



## **ECO 595 : Applied Business Research**

**Syllabus: Fall 2024**

Instructor: Dr. Lirong Liu

Office: BA 203

Office Hours: By appointment

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Course Meeting Times:

- **ECO 595.81B**: Class meets in person on the Dallas campus every Tuesday at 6:15 PM. Attendance is mandatory.
- **ECO 595.01W, 02W & 03W**: You are expected to join Zoom sessions regularly whenever possible. Reviewing the recordings of the zoom sessions within the week is required if you cannot attend the live lecture.

*\*\*\*There is no required textbook for this course. All materials will be provided. However, students that would like additional references are referred to the textbooks below\*\*\**

**Recommended Texts:**      **Statistics for Business and Economics (STAT)** by James T. McClave, P. George Benson, Terry T Sincich, 12th edition ISBN 9780321826237. Textbook only.

**Business research methods (BUS)** by Zikmund, W., Babin, B., Carr, J., & Griffin, M., 9th edition ISBN 9781111826925. Textbook only; no access code needed.

### **Course Description:**

This course investigates the techniques of the business research process as applied to business, finance, and economics. It emphasizes statistical concepts and applications with the integration of Microsoft Excel and Artificial Intelligence (AI) tools to support business and economic decision-making. Students will gain hands-on experience defining problems, designing research projects, and analyzing data. Particular emphasis is given to using Excel and AI to organize and analyze data, communicate findings to senior managers in presentation.

## Course Objectives

1. Develop a research plan including a problem statement, hypotheses, literature review, and methodology using both traditional analytical tools and AI applications.
2. Utilize Excel and AI tools to analyze data and generate insights relevant to business contexts.
3. Students will demonstrate the ability to use appropriate secondary data to solve business problems worldwide.
4. Present research findings to stakeholders effectively using visual presentations real-world applications.

## Instructional Methods

- Class participation & discussions
- Lecture w/ PowerPoint Slides
- Guest Speakers
- Assigned readings
- Student presentations
- Hands-on Exercises
- Group work w/ presentations
- Microsoft Excel
- AI platforms
- Video

**Grading:** Each student's grade will be comprised of Homework Assignments (25% total), a business research proposal (25%), a data analysis assignment (30%), Linked-In Learning Module completions (10%), and attendance / participation (10%).

**Grading Scale:**

- A = 90%-100%
- B = 80%-89%
- C = 70%-79%
- D = 60%-69%
- F = 59% or Below

## **Late Assignment Policy:**

Late assignments will accrue a penalty of 10 points per day the assignment is late. An assignment is considered one day late if it is submitted past the identified due date/time. It is considered two days late if it is submitted any more than 24 hours past the identified due date/time, and so forth. This includes weekends! Once an assignment is more than 10 days late, it will become a zero and will not be accepted for credit.

If a student wants an extension for an assignment, this must be received no less than 48 hours before the assigned due date/time. Extensions are not guaranteed, and are at the discretion of the instructor. Extensions may include a late penalty.

*For writing assignments, you should keep the following assumptions in mind:*

1. Assume you have been asked by a senior VP of the company to prepare research documents.
2. The VP is interested in numerous and varied issues facing the company but does not have the time to keep up with them all. You will be required to present your findings in varied formats listed above
3. You are a senior researcher for the company and your opinion is valued and sought after.
4. Spelling and grammar matter to her and you should follow standard writing conventions. She expects a succinct format that is business like.

## *Hands-on Exercises (20%)*

The Hands-on Exercises, under the homework assignments category, includes two individual assignments: "*Data Management and Hypothesis Testing*" (10%) and "*Predictive Modeling and Multivariate Analysis*" (10%). These assignments are designed to deepen your practical skills in data analysis by requiring you to gather, clean, and analyze multiple datasets using AI tools and Excel. Through these exercises, you will enhance your ability to generate and test hypotheses, as well as develop predictive models, preparing you to handle complex data scenarios and apply advanced statistical techniques in real-world business contexts.

