



# Agricultural and Applied Economics (AAE) 625

## *Agribusiness Economics & Management*

### 1. Administrative Details

Credits:	3
Instructional mode:	Lecture
Day & Time:	Tues/Thurs, 1:00 pm – 2:15pm
Semester:	Spring
Dates:	January 21 – May 2, 2025
Room:	Taylor Hall 103
Instructor:	Jing Yi, PhD
Contact:	<a href="mailto:jing.yi@wisc.edu">jing.yi@wisc.edu</a>
Office:	Taylor Hall Room 218
Office hours:	Tues/Thurs (2:15 – 3:15 pm) or by appointment
Class website:	Canvas
Course designations attributes:	50% graduate coursework
Instructional mode:	Face-to-face
Requisites:	ECON 301 or ECON 311 and AAE 335 (or AAE graduate/professional standing)

Feel free to reach out to me by email if you have any questions or concerns. I'll do my best to respond within 24 hours, so don't hesitate to send a follow-up if you don't hear back from me in that time. You're also welcome to drop by during my office hours—I'd love to chat and help out.

### 2. Course Description

This course offers a practical learning experience in managerial economics and business analysis, designed for both the agribusiness sector and the broader business world. It integrates fundamental economic theories with advanced analytical techniques to empower students with the skills necessary to make informed decisions in the dynamic field of business management. The course places a strong emphasis on acquiring job-relevant skills and provides a comprehensive understanding of managerial principles, advanced quantitative analysis, and hands-on data analytics using cutting edge industry tools.



### 3. Learning Objectives & Outcomes

This elective course is specifically designed for students in the Agricultural and Applied Economics (AAE) Professional Option master's program (MSPO) that want to gain a deeper understanding of agribusiness management in the U.S., and learn to apply theories from agricultural and managerial economics in agricultural businesses. It is also open to other graduate-level AAE students and upper-level AAE/ABM undergraduates that have taken intermediate microeconomics (or the equivalent) and at least one class that covers spreadsheets (e.g., *AAE 335: Introduction to Data Analysis in Excel*).

#### **Student Learning Outcomes:**

By the end of the course students should be able to:

- Interpret financial statements and calculate and analyze a variety of important financial ratios used in making managerial decisions.
- Examine an agricultural business to determine its strengths, weaknesses, and opportunities for improvement.
- Explain the profit function and how to determine areas of profit maximization and cost minimization.
- Evaluate various investment and competition strategies.
- Acquire practical skills relevant for careers in applied economics and agribusiness.
- Gain a deep understanding of managerial economics and its applications.
- Master quantitative and analytical techniques essential for data-driven decision-making.
- Develop confidence and proficiency in Python, SQL, R, and Tableau for business data analysis.
- Learn to present data and findings effectively to inform business strategies.

### 4. Textbook & Software

#### 4.1 Recommended Textbooks

[Agribusiness Management \(6<sup>th</sup> edition\)](#)

[Introduction to Agricultural Economics \(7<sup>th</sup> edition\)](#)

[Managerial Economics: Theory, Applications and Cases \(8<sup>th</sup> edition\)](#).

We will use Microsoft Excel, Python, SQL, and [Tableau](#) for our assignments in this course.

Note: Excel is available to download for free from the [UW Campus Software Library](#). You will also need to download Microsoft Word and PowerPoint, which should download together in the Microsoft 365 suite. A basic understanding of Excel is necessary to succeed in this course.



## 5. Course Requirements & Grading

The distribution of points for your final grade:

Quizzes (4)	20% (5% each)
Take-home Assignments (5)	30% (6% each)
Mid-term	25% (Undergraduate)
Final exam	25% (Undergraduate)
	<u>Total:</u> 100%

Grades will be assigned as follows:

A	94% - 100%
AB	87% - 93%
B	80% - 86%
BC	74% - 79%
C	68% - 73%
D	60% - 67%
F	< 60%

- *Late Assignments:* Late assignments receive a 10% deduction of the total grade for each day that they are turned in past the deadline up to three days.
- Each student is allowed one instance of a late submission without penalty. This grace period allows for a delay of up to 12 hours after the original deadline.

