

Annual Academic Assessment Report

(MS/Agricultural Economics and Agribusiness)

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Contact: Dr. Lanier Nalley lnalley@uark.edu 575-6818

Results of Analysis of the Assessment of Student Learning Outcome

Program Goals: Thesis MS

Given that the majority (>90%) of students in the AgEcon MS program are on a thesis track (thus research-oriented), one output metric can be measured in the form of peer-reviewed publications and peer-reviewed professional presentations by graduate students in AGECEC.

Student Learning Outcomes: Acceptable and Ideal Targets

- Students should strive to create quality research that is not only found acceptable for a departmental thesis defense but presentable to a wider academic audience.
- Acceptable: 33% of the graduate cohort present a referred presentation or publish in a refereed journal article each calendar year.
- Ideal: 50% of the graduate cohort present a referred presentation or publish in a refereed journal article each calendar year.

Key Personnel

- MS Theses Advisors (AgEcon Faculty)

Summary of Findings.

There were 14 journal articles published in 2024 with students from the 2024 AGECEC cohort as an author. This would mean, on average, that 42% of the cohort had a journal article published last year, surpassing our ideal target assessment of 33% of grad students having *either* a professional presentation or a peer-reviewed publication. Given that the average thesis student is enrolled in our program for two years, this metric would suggest that, on average, we would have 84% of MS students publishing one article during their time at the UofA.¹ There were 35 peer-reviewed professional presentations with students from the 2024 cohort as an author/co-author. This would mean that, on average, each student presented 1.15 peer-reviewed presentations, well above our ideal target of 50%.

Table 1. Research output by 2024 AGECEC MS cohort.

Metric	Number*	% of Cohort with Output**
Peer-Reviewed Publications	14	42%
Peer-Reviewed Presentations	35	115%

*Total number represents those students who may have multiple outputs for an individual metric.

**Average number of graduate students in 2024 was 30.3 between all three semesters.

Use of Results

- While the metrics above suggest the graduate program is above the ideal target of 50% of graduate students having either a professional presentation or a peer-reviewed publication, there is still room for improvement. Professors in the AgEcon department who teach graduate courses and require a project are now being encouraged to help students turn those projects

¹ This ceiling is less than 100% as roughly 10% of our graduate student cohort is non-thesis, indicating that they do not conduct research while pursuing their MS degree.

into tangible academic outputs, mainly through submissions to professional conferences.

Program Goals: Non-Thesis MS

Student Learning Outcome: Acceptable and Ideal Targets

Key Personnel

- AGEC faculty who teach graduate courses.
- All non-thesis students must pass a comprehensive, two-hour written exam only after completing AGEC 5103 and AGEC 5403. Students who enter the domestic non-thesis program will follow these procedures:
 - Students must answer four questions.
 - Part I consists of questions about the materials presented in AGEC 5103 and AGEC 5403. Students must answer both questions.
 - Part II consists of three questions, each related to the marketing, finance/management, and policy courses. Students must answer two questions, each from a different area. For example, a student cannot choose two policy questions; instead, he/she must choose a question from the policy area and one other area.
 - Students are only allowed to answer questions for classes they completed for credit during their graduate studies. If a student took a split-level course during their undergraduate studies at the University of Arkansas, they are not permitted to answer that question on the comprehensive exam
- Overall Exam Score Metrics:
 - **Pass Score ≥ 1.75**
 - **Marginal Performance $1.74 \geq \text{Score} \geq 1.0$.** Implies a retake on areas of poor performance, which are on questions with a score(s) less than 2.0. Students who score less than a 2.0 on any question must redo that topic question (which could be a different question based on the professor's preference) if their overall score is 1.74 or less. Students who score 1.0-1.74 have the option to retake the exam within three weeks or they can wait until the next semester. Upon retaking the exam, if the new scores on the questions that required a retake are not high enough to bring the total exam score ≥ 1.75 , the student will again have to retake question(s) that were less than 2.0 when the exam is offered the next semester
 - **Fail Score < 1.0 .** Anyone who scores less than 1.0 is required to wait until the next semester to retake the entire exam.
- Acceptable: An average of 80% of non-thesis students will have an average above 1.75 on the comprehensive exam.
- Ideal: An average of 50% of non-thesis students will have an average above 2.0 on the comprehensive exam.

Summary of Findings

- The average comprehensive exam scores for the two non-thesis students in 2024 were 2.6 (both scored this). This would indicate that 100% of the AGEC non-thesis students achieved the ideal goal in 2024.

Use of Results

- Unlike thesis students whose program culminates in a thesis defense, non-thesis students must pass a comprehensive exam to graduate. Non-thesis students' average comprehensive exam scores have increased from 2.06 in 2021 to 2.6 in 2024, a sign of improvement
- A concerted effort was put forth in 2024 to go over, in detail, the comprehensive exam with non-thesis students during graduate student orientation to be the impetus of them thinking about this exam from their first day on campus. This will continue moving forward in the AEAB graduate program orientation.

