

University of Florida  
Food and Resource Economics Department

## **AEB4334 Agricultural Price Analysis**

Updated: December 31, 2021

**Spring Term 2022**

Class Number: ONLINE  
3 Credit Hours

Online 100% asynchronous course delivery via Canvas

### **Instructor and Contact Information**

**Instructor:** Dr. Mikael Sandberg

(Faculty member in the Department of Economics at the University of South Florida)

**Office Hours:** Tuesday and Thursday 10:00am – 12:00pm. Other times by appointment. (Virtual Office Hours using Zoom – use Canvas for access)

**E-mail:** [sandberg1@usf.edu](mailto:sandberg1@usf.edu)

E-mail is an efficient and fast way to ask questions! When e-mailing me, please indicate in which class you are enrolled (e.g., AEB4334, Price Analysis, UF class, or something similar) so that I can more effectively address your concerns. Courteous and professional e-mails can expect a *prompt* reply (usually within 24 hours). Please do NOT use my old UF Gatorlink account (it is still accessible in some e-mail directories). Instead, for quickest response use my USF e-mail: [sandberg1@usf.edu](mailto:sandberg1@usf.edu).

**E-Learning Canvas:** There is a Canvas page for this course that can be accessed via <http://elearning.ufl.edu>. If you are having difficulties accessing E-Learning, please contact the UF Computing Help Desk by calling (352) 392-HELP or e-mail [helpdesk@ufl.edu](mailto:helpdesk@ufl.edu), or visit <https://helpdesk.ufl.edu/>. You will need your UFID/Gatorlink information when contacting them.

### **General Course Information**

**Required Text and Materials:** *Managerial Economics: Foundations of Business Analysis and Strategy, 13th edition*, by Christopher Thomas and S. Charles Maurice. McGraw Hill. 2020. Hardcover. ISBN: 9781260004755.

- You may also purchase a loose-leaf version of the textbook – ISBN: 9781260506334.
- Electronic access is also acceptable.

**Course Description:** Quantitative measurement of factors affecting agricultural and resource prices; seasonal and cyclical fluctuations; index measures of price and quantity variables; theory and application of consumer behavior principles.

**Prerequisites:** AEB3103 and AEB3510 or the equivalent. Students are expected to have a working knowledge of basic microeconomics, algebra, and elementary calculus.

## Course Structure and Course Content

**Course Objectives:** This course applies economic theory to the analysis of the universal goals of consumer utility-maximization and firm profit-maximization. AEB4334 represents a transition to a more rigorous and analytical treatment of microeconomics. After the successful completion of this course, the typical student should be able to have a rather sophisticated understanding of:

- the economic theory of consumer behavior and decision making;
- the elasticity of demand and its influence on the operations of a firm;
- the economic theory of firm behavior;
- the difference between short-term operating and long-term planning decisions of a firm;
- the use of economic analysis as a tool to achieve profit maximization for firms in a variety of contexts under different market structures.

**Topical Course Outline:** The instructor reserves the right to change this outline as appropriate.

### Introduction and Methods

*Introduction Lecture: The Nature of Economic Analysis*

*Chapter 3: Marginal Analysis for Optimal Decisions*

- Unconstrained Optimization
  - Marginal Benefit and Marginal Cost
- Continuous versus Discrete Choice Variables
- Constrained Optimization
  - Value per dollar spent

### Markets and the Theory of Consumer Behavior

*Chapter 5: Theory of Consumer Behavior*

- Assumptions about Consumer Theory and Preferences
- Utility Function
- Indifference Curves
  - Marginal Rate of Substitution
- Budget Lines
- Utility Maximization
- Derivation of individual demand and market demand curves
- Substitution and Income Effects of a Price Change

*Chapter 6: Elasticity and Demand*

- Price Elasticity of Demand
- Price Elasticity and Total Revenue
  - Marginal Revenue
- Income Elasticity of Demand
- Cross-Price Elasticity of Demand