## 6. Course Outline

Module 1: Course Introduction and Setup

- Course introduction: Objectives and syllabus overview
- Overview of industry tools:
  - Excel, Python, SQL, Tableau, and GitHub

Module 2: Introduction to Agribusiness Management & Managerial Economics: Scope, Functions, and Tasks (AM Part 1&2)

- The business of agribusiness
- Managing the agribusiness
- Economics for agribusiness managers
- Organization and context

Module 3: Marketing Management and Consumer Behavior (AM Part 3)

- Theory of consumer behavior and market segmentation.



- Empirical methods and marketing analytics for marketing decision tools: Elasticity analysis, regression analysis, forecasting, A/B testing, advertisement outcome analysis.

#### Module 4: Financial Management and analysis (AM Part 4)

- Understanding financial statements.
- Analyzing financial statements.
- Financing in agribusiness.
- Tools for evaluating operation and investment decisions.

#### Module 5: Operations Management for Agribusiness (AM Part 5)

- Production planning and management
- Supply chain management for agribusiness

#### Module 6: Human Resource Management for Agribusiness (AM Part 6)

- Supply chain management in agribusiness: From farm to market.
- Data-driven supply chain analysis

#### **Optional:**

##### Module 7: Data Analysis and Decision-Making Tools

- Data cleaning and preprocessing: Handling missing data, outliers, and noise.
- Descriptive statistics and data exploration techniques in agribusiness.
- Predictive analytics: Machine learning algorithms for agribusiness data.
- Prescriptive analytics: Decision-making under uncertainty, scenario analysis.

##### Module 8: Data Visualization and Reporting

- Principles of effective data visualization: Choosing the right charts and graphs.
- Interactive dashboards with Tableau: Designing for agribusiness stakeholders.
- Data storytelling for agribusiness: Crafting narratives from data insights.
- Reporting and presenting data findings: Persuasive communication strategies.

##### Module 9: Financial Markets and Instruments in Agribusiness

- Credit and banking for agribusiness: Interest rate analysis and loan structuring.
- Fraud analysis and default prediction: Data-driven approaches for financial security.
- Investment analysis and portfolio management in agribusiness.



## 7. How Course Hours are Met by the Course

In accordance with the [UW-Madison Credit Hour Policy](#) (b), it is expected that students in this course will engage in at least 135 hours of learning activities (45 hours per credit). For this course, that includes 3.0 hours per week in lecture (45 total hours), 30 hours total on assignments (10 hours on each assignment), 3.0 hours per week reading and studying the lecture notes, textbooks or other outside materials in preparation for class participation and quizzes (45 total hours), and 1.0 hour per week (on average) preparing for the final presentation and the final exam (15 total hours).

## 8. Regular and Substantive Student-Instructor Interaction

This course provides two 75-minute live instructor-led face-to-face lectures per week throughout the semester. The instructor will provide students with qualitative feedback on assignments, quizzes and the final project and presentation. Additionally, the instructor will facilitate group discussions periodically and lead in-class practice problems as part of the lecture period.

## 9. Academic Integrity

By enrolling in this course, each student assumes the responsibilities of an active participant in UW-Madison's community of scholars in which everyone's academic work and behavior are held to the highest academic integrity standards. Academic misconduct compromises the integrity of the university. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these acts are examples of academic misconduct, which can result in disciplinary action. This includes but is not limited to failure on the assignment/course, disciplinary probation, or suspension. Substantial or repeated cases of misconduct will be forwarded to the Office of Student Conduct & Community Standards for additional review. For more information, refer to [studentconduct.wiscweb.wisc.edu/academic-integrity/](http://studentconduct.wiscweb.wisc.edu/academic-integrity/).

## 10. Accommodations for Students with Disabilities

The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform me of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or



recognized. I will work either directly with the you or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA.

<http://mcburney.wisc.edu/facstaffother/faculty/syllabus.php>

## **11. Diversity & Inclusion**

Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world. <https://diversity.wisc.edu/>