



Eco 562.01w/02w

Managerial Economics

COURSE SYLLABUS: Spring 2025

Brian Toney, Ph.D.

Office Hours: MWF 2:00pm-3:00pm, or by appointment

University Email Address: Brian.Toney@tamuc.edu

Preferred Form of Communication: **e-mail**

Communication Response Time: 24 hours

COURSE INFORMATION

Textbook(s) Required:

-None

Software Required:

-Plus OpenAI Membership (\$20/month)

<https://openai.com/index/chatgpt-plus/>

Course Description

The course examines and applies economic concepts and models, primarily microeconomic, to various types of management problems. While analysis is primarily in terms of cost, demand, revenues, and market structure, the process combines ideas and methods from other functional fields of business administration especially quantitative tools.

This syllabus is a suggested outline and NOT a contract. It represents the **minimum** material we will cover. We will discuss additional material as our class discussions warrant. Dates are approximate and subject to change that will be announced in Webinar and over D2L. Your class page has a wealth of material in the "Content" tab. You are expected to look at all of that material.

You may be tested on any material listed in the syllabus, on your class page and discussed in class.

Student Learning Outcomes

Upon completing the class students should be to apply the concepts below to managerial decision making in the modern firm.

1. Math Background
 - a. Graphing
 - b. Calculus
 - c. Linear Regression
2. Consumer Choice
3. Demand, Supply, Market clearing and elasticity

REGRESSION ANALYSIS/Simulations

1. Estimating Regressions
2. Simulations
3. Interpreting Regressions
4. Time Series Analysis

COSTS AND PRODUCTION

1. Inputs and Production
2. Costs and Cost minimization
3. Cost Curves
4. Difference between costs in Economics and Accounting.

BOUNDARIES OF THE FIRM

1. Horizontal (scale and scope)
2. Vertical (make or buy)

MARKETS AND COMPETITIVE ANALYSIS

1. Industry Analysis (Porter's five forces)
2. Non Interdependent Markets (Competition and Monopoly)
 - a. Entry/Exit, and degree of market power
 - b. Industry Analysis
 - c. Profit Maximization
3. Interdependent Markets (Oligopoly and Monopolistic Competition)
 - a. Firms with market power
 - b. Profit Maximization
 - c. Strategic Behavior
 - a. Duopoly models
 - b. Game theory and Expected Value Game Theory
4. Yield Management
5. Advanced Pricing Methods (bundling, two part tariff, tie in sales)

VALUE BASED PRICING

1. Value Creation
2. Price Structure

3. Price & Value communication
4. Pricing Policy
5. Price Level

CONSUMER PSYCHOLOGY (BEHAVIORAL ECONOMICS)

1. Prospect Theory
2. Rational Inattention
3. Self-Control

COURSE REQUIREMENTS

Minimal Technical Skills Needed

This course presupposes some knowledge of mathematics. Specifically, students should be familiar with:

- Algebra (Solving For x)
- **To be ahead of the game, I would recommend being familiar with:**
 - **Basic Statistics**

In the math review, I will get you up to speed on everything else (Basic Calculus), but you will need to know basic math principles taught in high school.

Instructional Methods

This is an online class and requires the student to be more **self-directed**. Please make sure you have a working microphone. You are responsible for all the material which I discuss in the Webinar. If you are uncomfortable with this, you may wish to reconsider taking this class. If you think this class will take less time and be easier than a face to face you are mistaken indeed. The fact that you may be working a full time job while taking this class will put additional pressure on you. You should be aware that I still expect you to meet the timelines in this class. Your employer would not accept other time commitments as a reason for missing a deadline nor will I.

You will need to study every week. No kidding.

In order to connect to the Webinars you must have a cable, DSL, or high speed modem connection. Speeds of 5 megs or more work best. Public WiFi connections tend to be sub-optimal. Chrome is the browser of choice. Also since we are using a Voice Over IP system you will need a head set with earphones and microphone. Using a separate mic and speakers creates too much feedback in the system. Typing is a most **inefficient** to communicate and will significantly degrade your learning experience. The headset combo can be purchased at WallMart or similar stores for around \$20.00.

Student Responsibilities or Tips for Success in the Course

You are responsible for reading the syllabus. This is an interactive class NOT a chat room, e-mail or web page posting class. While that may be how some of your other classes operated not this class. You must attend live or watch the recorded sessions each week. Do not get behind. I will send you a link to copy into your browser to watch the recorded sessions. Do not download them or view them in D2L, YouSeeU.

This class has a once weekly 2.5 hour Webinar offered on Tuesday night from 6:30pm CST to 8:30pm CST. You will be required to participate live or watch the recorded sessions. A D2L section has been created for all the Webinars and you have been enrolled in it. The Webinar is your opportunity to have a live and interactive session with me and to check and extend what you are learning. I will also work through real world applications of the theory. Access to the Webinar is through Zoom.