### Production: Theory and Empirics

*Chapter 8: Production and Cost in the Short-Run*

- Production and Cost
- Short-run versus Long-run
- Short-run Production
  - Total Product, Average Product, Marginal Product

- Short-run Cost
  - Total Cost, Total Fixed Cost, Total Variable Cost
  - Average Total Cost, Average Fixed Cost, Average Variable Cost, Short-run Marginal Cost
- The link between Production Functions versus Cost Functions

*Chapter 9: Production and Cost in the Long-Run*

- Isoquants
- Isocost Curves
- Optimal Input Combination
- Optimization and Cost: The Expansion Path
- Long-run costs
  - Relationship between Long-run Cost and Short-run Cost
- Economies and Diseconomies of Scale
- Economies of Scope
- Short-run Expansion Paths

*Chapter 10 Handout: Provided on Canvas*

- Specification of Short-run Production Functions
- Specification of Short-run Cost Functions

**Firm Behavior and Market Structure**

*Chapter 11: Managerial Decisions in Competitive Markets*

- Market Structures and Perfect Competition
- Firm Demand Curve
  - Price Takers
- Profit maximization
- Perfect Competition in the Long-run
- Shut-Down Decision
- Firm's Supply Curve
- Profit-maximizing Input Decisions

*Chapter 12: Managerial Decisions for Firms with Market Power*

- Market Power
- Monopoly
  - Barriers to Entry
  - Profit Maximization
  - Short-run versus Long-run
- Monopolistic Competition
  - Profit Maximization
  - Short-run versus Long-run
  - Advertising and Product Development

*Chapter 13: Strategic Decision Making in Oligopoly Markets*

- Game Theory
  - Dominant Strategies
  - Nash Equilibrium
- Best-Response Curves
  - Derivation and analysis
  - Nash Equilibrium

**AEB4334 Semester Schedule:** AEB4334 is taught as on-line asynchronous course. All required class activities and assessments take place online using Canvas. Thus, there are no physical in-class activities or specific times when you must be logged on for lectures. More information on the following page. That said, I approach the course as a regular UF class with two scheduled lectures per week. Below you find a week-by-week preliminary semester schedule. I reserve the right to change this outline at any time, as warranted by circumstances and outside events.

Week	Dates	Monday	Wednesday
1	Jan 5	<b>STILL WINTER BREAK!</b>	Introduction and Syllabus
2	Jan 10 & Jan 12	Framework of Microeconomic Analysis	Ch 3: Marginal Analysis for Optimal Decisions
3	Jan 17 & Jan 19	<b>MLK Holiday (No Class Material)</b>	Ch 3: Marginal Analysis for Optimal Decisions
4	Jan 24 & Jan 26	Ch 5: Theory of Consumer Behavior	Ch 5: Theory of Consumer Behavior
5	Jan 31 & Feb 2	Ch 5: Theory of Consumer Behavior	Ch 5: Theory of Consumer Behavior
6	Feb 7 & Feb 9	Ch 6: Elasticity and Demand	Ch 6: Elasticity and Demand
7	Feb 14 & Feb 16	<b>EXAM 1</b> (February 14)	Ch 8: Production and Cost in the Short Run
8	Feb 21 & Feb 23	Ch 8: Production and Cost in the Short Run	Ch 9: Production and Cost in the Long Run
9	Feb 28 & Mar 2	Ch 9: Production and Cost in the Long Run	Ch 9: Production and Cost in the Long Run
10	Mar 7 & Mar 9	<b>SPRING BREAK!</b>	<b>SPRING BREAK!</b>
11	Mar 14 & Mar 16	Ch 10 Handout: Production and Cost Estimation	<b>EXAM 2</b> (March 16)
12	Mar 21 & Mar 23	Handout: Cost, Profit, and Markets	Ch 11: Managerial Decisions in Competitive Markets
13	Mar 28 & Mar 30	Ch 11: Managerial Decisions in Competitive Markets	Ch 11: Managerial Decisions in Competitive Markets
14	April 4 & April 6	Ch 12: Managerial Decisions for Firms with Market Power	Ch 12: Managerial Decisions for Firms with Market Power
15	April 11 & April 13	Market Structures Summary Unit	<b>EXAM 3</b> (April 13)
16	April 18 & April 20	Ch 13: Strategic Decision Making in Oligopoly Markets	Ch 13: Strategic Decision Making in Oligopoly Markets
17	April 25	<b>FINAL EXAM</b> (April 25)	

