

Program Assessment Report Undergraduate Program
Department of Agriculture Economics and Agribusiness
University of Arkansas
2020-2021

Program: **Agriculture Economics and Agribusiness**

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A. Goals

To be the premier agricultural business and applied economics program in Arkansas, provide concentrations and specializations that are responsive to the needs of both students and industry stakeholders, and prepare students for success in the global marketplace.

B. Expected Outcomes

We expect all graduates to have the following skills and competencies:

1. Understand the fundamental principles which describe how markets operate in an economy
2. Ability to comprehend and analyze firm-level problems using basic economic principles, particularly those problems of businesses in the agricultural sector
3. Have the necessary written and oral communication skills to explain economics concepts
4. Have a working understanding of basic quantitative analysis tools and an ability to analyze data
5. Understand the impacts of government policies and general economic conditions on firms, markets and institutions
6. Be prepared for work in agribusiness or for a program of graduate/professional education.

C. Program Assessment

The continued growth of the undergraduate research program is critical to quality educational experiences and in developing leaders for the future. Below are the means in which the programs are assessed.

1. Student performance in courses
2. Curriculum review
3. Electronic survey of all graduating seniors
4. Confidential exit interviews with Department Head
5. Course/instructor teaching evaluations
6. Periodic feedback from alumnae

D. Analysis of Results

1. Student performance. Average enrollment in all undergraduate AGEC courses remains high. Undergraduate classes average 60 students fall 2020 semester and 67 spring 2021 semester. The enrollment numbers may have peaked after several years of increases. Student performance was assessed by each instructor based on a combination of homework assignments, class projects, papers/presentations, and quizzes/exams. This combination of performance measures enabled each instructor to assess the student's ability to: (a) Grasp fundamental principles and how to apply them to problem solving (papers, projects); (b) Analyze data and apply quantitative tools (homework assignments); and, (c) Master written and oral communication skills, both individually and in a team environment (papers, presentations, projects). Exams in each course provided instructors with a concise measure of each student's ability to successfully master course content including principles, problem-solving skills, and ability to communicate. The average grade point average for undergrads is a 3.05.

Assessment of Social Science Core Curriculum Courses

AEAB conducts student assessment of performance in the two campus core courses it teaches, AGEC 1103 (Principles of Agriculture Microeconomics) and AGEC 2103 (Principles of Agriculture Macroeconomics). The assessment consists of ten multiple choice questions asked on the final examination in each class. This assessment commenced in Fall 2009 and continues to the present. Class averages on the ten multiple choice questions in AGEC 2103 have ranged from 48% to 68%. The ten questions asked in AGEC 2103 range from basic to very difficult. The class averages on the ten multiple choice questions in AGEC 1103 have ranged from 58% to 86% and cover a similar range of level of difficulty. There is a gap in the data for AGEC 1103 due to the departure of a faculty member in late 2013, and data from 2014 are not available. As would be expected, students do very well on the simple questions and do less well on the more difficult questions. Although efforts are made continually to improve student performance, the faculty are of the opinion that the range of difficulty is a good measure of the level for teaching the course. Since student abilities and aptitudes vary greatly across any given class, the faculty are more interested in uniform shifts up or down in the range of responses. Clearly, substantial, across-the-board improvement would likely lead to a more rigorous treatment of the subject.

Pre-and Post-Agribusiness Assessment Quiz

AEAB also conducts a set of questions which serve as a general program assessment. These ten questions are pulled from core and elective courses in our Agribusiness Major. Students are asked to take the assessment quiz as college freshmen in AGEC 1103 before studying the materials; then they are tested on the materials again to evaluate gain in knowledge in the subject matter being evaluated. In the following table, the "Baseline" group (n=75) is made up of students from the Fall 2020 offering of AGEC 1103. Group 1 (n=45) represents students who are juniors or seniors and have taken our core courses and some of our upper division electives. This assessment was conducted as an unannounced,

“pop” quiz in both groups. As the table shows, the average percent correct on the assessment for the Baseline group this academic year was about 35%, while Group 1 answered 83.1% correct. This indicates positive knowledge gain throughout our students’ time in our Agribusiness Program. The assessment questions can be found in the Appendix.

