3	4
10	4	4	4	4	4
Mean	3.6	3.8	3.6	3.6	3.4

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 2024 semester ranged between “milestones (high)” and “capstone” categories. There was not only an improvement from Module 3 to Module 4, but an overall improvement over 2023, indicating a improvement in student

performance mastering problem solving, communication, and critical thinking at this stage in their academic career.

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

None at this time.

Any changes to the assessment process made or planned

We will evaluate a 3 to 5 year average in the core competencies in the next report.