**End-of-Chapter Problems:** Each chapter in the textbook is accompanied by numerous study problems and exercises labeled 'Technical Problems' (some of them are excellent!). The solutions for ALL Technical Problems are posted on Canvas under 'Solutions.' To do well in this class, you should work and master these problems. Below are the recommended exercises out of each chapter. These problems are not to be turned in for credit, rather they are assigned to help you learn the material.

Chapter	Recommended Technical Problems
Chapter 3	2, 3, 4, 6, 8, 10, 12
Chapter 5	1, 3, 4, 5, 6, 7, 8, 10, 15, 16
Chapter 6	1, 2, 4, 8, 9, 14, 16
Chapter 8	2, 4, 7, 9, 10, 12, 14
Chapter 9	1, 2, 3, 4, 6, 7
Chapter 10 (Handout)	1, 2
Chapter 11	1, 2, 3 (skip part c), 6, 8, 11
Chapter 12	1, 4, 5, 7, 9, 12, 13, 15, 16
Chapter 13	3, 4, 11

**Module Structure:** AEB4334 is taught as *on-line 100% asynchronous course*. All required class activities and assessments take place online using Canvas. Thus, there are no physical in-class activities or specific times when you must be logged on for lectures. AEB4334 will be delivered by the use of modules in Canvas. Each module roughly corresponds to a traditional in-class lecture. Thus, in a normal week there would be two modules posted – one for Monday and one for Wednesday. The modules will be posted at 10:00am on Mondays and Wednesdays. On Exam days there will be no new lecture modules posted.

Each module will have three primary components:

1. **PowerPoint Lecture notes** (downloadable);
2. **An mp4 video file of the PowerPoint slides with my lecture accompanying them;**
3. **Review Exercises** (with solutions) designed to accompany the lecture in the module. The first two modules (i.e., August 23 and August 25) will not have Review Exercises. Additional exercises and recommended review problems are available at the end of the chapters in your textbook (see previous page).

For simplicity, the Monday modules and the Wednesday modules are about the same length. This is by design.

Please note that the posted mp4 video files are significantly shorter than the traditional lecture time. There are several reasons for this. First, the lectures are delivered via PowerPoint so there is less time devoted to writing things down on the board or in your own notes. Second, during a traditional lecture, students often ask clarifying questions which usually leads interesting in-class discussions. In pre-recorded lectures, this feature will naturally be absent. Consequently, the material will be covered in a shorter period of time than traditional lectures. Third, students are also expected to begin looking at the posted Review Exercises.

On Canvas you will also find Chapter Discussion Boards. Each chapter will have its own Discussion Board on Canvas. The purpose of the Discussion Boards is for students to interact with one another and to ask each other questions about the material covered in class. You can also ask about end-of-chapter exercises out of the book or anything else pertaining to the material. These peer-to-peer discussions are an integral part to the learning experience in this class. Students often find that these Discussion Boards are very helpful. I will monitor the Discussion Boards regularly to ensure accuracy and to answer questions. Discussions not pertaining to the class or the material covered will not be accepted. No discussion boards are open for the first week of class.