## *Business Research Proposal (25%):*

The Business Research Proposal Presentation is a group project where you will develop and present a comprehensive research proposal on a business-related topic of your choice. This assignment simulates the professional process of pitching a research proposal, allowing you to apply key course concepts such as research design, literature review, and data analysis. It also enhances your teamwork and communication skills, providing valuable experience in creating and delivering a structured research proposal—an essential skill for both business and academic success.

### *Data Analysis Project (30%):*

The Data Analysis Presentation is a group project where you will conduct and present a comprehensive data analysis on a business-related topic of your choice. This assignment allows you to apply the analytical techniques covered in the course to real-world data, culminating in an in-class presentation of your findings. It enhances your ability to conduct in-depth data analysis and communicate the results effectively, demonstrating how your insights can inform actionable business decisions—an essential skill in today's data-driven business environment.

### *Linked-In Learning (10%)*

The LinkedIn Learning modules in this course are designed to enhance students' skills in specific areas that are crucial for managerial decision-making. Each module provides comprehensive training on relevant topics, such as essential Microsoft Excel skills. The general process involves watching video tutorials, completing exercises, and passing assessments to reinforce learning. Upon completion of each module, students receive a certificate that can be directly linked to their LinkedIn profile, showcasing their newly acquired skills to potential employers. The goals are to provide students with practical, hands-on experience, improve their proficiency in key areas of managerial economics, and support their professional development by enabling them to demonstrate their expertise in these valuable skills.

### *Attendance & Participation (10%)*

Students must not be passive in this course. More than before, each student should engage in classroom learning through respectfully asking questions and reflecting on the material with other class members.

Students will be evaluated based on timeliness (on time), preparedness (have researched the issue), and engagement (respectful participation in class reflections/discussion boards on subject matter and applications). Just as it will be when you begin your career, meeting deadlines is a base-level expectation and, alone, will not earn you a glowing review (e.g., a grade of 100% for the semester). **You must demonstrate additional value through your actions as part of the course.**

### **General Comments:**

1. Turn off your cell phones before coming to class. This is a classroom environment. It is disruptive to the class and disrespectful to the instructor to have a cell phone ring in the middle of class. Please double check before you come to class.
2. Texting, the use of a computer for purposes not related to class, reading of newspapers, sleeping, or any other distraction will not be tolerated.

3. Each student is expected to check his/her **university** e-mail (e.g. [rt42@tamcu.edu](mailto:rt42@tamcu.edu)) frequently for course announcements. E-mails **will not** be sent to personal e-mail addresses (e.g. [goldlion@yahoo.com](mailto:goldlion@yahoo.com)). This is to ensure privacy.
4. Prior to sending an email, please check the course syllabus and the D2L course page to see if your question or concern is already addressed. Allow up to 24 hours during weekdays and up to 48 hours on weekends for a reply. If you do not receive a response within that time frame, feel free to follow up.

## **Netiquette**

The discussion boards and other forms of online communication are created to provide an opportunity for students to actively engage in meaningful conversation on a particular topic or issue. You are encouraged to provide your honest viewpoint, but be respectful of the views of your classmates.

### **Do's**

1. Do use correct grammar and spelling.
2. Do read the prompt, reflect on what you would like to say, and review what you've written before posting!
3. Do respect the privacy, beliefs, and opinions of your classmates.
4. Do challenge each other's ideas but not each other personally.
5. Do remember to treat others as you would want to be treated.
6. Do stick to the discussion prompt at hand when posting to a forum.
7. Do use humor and sarcasm carefully. Students cannot see your facial expressions or hear any voice inflections.

### **Don'ts**

1. Don't type in ALL CAPS. This is regarded as shouting.
2. Don't rant or rage. This is not the place to vent your anger or start a fight.
3. Don't make inappropriate comments. Objectionable, sexist, or racist language will not be tolerated.

In the discussion forums you will post assignments and discuss your work with others in the class or in your groups. These are public forums, so whatever is posted can be seen by everyone in the course, including the instructors. If you want to send a private message, use individual email. The Class Lounge discussion forum is a public space for conversation with your classmates on any topic or question.

# TECHNOLOGY REQUIREMENTS

## 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 <b>point</b> release of that major version) and the previous major version of iOS (the latest minor or <b>point</b> 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.
  - \*For courses utilizing video-conferencing tools and/or an online proctoring solution, a webcam and microphone are required.