Program Goals: Thesis MS

The Oral Communication Rubric was utilized for 14 students presenting their final thesis results (Defense). The students were evaluated by the professors constituting their committee (a total of 14 evaluations were submitted by faculty; the number of evaluators ranged from two to five: committees consist of a minimum of three members, but not all faculty submitted their assessment). The results are below

Table 4. Thesis Oral Presentation Summary results

	Excellent (4)	Above Average (3)	Average (2)	Needs Improvement (1)	Average student score on a 1-4 scale
Organization	33	13	1		3.68
Language	33	15			3.79
Delivery	34	12			3.74
Supporting Material	20	22	5		3.32
Central Message	30	16	1		3.62

- The majority of thesis students are performing “above average” or higher.
- The Problem-Solving Rubric was utilized for 14 students presenting their final thesis results (Defense). The students were evaluated by the professors constituting their committee (a total of 14 evaluations were submitted by faculty; the number of evaluators ranged from two – five: committees consist of a minimum of three members but not all faculty submitted their assessment). The results are below

Table 5. Thesis Students' Problem-Solving Summary results

	Excellent (4)	Above Average (3)	Average (2)	Needs Improvement (1)	Average student score on a 1-4 scale
Define Problem	31	8	5		3.59
Identify Strategies	26	13	4		3.51
Propose Solutions / Hypotheses	28	14	2		3.59
Evaluate Potential Solutions	23	16	5		3.41
Strategy to Implement Solution	23	19	2		3.48
Evaluate (Potential) Outcomes	27	9	7		3.47

- The majority of thesis students are performing "above average" or higher.

The Written Communication Rubric was utilized for 14 students presenting their final thesis results (Defense). The students were evaluated by the professors constituting their committee (a total of 14 evaluations were submitted by faculty; the number of evaluators ranged from two to five: committees consist of a minimum of three members). The results are below.

Table 6. Thesis Written Communication Summary results

	Excellent (4)	Above Average (3)	Average (2)	Needs Improvement (1)	Average student score on a 1-4 scale
Contest and Purpose	21	15	6	2	3.25
Content Development	20	19	5	1	3.29
Genre & Disciplinary Conventions	27	14	3		3.55
Sources & Evidence	18	23	3		3.34
Control of Syntax	26	13	5		3.48

- The majority of thesis students are performing "above average" or higher.

Program Goals: Combined Thesis and Non-Thesis evaluation

Core content exam

- All students (thesis and non-thesis) are required to take Microeconomics Principles (AGEC 5103-Huang) and Quantitative Methods (AGEC 5403-Nalley). Students will be examined on key concepts at the beginning and again at the end of the semester for each class.
- The course instructor will directly evaluate this.
- The change in percentage correct will be reported

Student Learning Outcome: Acceptable and Ideal Targets

- Acceptable: Students will show an average increase of 20% after taking the course, i.e. on average, students will correctly answer 35% of the questions at the beginning of the course and 55% or better by the end of the course.
- Ideal: Students will show an average increase of 40% after taking the course, i.e. on average, students will correctly answer 35% of the questions at the beginning of the course and 75% or better by the end of the course.

Summary of Findings.

- For the Fall 2024 term, all students in AGEC 5103 Microeconomics principles were administered the basic content quiz at the beginning of the semester and again at the end of the semester. The average result on the quiz was 51% correct at the beginning of the semester and 94% at the end of the semester. The average score improved by 43% points.
- For the Spring 2024 term, all students in AGEC 5403 Quant Methods for AGEC were administered the basic content quiz at the beginning and again at the end of the semester. The average result on the quiz was 25% correct at the beginning of the semester and 84% at the end of the semester. The average score improved 59% points.

Program Goals: Mastery of course subject matter

- Students will be assessed how well they comprehend material in their course of study.
- The course instructor will indirectly assess students.
- Students will be given a series of assignments, exams, and/or projects to demonstrate their knowledge of key Agricultural Economic Concepts and ability to use the appropriate concepts in a given situation.
- Students will be assessed grades based on their demonstrated mastery of core concepts and appropriate use.

Student Learning Outcome: Acceptable and Ideal Targets

- Acceptable: At least 50% of the students should complete their course of study with a GPA average above a 3.75 GPA on a 4.0 scale.
- Ideal: At least 75% of the students should complete their course of study with a GPA average above a 3.33 GPA on a 4.0 scale.

Summary of Findings.

- As seen in the table below, students averaged over 3.33.

Type of MS Student	Number of Students	Average GPA
Total	35	3.84 (98% > 3.33; 74%>3.75)
Thesis	30	3.85 (100% > 3.33; 73%>3.75)
Non-Thesis	5	3.80 (89% > 3.33; 77%>3.75)

- **Any changes to degree/certificate planned or made on the basis of the assessment and analysis**
None
- **Any changes to the assessment process made or planned.**
None