Table 1. Percent Correct on Ten Program Assessment Questions

	Group 1 n=45	Baseline n=75
Q1	81.9%	44.0%
Q2	69.4%	18.7%
Q3	91.1%	46.7%
Q4	97.8%	54.7%
Q5	80.0%	20.0%
Q6	65.3%	16.0%
Q7	84.5%	49.3%
Q8	73.6%	26.7%
Q9	88.9%	20.0%
Q10	98.5%	53.3%
Mean	83.1%	34.9%

Assessment of Written and Oral Communication Skills

AEAB also assessed the written and oral communication skills of our students in the AGE 401V - Internship in Agribusiness course, which is part of a new requirement in our curriculum known as the Capstone Requirement. General Education Curriculum Goal 6 is accomplished in the course, partly by the completion of a 1,250 word essay and an oral presentation. The faculty member instructing the course evaluated student essays and oral presentations by use of the rubric attached in the appendix. The students’ performance on the essay and oral presentation are used here to assess the written and oral communication skills of students in the AEAB. Seven students (all seniors) were enrolled in the Agribusiness Internship course during the fall semester; however, going forward, we will collect these data during all semesters, including the summer, and have a more robust sample of our students. Assessment scores are reported in Table 2.

Table 2. Written and Oral Communication Assessment

	Written n=7	Oral n=7
Mean	3.43	3.57
Minimum	2	2
Maximum	4	4

Note: student performance was rated on a scale of 1 to 4 (see appendix for details)

Based on the limited data available for the written and oral communication assessment, the data showed that, on average, our students are performing at the 3-Milestone and 4-Capstone level in both written (mean=3.43) and oral (mean=3.57) communication by the time they are seniors enrolled in our Agribusiness Internship course.

2. Curriculum review. As noted in the Degree Changes section below, we have added courses and made changes to the curriculum in response to the UA General Education Curriculum that went into effect in the fall of 2020. We have continued to add additional sections of online courses to help provide added flexibility for our students.
3. Exit interviews and electronic surveys. For several years, the Department Head of Agricultural Economics and Agribusiness has conducted confidential exit interviews with selected graduating seniors. Virtually all graduating seniors were complimentary of the quality of advising and instruction in the Department of Agricultural Economics and Agribusiness and the genuine one-on-one care of the faculty for students. Since the 2009-2010 academic year AEAB has conducted an on-line survey of all graduating seniors to supplement the exit interviews.

Data from the Qualtrics Undergraduate Exit Survey indicate students view the program as having high academic value. AEAB courses were commonly among those listed as most valuable across the curriculum and none were listed among the least valuable. This points to high quality instruction amongst the department's faculty. Most students participating in the Agricultural Business Club rated the experience favorably. The Agricultural Business Club is the department's registered student organization. Nearly 70 percent of graduating students had a job lined up at the time of the survey. This demonstrates the value of coursework in preparing students for careers. The vast majority of these careers were related specifically to the major. Among the courses students perceived to be most valuable were those that had specific career-focused skill sets at their center. Students completing an internship rated the experience as extremely valuable.

4. The Department takes pride in its advising. Students can expect a personal touch in the advising they receive from the department. We target 1-20 student advisees per faculty member. The addition of two instructors in recent years has allowed us to keep faculty advising to manageable numbers. The Dean's Office has professional academic advisors that assist the department with undergraduate advising. These staff members advise all entering freshmen and transfer students until students have accumulated 60 credit hours. Students are transitioned to faculty advisors for their junior and senior years.
5. Teaching evaluations. Course and instructor evaluations were conducted for each course to assess quality of instruction and course content. Summary data forwarded to the Department Head and feedback are shared with faculty during their annual evaluations. Each faculty member may view a copy of the student evaluations to assist in preparation of future classes.

6. Alumnae feedback. We invite alumnae to visit with faculty and students at fall and spring social events and for special occasions throughout the year. We have implemented a new on-line questionnaire for graduating seniors to get feedback on their experiences and to collect data to facilitate future communication with these new alumnae. We send an electronic newsletter to alumni and stakeholders 3-4 times a year. We receive comments and other feedback on items that appear in the newsletter.

