



A Member of the Texas Tech University System

## **Course Syllabus: Intro to Econometrics**

Dillard College of Business Administration

ECON 3543 Section 201

TR 12:30pm to 01:50pm DB 306

Spring Semester 2026

### **Contact Information**

Instructor: Dr. John E. Martinez

Office: Dillard College, Second Floor, Room 255

Office hours: 10:15-11:30 Monday through Thursday, or by appointment

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### **Course Description**

The application of statistical methods to economic and financial analysis; particular attention is given to the regression analysis including limited and dichotomous dependent variables, regression diagnostics, hypothesis testing, analysis of variance, and selected topics in time series forecasting.

### **Course Prerequisite:**

Junior standing or above or consent of the chair, and BUAD 3033 or equivalent.

### **Textbook & Instructional Materials**

Required text:

Introductory Econometrics <http://wpage.unina.it/cafiero/books/wooldridge.pdf>

ZedStatistics <https://www.youtube.com/user/zedstatistics>, regression series (10 videos)

Optional text:

A Gentle Introduction to Statistics Using SAS® Studio in the Cloud

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978-1-954844-45-2 (Paperback) 978-1-954844-47-6 (EPUB)

Course Material:

Access to SAS OnDEMAND for Academics (SODA) and to EXCEL.

The great news about SAS OnDemand for Academics (hence forth called ODA – OnDemand for Academics) is that you don't have to download anything! You access SAS on a cloud platform.

## Registering for ODA

To gain access to ODA, you need to register with SAS Institute. Part of the registration process is to create a SAS profile. If you already have a SAS profile, skip that portion of the instructions. To start, point your browser to:

<https://welcome.oda.sas.com>

## Other ancillary Material:

Students need to have access to the following:

- WebCam video
- Thumb drive:

Each student should have a thumb drive (USB) on which to keep various data sets and assignments that will be a part of each class. Projects and assignments may include the requirement that electronic versions of your work be submitted. If students have access to MSU-DCOBA labs, then downloading the SAS software is not necessary. SAS software is installed in most DCOBA labs.

## **OBJECTIVES:**

## **LEARNING GOALS:**

### **General Learning Goals:**

Upon successful completion of this course, the student should:

- Demonstrate problem-solving and decision-making abilities through the critical analysis, evaluation, and interpretation of business information.
- Demonstrate a competency in speaking and writing for common business scenarios.
- Be able to utilize available technology for common business applications.

### **Course Specific Learning Goals:**

Upon successful completion of this course, the student should:

- Be able to utilize SAS and EXCEL programs for solving business and economic problems. Demonstrate a competency, not only in using SAS and EXCEL programs, but also in interpreting output generated from those technologies.
- Understand basic ordinary least squares (OLS) regression and its application in economic research.
- Grasp the assumptions under which OLS regression analysis is developed and understand the reasons for these assumptions.
- Develop an understanding of the classical regression model and understand issues that arise when its fundamental assumptions are violated and to develop an appreciation for limitations that accompany OLS regression analysis and be able to identify instances in which application exceed common sense limitations.
- Demonstrate ability to read and interpret articles in which regression analysis is employed and identify specific items that validate (or invalidate) the model(s) and application(s).
- Understand extended applications of basic OLS regression analyses in selected, specialized econometric models.

## **Assessment:**

Attainment of learning goals will be assessed by a combination of class discussions, problems and exercises in class, quizzes, and exams. Exercises and exams will assess student problem solving and decision making abilities as demonstrated by critical analysis, evaluation, and interpretation of business and economic information.

### **SYLLABUS CHANGE POLICY:**

This syllabus is a guide for the course and is subject to change. All changes will be announced in class and students will be responsible for incorporating the changes into the syllabus. If, at some point, the university switches to an online format, then there will be significant changes in the manner in which exams are administered. Any exam taken online will be monitored through RESPONDUS, which will require students to have access to a webcam video.

### **COURSE POLICIES:**

#### **A. Attendance Policy:**

Being an in-person course, physical classroom attendance is strongly recommended. Except for a limited number of situations, the instructor will not review class material nor reiterate class instructions to any student not regularly attending class. Students are expected to access all videos and taped lectures for this course. Many important announcements are provided for this course. You are expected to log into D2L a minimum of once daily to check for updates and announcements via postings and email. Class participation is deemed essential by the faculty member due to the fact that excessive absences may lower the student's grade from failure to benefit from unannounced quizzes and bonus assignments. Instructor's records will stand as evidence of absences.

#### **B. Other Related Policies**

Use of personal electronic communication devices, other than through D2L, is not permitted during exams and students are required to disable any other electronic instruments during exams. Individuals holding devices that disrupt class may be asked to leave the class for the remainder of the session.

#### **Expectation**

Answers you provide in exams and case studies are expected to reflect logical reasoning, to be well articulated, including correct grammar and punctuation and to be clearly legible, in a manner and format that would be acceptable for a business report in a commercial setting. Students will be expected to develop a base knowledge in using SAS. Each student is expected to become sufficiently familiar with the Desire-2-Learn (D2L), as it will be a primary communication instrument for this class.

### **OTHER RELEVANT INFORMATION:**

#### **Midwestern State University Student Handbook:**

See the most recent MSU Student Handbook for a statement of the university's policy on academic dishonesty. Any other questions not specifically addressed by this syllabus are governed by the student handbook. Make sure you have a copy and are familiar with all the procedures therein. Pay close attention to the Code of Student Conduct section.

#### **Medical or Other Serious Problems:**

Please take time and make the effort to advise me if you have difficulties that require my attention to properly evaluate your classroom participation and activities.

**Tape Recordings and Cell Phones:**

Tape recording of lectures is permitted. You may not tape record any information or class discussion when a graded test is being reviewed. Cell phones and pagers are prohibited unless the instructor has granted permission to have them in class.