- 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 \(version 17 or later\) https://get.adobe.com/flashplayer/](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](mailto: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

### Brightspace Support

**Need Help?**

**Student Support**

If you have any questions or are having difficulties with the course material, please contact your Instructor.

### Technical Support

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.



### 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.

## **COURSE AND UNIVERSITY PROCEDURES/POLICIES**

### **Syllabus Change Policy**

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

### **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. (See current Student Guidebook).

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

### **ADA Statement Students with Disabilities**

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 132

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

Fax (903) 468-8148

Email: [Rebecca.Tuerk@tamuc.edu](mailto:Rebecca.Tuerk@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**

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

((<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>) and/or consult your event organizer). 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.

## Tentative Schedule

Week	Text	Details
Week 1	Syllabus; Introduction	
Week 2	Overview and Foundations of Business Research	LIL (Excel Training)
Week 3	STAT & Excel Review	
Week 4	Data Cleaning and Preparation	Guest Speaker LIL (PPT Training)
Week 5	Confidence Intervals	LIL (Business Presentations)
Week 6	Hypothesis Testing	Data Analysis and Hypothesis Testing (HE #1)
Week 7	Survey Research & Questionnaire Design	
Week 8	Business Research Proposals	Presentations
Week 9	Simple Linear Regression	LIL (Excel Modeling)
Week 10	Multivariate Linear Regression	
Week 11	Advanced Statistical Methods	Predictive Modeling and Multivariate Analysis (HE #2)
Week 12	Communication of Research Findings	Guest Speaker
Week 13	Industry-Specific Case Studies	LIL (Data Visualization)
Week 14	Special Topics	
Week 15	Data Analysis	Presentations

# AI Policy for ECO 595: Applied Business Research

## **Empowering Responsible and Ethical Use of AI**

As your professor, I encourage the use of AI tools, such as ChatGPT, to enhance your learning experience, productivity, and career success. AI can be a powerful resource for generating ideas, conducting research, and improving your analytical skills. However, it is crucial to use these tools responsibly and ethically to maintain the integrity of your work and uphold academic standards.

## **Acceptable Use of AI:**

1. **Research and Idea Generation:** Use AI to help brainstorm topics, generate ideas, and gather preliminary information.
2. **Data Analysis Assistance:** Employ AI tools for assistance with data analysis, such as creating graphs and visualizations in Excel.
3. **Improving Writing:** Use AI for proofreading to enhance the clarity, grammar, and structure of your writing.
4. **Learning and Skill Development:** Engage with AI to improve your understanding of course material and develop relevant skills, such as prompt engineering and metrics development.

## **Unacceptable Use of AI:**

1. **Plagiarism:** Submitting AI-generated content as your own without proper attribution is strictly prohibited. All work must be original and reflect your own understanding and effort.
2. **Cheating:** Using AI to complete assignments, quizzes, or exams, undermining the learning process, is not allowed.
3. **Fabrication of Data:** Generating or altering data using AI tools to misrepresent research findings or results is unacceptable.
4. **Misrepresentation:** Presenting AI-generated content or ideas your own is prohibited.

### **Guidelines for Responsible Use:**

1. **Cite AI Sources:** If you use AI tools to gather information or generate content, provide appropriate citations and acknowledge the use of these tools in your work.
2. **Maintain Academic Integrity:** Ensure that your submissions reflect your own understanding, analysis, and synthesis of the material. Use AI as a supplement, not a substitute, for your learning and effort.
3. **Transparency:** Be honest about the extent to which AI has assisted you in your work. When in doubt, consult with the instructor on how to appropriately integrate AI into your assignments.
4. **Learn and Grow:** Use AI as a learning tool to enhance your knowledge and skills. Strive to understand and internalize the concepts rather than relying solely on AI outputs.

**Consequences of Misuse:** Violations of this AI policy will be treated as academic misconduct and will be subject to the university's academic integrity procedures. Penalties may include failing the assignment, failing the course, or further disciplinary action as outlined in the university's academic integrity policy.

By adhering to these guidelines, you can effectively harness the power of AI to support your educational journey while maintaining the highest standards of academic integrity and professionalism.