If you are not coming to the Webinars or watching the recorded sessions, then you and only you will bear those costs.

I have given you some additional Powerpoint presentations in your "Content" section of your D2L site. Make sure to attend or watch the Webinars to add to your understanding and or be able to ask questions. Exchanging e-mails is a poor way for you to learn. Asking your classmates to explain theory they may not understand is also a poor strategy.

GRADING

Final grades in this course will be based on the following scale:

A = 90%-100%

B = 80%-89%

C = 70%-79%

D = 60%-69%

F = 59% or Below

Assessments

There will be 4 assignments and 2 exams. Each exam is worth 40% and each assignment is worth 5% of your grade.

| Component of Course | Percentage of Grade |
|---------------------|---------------------|
|---------------------|---------------------|

| | |
|--------------|-------------|
| Midterm | 40% |
| Final | 40% |
| Assignment 1 | 5% |
| Assignment 2 | 5% |
| Assignment 3 | 5% |
| Assignment 4 | 5% |
| TOTAL | 100% |

COURSE OUTLINE / CALENDAR

| Week | Dates | Due (11:59pm) | Topics |
|------|-------------|-------------------------|---|
| 1 | 01/13-01/17 | | Meet and Greet; Intro to GPT |
| 2 | 01/20-01/24 | | Math Review |
| 3 | 02/03-02/07 | | Ordinary Least Squares |
| 4 | 02/10-02/14 | Assignment 1 (02/16) | Managerial Economics and Decision Making; Standard Errors |
| 5 | 02/17-02/21 | | Supply; Dummy Variables in Regressions |
| 6 | 02/24-02/28 | | Demand; Omitted Variable Bias in Regressions |
| 7 | 03/03-03/07 | | GPT Applications in Business; Model Fitting |
| 8 | 03/10-03/14 | Spring Break | |
| 9 | 03/17-03/21 | Assignment 2 (03/23) | Perfect Competition |
| 10 | 03/24-03/28 | Midterm Exam (03/30) | Monopoly and Monopolistic Competition; Review |
| 11 | 03/31-04/04 | | Game Theory and Oligopoly |

| | | | |
|----|-------------|-------------------------|---|
| 12 | 04/07-04/11 | | Pricing Decision; Time-Series Analysis |
| 13 | 04/14-04/18 | Assignment 3 (04/13) | Business Decisions Under Uncertainty; Monte Carlo Simulations |
| 14 | 04/21-04/25 | | Consumer Psychology (Behavioral Economics); Binary Regressions |
| 15 | 04/28-05/02 | Assignment 4 (05/04) | Ethical Considerations in Managerial Economics |
| 16 | 05/05-05/09 | Final Exam (05/07) | |

TECHNOLOGY REQUIREMENTS

Plus OpenAI Membership

A large component of this course involves regression analysis. The newest GPT models released by OpenAI are able to conduct regressions in chat, making fewer errors in estimation than students using Excel. More importantly, there are important statistical tests difficult to conduct in Excel, but are rather easy to do with GPT. Note that GPT is only being used as a substitute to Excel in this course. As it stands today, while GPT is great at *estimating* statistical models, it struggles at *interpreting* the coefficients in a business context.

Instead of requiring a costly textbook, students need to have a plus membership through OpenAI throughout the semester (\$20/month). I require the paid subscription is because the advanced data analysis feature only reliably works for paid users. This is a good deal, because there are countless other benefits that students receive from a plus membership.

<https://openai.com/index/improvements-to-data-analysis-in-chatgpt/>

Browser support

D2L is committed to performing key application testing when new browser versions are released. New and updated functionality is also tested against the latest version of supported browsers. However, due to the frequency of some browser releases, D2L cannot guarantee that each browser version will perform as expected. If you encounter any issues with any of the browser versions listed in the tables below, contact D2L Support, who will determine the best

course of action for resolution. Reported issues are prioritized by supported browsers and then maintenance browsers.

Supported browsers are the latest or most recent browser versions that are tested against new versions of D2L products. Customers can report problems and receive support for issues. For an optimal experience, D2L recommends using supported browsers with D2L products.

Maintenance browsers are older browser versions that are not tested extensively against new versions of D2L products. Customers can still report problems and receive support for critical issues; however, D2L does not guarantee all issues will be addressed. A maintenance browser becomes officially unsupported after one year.

Note the following:

- Ensure that your browser has JavaScript and Cookies enabled.
- For desktop systems, you must have Adobe Flash Player 10.1 or greater.
- The Brightspace Support features are now optimized for production environments when using the Google Chrome browser, Apple Safari browser, Microsoft Edge browser, Microsoft Internet Explorer browser, and Mozilla Firefox browsers.