## Evaluation of Performance and Grading

**Grades:** Your final grade for AEB4334 will be based on the following:

Sum of 2 highest Mid-term	
Exams Grades	200 possible points
Final Exam (Comprehensive)	100 possible points
Assignments	80 possible points
<b>TOTAL</b>	<b>380 possible points</b>

Final course grades will have the following benchmarks out of the 400 possible grade points:

<b>A</b>	<b>(≥ 353)</b>	<b>B-</b>	<b>(304 - 314)</b>	<b>D+</b>	<b>(254 - 265)</b>
<b>A-</b>	<b>(342 - 352)</b>	<b>C+</b>	<b>(292 - 303)</b>	<b>D</b>	<b>(239 - 253)</b>
<b>B+</b>	<b>(330 - 341)</b>	<b>C</b>	<b>(277 - 291)</b>	<b>D-</b>	<b>(228 - 238)</b>
<b>B</b>	<b>(315 - 329)</b>	<b>C-</b>	<b>(266 - 276)</b>	<b>E</b>	<b>(≤ 227)</b>

Please note that grades are not 'rounded' or in any way 'adjusted' at the end of the term. Grading is not a negotiation process and arguing over grades at the end of the semester is NOT entertained. If you believe that

your exam is incorrectly graded or that your grade is incorrectly posted, please contact me via e-mail (i.e., in writing) as soon as possible. You have 7 days after the grade has been posted to voice your concern. After 7 days have passed, your posted grade will be assumed to be correct and accurate

**Exams:** There will be three regular exams ('mid-terms') offered during the semester for AEB4334. Each exam is worth 100 points. Your lowest mid-term grade is dropped, so only your two highest exam grades count (for a total of 200 points towards your final course grade). The exams will consist of multiple-choice, problem-solving, and analytical questions. The exams are closed book and closed notes. A simple calculator may be used. However, other aides are not allowed. The exams will be administered using HonorLock in Canvas. HonorLock requires students to have access to a computer with a webcam (either internal or USB). **The exams will open at 10:00am EST on exam days.** Once you start your exam, you will have 100 minutes to finish. **The exam must be completed by 11:59pm EST on exam days.** This will give you a cushion in case something unforeseen happens or if your internet service is temporarily interrupted.

**Final Exam:** A mandatory and comprehensive Final Exam is offered during the final exam week: **Monday April 25 at 10:00am EST.** The final exam is exclusively multiple-choice. The exam will be administered using HonorLock in Canvas. Once you start your final exam, you will have 120 minutes to finish. **The exam must be completed by 12:00pm noon EST on the following day, April 26.** This will give you a cushion in case something unforeseen happens or if your internet service is temporarily interrupted.

**Tentative Exam Dates:**

<b>Exam 1:</b>	<b>Monday February 14 (exam opens at 10:00am EST)</b>
<b>Exam 2:</b>	<b>Wednesday March 16 (exam opens at 10:00am EST)</b>
<b>Exam 3:</b>	<b>Wednesday April 13 (exam open at 10:00am EST)</b>
<b>Final Exam:</b>	<b>Monday April 25 (exam opens at 10:00am EST)</b>

**The instructor reserves the right to change these exam dates as appropriate. Any changes will be communicated via Canvas.**

**Make-Up Exams:** Early or late exams are usually not given. Make-up exams are only given in circumstances with verifiable supporting documentation. Minor illnesses, work, or family obligations are not acceptable excuses for a make-up exam nor are internet services outages – exams are online and you are generously allowed until 11:59pm on exam days. Remember, your lowest mid-term grade is dropped. Use this drop wisely.

**Assignments:** There will be four take-home projects posted on Canvas under 'Assignments' during the semester – each worth 20 points. There are no make-up assignments and late submissions are not entertained. Completed assignments are to be uploaded in Canvas before the designated deadline. Each take-home project will be posted about a week before its due date, so you will have plenty of time to complete your assignment and upload your answers. The assignments will be worth a combined total of 80 points towards your final grade. More information will be provided during the semester.

### **Other Important Information**

Students are responsible for all deadlines/critical dates and policies set forth by the University of Florida. Deadlines/critical dates are published on the University of Florida Office of the University Registrar's website, <http://www.registrar.ufl.edu/>. Current academic policies are presented in the University of Florida Undergraduate Catalog, <https://catalog.ufl.edu>. Please make sure you familiarize yourself with these resources.