E. Changes to Degree Program

Enrollment growth of the past few years has increased average class size and has created difficulties for student class scheduling. We have continued to address our growing program by making a number of changes. First, we have reduced the number of specifically required courses and grouped courses requiring students to take one or two of a group of three or four courses emphasizing main topic areas such as agricultural finance and management; agricultural policy; and agricultural marketing rather than one or two specific courses. Second, additional teaching resources have allowed us to offer some higher-level courses twice a year rather than once a year. Finally, we have continued to develop a robust online program to give our students many options during the summer sessions to continue working on their degree requirements. We are continuing to explore ways in which to expand our online footprint in the department.

General Education Curriculum Changes

Effective Fall of 2020, our curriculum changed to incorporate the new UA General Education Curriculum. The biggest change to our curriculum as a result was the creation of a Capstone Experience requirement. All students must complete either an Agribusiness Internship (AGEC 401V) or our new course AGEC 4041 - Agribusiness Capstone, to fulfill the Capstone Requirement. The Capstone Requirement fulfills Goal 6 of the General Education Curriculum.

F. Changes to Assessment Process

We implemented an on-line questionnaire for graduating seniors to supplement the traditional exit interview system. This on-line survey is conducted at the end of every academic term and up-dated as needed. We have used the results of this survey to guide the program changes noted above. We added one question to our program assessment quiz, which now contains ten questions from various core and elective courses from our program. We used data from our Agribusiness Internship course for the first time to evaluate the written and oral communication skills of our students. Going forward, we plan to use data from both of our Capstone Experience courses to better evaluate the written and oral communication skills of our junior and senior students.

Appendix - AEAB Program Assessment Questions

Instructions: Choose the one alternative that best completes the statement or answers the question.

1. **A call option is said to be “in the money” when**
 - a. the strike price is above the futures price
 - b. **the strike price is below the futures price*
 - c. the futures contract has expired
 - d. the futures contract enters the month of maturity
2. **An import tariff shifts**
 - a. the excess demand curve up
 - b. the excess supply curve up
 - c. **the excess demand curve down*
 - d. the excess supply curve down
 - e. both the excess supply and excess demand curve up
3. **If the income elasticity of demand is -0.5**
 - a. the good is a normal necessity
 - b. **the good is inferior*
 - c. the good is a normal luxury
 - d. the good is a substitute in consumption
4. **The accounting equation states that assets equal liabilities plus**
 - a. depreciation expenses
 - b. accounts receivable
 - c. **equity*
 - d. current-period debt payments
 - e. accrued interest
5. **The quick ratio is computed as**
 - a. total assets to total liabilities
 - b. **current assets less inventories to current liabilities*
 - c. total liabilities to total equity
 - d. total income before taxes to total assets
 - e. current interest to current assets
6. **Trade occurs because**
 - a. of trade disputes
 - b. **autarky prices differ*
 - c. of tariffs imposed by the exporting country
 - d. of good will between two countries
 - e. of political stability
7. **Which best describes a monopsony?**
 - a. A single seller
 - b. An organization with a single headquarters location
 - c. **A single buyer*
 - d. A single regulatory body
8. **Which is the best example of third-degree price discrimination?**
 - a. **student discounts at a movie theater*
 - b. bundle pricing
 - c. access fees
 - d. both (b) and (c)
9. **Which would make both “at-the-money” put and a call options more valuable?**
 - a. an increase in the interest (discount) rate
 - b. **an increase in volatility*
 - c. an increase in the futures price
 - d. passage of time
10. **The rate of return on assets (ROA) uses a ratio to measure a firm’s:**
 - a. liquidity
 - b. solvency
 - c. repayment capacity
 - d. **profitability*

Rubric for assessing written assignments				
Performance Area	Capstone 4	Milestone 3	Milestone 2	Benchmark 1
Context of and Purpose	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)
Content Development	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
Disciplinary Conventions	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
Sources and Evidence	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
Syntax and Mechanics	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.
Critical Thinking	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.
Problem Solving	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
Total Points	40	35	30	25

Rubric for assessing oral presentations				
Performance Area	Capstone 4	Milestone 3	Milestone 2	Benchmark 1
Organization	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.
Central message	Central message is compelling (precisely stated, repeated, memorable, and 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.
Delivery & Preparedness	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.
Style & Timing	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.
Critical Thinking	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.
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