Desktop Support

| Browser | Supported Browser Version(s) | Maintenance Browser Version(s) |
|-------------------------------|-------------------------------------|---------------------------------------|
| Microsoft® Edge | Latest | N/A |
| Microsoft® Internet Explorer® | N/A | 11 |
| Mozilla® Firefox® | Latest, ESR | N/A |
| Google® Chrome™ | Latest | N/A |
| Browser | Supported Browser Version(s) | Maintenance Browser Version(s) |
| Apple® Safari® | Latest | N/A |

Tablet and Mobile Support

| Device | Operating System | Browser | Supported Browser Version(s) |
|---------------|-------------------------|----------------|-------------------------------------|
| Android™ | Android 4.4+ | Chrome | Latest |

| | | | |
|---------|------------|-----------------------------|---|
| Apple | iOS® | Safari, Chrome | The current major version of iOS (the latest minor or point release of that major version) and the previous major version of iOS (the latest minor or point release of that major version). For example, as of June 7, 2017, D2L supports iOS 10.3.2 and iOS 9.3.5, but not iOS 10.2.1, 9.0.2, or any other version. Chrome: Latest version for the iOS browser. |
| Windows | Windows 10 | Edge, Chrome, Firefox | Latest of all browsers, and Firefox ESR. |

- You will need regular access to a computer with a broadband Internet connection. The minimum computer requirements are:
 - 512 MB of RAM, 1 GB or more preferred
 - Broadband connection required courses are heavily video intensive
 - Video display capable of high-color 16-bit display 1024 x 768 or higher resolution

- You must have a:
 - Sound card, which is usually integrated into your desktop or laptop computer
 - Speakers or headphones.

- Both versions of Java (32 bit and 64 bit) must be installed and up to date on your machine. At a minimum Java 7, update 51, is required to support the learning management system. The most current version of Java can be downloaded at: [JAVA web site](http://www.java.com/en/download/manual.jsp)
<http://www.java.com/en/download/manual.jsp>

- Current anti-virus software must be installed and kept up to date.

Running the browser check will ensure your internet browser is supported.

Pop-ups are allowed.

JavaScript is enabled.

Cookies are enabled.

- You will need some additional free software (plug-ins) for enhanced web browsing. Ensure that you download the free versions of the following software:
 - [Adobe Reader](https://get.adobe.com/reader/) <https://get.adobe.com/reader/>
 - [Adobe Flash Player](https://get.adobe.com/flashplayer/) (version 17 or later) <https://get.adobe.com/flashplayer/>
 - [Adobe Shockwave Player](https://get.adobe.com/shockwave/) <https://get.adobe.com/shockwave/> ◦ [Apple Quick Time](http://www.apple.com/quicktime/download/) <http://www.apple.com/quicktime/download/>
- At a minimum, you must have Microsoft Office 2013, 2010, 2007 or Open Office. Microsoft Office is the standard office productivity software utilized by faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is the standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required. If you do not have Microsoft Office, you can check with the bookstore to see if they have any student copies.

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your Instructor. If you are having technical issues please contact tech support below.

D2L runs monthly updates during the last week of the month, usually on Wednesday. The system should remain up during this time unless otherwise specified in an announcement. You may experience minimal impacts to performance and/or look and feel of the environment

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778 or click on the **Live Chat** or click on the words “[click here](#)” to submit an issue via email.

Interaction with Instructor Statement

You do not have 24/7 access to me. During the work week we will respond to e-mails, that we get, within 24 hours. On the weekends I only occasionally check e-mail. I will arrange Q&A sessions during the semester and I am available to meet with you in D2L during the day. My graduate student may also reply.

When you communicate with me by e-mail please use your university account. I will not respond to any e-mail that does not have an .edu extension.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

I have given you some additional Powerpoint Presentations in your “Content” section of your D2L site—please look over it before the Webinars. Make sure to attend or watch the Webinars to add to your understanding and or be able to ask questions. Exchanging e-mails is a poor way for you to learn. Asking your classmates to explain theory they may not understand is also a poor strategy.

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for me to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](#).

<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: <https://www.britannica.com/topic/netiquette>

TAMUC Attendance

For more information about the attendance policy please visit the [Attendance Procedure 13.99.99.R0.01](#).

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

[Graduate Student Academic Dishonesty 13.99.99.R0.10](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

Students with Disabilities-- ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce

Gee Library- Room 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: studentdisabilityservices@tamuc.edu

Website: [Office of Student Disability Resources and Services](#)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

COMMUNICATION AND SUPPORT

System Maintenance

D2L runs monthly updates during the last week of the month, usually on Wednesday. The system should remain up during this time unless otherwise specified in an announcement. You may experience minimal impacts to performance and/or look and feel of the environment

“Students should not attend class when ill or after exposure to anyone with a communicable illness. Communicate such instances directly with your instructor. Faculty will work to support the student getting access to missed content or completing missed assignments.”