**HonorLock Exam Proctoring:** You will take your exam online in Canvas. In order to maintain a high standard of academic integrity and assure that the value of your University of Florida degree is not compromised, the exams will be proctored by HonorLock. HonorLock will be used to record your exam session and proctors will investigate and report all violations to the instructor.

You will need a computer with a webcam, speakers, microphone and reliable Internet connection to be able to take your exams. **Google Chrome is the only supported browser for taking exams in Canvas.** You DO NOT need to register for an account, download any software, pay any fee for HonorLock, or schedule an appointment in advance. HonorLock is automatically available for all exams in this course.

To get started, you will need Google Chrome and to download the Honorlock Chrome Extension. You can download the extension at [www.honorlock.com/extension/install](http://www.honorlock.com/extension/install) .

When you are ready to take your exam, log onto the Canvas page for the course and click on your exam. Clicking Launch Proctoring will begin the Honorlock authentication process, where you will take a picture of yourself, show your ID, and complete a scan of your room. Honorlock will be recording your exam session by webcam as well as recording your screen. Honorlock also has an integrity algorithm that can detect search-engine use, so please do not attempt to search for answers, even if it's on a secondary device.

Prior to each exam, ensure that your computer software is properly updated and that the HonorLock Chrome Extension is installed. You can run a free system check by visiting the HonorLock website and clicking RUN SYSTEM CHECK at: <https://honorlock.com/support/> .

If you experience any technical difficulties, you should seek assistance from Gator Help Desk. If you encounter issues during an exam, HonorLock Support is built into the exam platform and available in real time. As you navigate through your exam, a link to live chat and support services will be available at all times by clicking on the help button in the exam. Honorlock support is available 24/7/365. If you encounter any issues, you may contact HonorLock by live chat (available within the exam itself), via phone (844) 243-2500, and/or email [support@honorlock.com](mailto:support@honorlock.com).

**Students Requiring Accommodations:** Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center, <https://disability.ufl.edu/> . It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

**Course Evaluation:** Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students are notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

**In-Class Recording:** Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled.

The only allowable purposes are: (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

**Academic Honesty:** As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: “*We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.*” You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: “*On my honor, I have neither given nor received unauthorized aid in doing this assignment.*” It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <https://sccr.dso.ufl.edu/process/student-conduct-code/>

**Software Use:** All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

**Student Privacy:** There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see the <https://registrar.ufl.edu/ferpa/>

#### **Health and Wellness Resources:**

- **U Matter, We Care:** If you or someone you know is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu), 352-392-1575, or visit <https://umatter.ufl.edu/> to refer or report a concern and a team member will reach out to the student in distress.
- **Counseling and Wellness Center:** Visit <https://counseling.ufl.edu/> or call 352-392-1575 for information on crisis services as well as non-crisis services.
- **Student Health Care Center:** Call 352-392-1161 for 24/7 information to help you find the care you need, or visit <https://shcc.ufl.edu/>.



- **University Police Department:** Visit <https://police.ufl.edu/> or call 352-392-1111 (or 9-1-1 for emergencies).
- **UF Health Shands Emergency Room / Trauma Center:** For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit <https://ufhealth.org/emergency-room-trauma-center>.

### **Academic Resources:**

- **E-learning technical support:** Contact the UF Computing Help Desk at 352-392-4357 or via e-mail at [helpdesk@ufl.edu](mailto:helpdesk@ufl.edu). You may also visit <https://helpdesk.ufl.edu/>
- **Career Connections Center:** Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services. You may also visit <https://career.ufl.edu/>
- **Library Support:** Various ways to receive assistance with respect to using the libraries or finding resources. Visit <https://cms.uflib.ufl.edu/ask>
- **Teaching Center:** Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring. You may also visit <https://teachingcenter.ufl.edu/>
- **Student Complaints On-Campus:** Visit the Student Honor Code and Student Conduct Code webpage for more information <https://sccr.dso.ufl.edu/policies/student-honor-%20code-student-conduct-code/>
- **On-Line Students Complaints:** <https://distance.ufl.edu/getting-help/student-complaint-process/>.