**Return of Exams:** For any in-class exam, failure to return exam will result in a 0 for that exam.

**Grade Postings:** Exam grades will be posted using D2L.

**Plagiarism Statement:**

"By enrolling in this course, the student expressly grants MSU a "limited right" in all intellectual property created by the student for the purpose of this course. The "limited right" shall include but shall not be limited to the right to reproduce the student's work product in order to verify originality and authenticity, and educational purposes."

**Lower Grades:**

The instructor reserves the right to lower any student's final grade by a letter grade for:

- A negative, rude, unreasonably argumentative or inattentive attitude in class,
- Repeatedly disrupting the class for any reason (tardiness)
- Not showing respect for fellow classmates' questions or opinions.

**Study Hours and Tutoring Assistance**

Click here to enter text

**Student Handbook**

Refer to: [Student Handbook](#)

**Academic Misconduct Policy & Procedures**

**Academic Dishonesty:** Cheating, collusion, and plagiarism (the act of using source material of other persons, either published or unpublished, without following the accepted techniques of crediting, or the submission for credit of work not the individual's to whom credit is given). Additional guidelines on procedures in these matters may be found in the Office of Student Conduct.

[Office of Student Conduct](#)

**Moffett Library**

Moffett Library provides resources and services to support student's studies and assignments, including books, peer-reviewed journals, databases, and multimedia materials accessible both on campus and remotely. The library offers media equipment checkout, reservable study rooms, and research assistance from librarians to help students effectively find, evaluate, and use information. Get started on this [Moffett Library webpage](#) to explore these resources and learn how to best utilize the library.

**Grading**

*Table 1: Points allocated to each assignment*

Assignments	Points
MAJOR EXAMS	400
Exam I	200
Exam II	200
Quizzes	400
Research Project	200
Final Exam (Optional)*	
Total Points	1000

\*The final exam score, which is optional, can replace any one of the course assignments: exams, quizzes, or research project.

*Table 2: Total points for final grade.*

Grade	Points
A	900
B	800 to 899
C	700 to 799
D	600 to 699
F	Less than 600

### **Quizzes (40%)**

A quiz will be given over all chapters of the text. All quizzes are equally weighted. Quizzes will consist of objective-type questions [TF or MC] and problems from lectures and other required materials. Utilization of any material, electronic or otherwise, will result in a zero for that quiz. A student's lowest quiz scores can be replaced with their final exam grade. Failure to take a quiz on the scheduled date without prior permission from the instructor will result in a zero for that quiz. Failure to take any quiz without prior approval will result either in an 'F' or 'I' (incomplete) for that quiz. If, because of a truly unavoidable situation, you are absolutely not able to take a quiz at the scheduled time/date, it is your responsibility to contact your instructor well in advance to ask to take any quiz early. If a real, legitimate, last minute emergency occurs, it is your responsibility to contact me before the quiz begins.

### **Exams (30%)**

Two major exams, of equal weight, will be given. Each exam will involve calculation and derivation of answers as well as their interpretation and meaning. Questions will come from the text and notes. Exams will consist mostly of objective-type questions [TF or MC]. Utilization of any material, electronic or otherwise, will result in a zero for that exam. A student's lowest exam score can be replaced with their final exam grade. Failure to take an exam on the scheduled date without prior permission from the instructor will result in a zero for that exam. Failure to take any exam without prior approval will result either in an 'F' or 'I' (incomplete) for the course. If, because of a truly unavoidable situation, you are absolutely not able to take an exam at the scheduled time/date, it is your responsibility to contact your instructor well in advance to

ask to take the exam early. If a real, legitimate, last minute emergency occurs, it is your responsibility to contact me before the exam begins.

### **Research Project (20%)**

See separate attachment about the requirements for your research project.

### **Final Exam**

An optional comprehensive final exam will be given. This exam will be an objective-type exam [TF or MC]. The final must be taken in-person at the scheduled date based on the final exam schedule. A student's final exam score can be used to replace their lowest exam score or any other requirement that was missed. For students approved as Distance or on-line Learners, the exam instructions will be available via D2L.

Only certified testing centers are permitted to administer exams. Students are responsible for arranging a testing center to oversee the exam process. Students enrolled in a course(s) requiring proctored exams, must have a proctor on file. Proctors must be able to monitor the student throughout the entire exam. The testing site information must be submitted one month before the scheduled date of the final exam. All testing centers must be approved by instructor. Libraries are prohibited from proctoring exams. Students are not allowed to handle the exam after completion under any circumstances. Proctored exams are not to be removed from the testing center at any time. No late exams will be accepted.

### **Further guidelines about Testing Centers for Online Final Exam**

For locating a testing center, you can find some approved public testing centers near you at <https://clep.collegeboard.org/clep-test-center-search>.

You'll be responsible for making the arrangement with an approved testing center of your choice, and scheduling to take the exam on or before the final exam expiration date, as stated in the syllabus. The password-protected exam shall be administered online through D2L using a computer provided by the testing center. The computer needs to support the RESPONDUS Lockdown Browser. There are no allowed resources for the exam – not even a calculator. Draft papers and stationery such as pen and pencil are also not allowed. No electronic device is allowed for the exam (e.g., no cell phone). The exam will have approximately 67 objective type questions with a two-hour time limit. The rest of the exam specification also remains the same. After you make the testing arrangement with an approved testing center, please have the contact person from the testing center email instructor, or provide instructor with the email address of the contact person. I'll then share the password of the exam with that person, such that at your scheduled exam time, the testing center will provide you with the password to enter the exam. You'll access the exam through our D2L course page as before.

If you are an online student, you may take the exam at the same time and the same classroom as the in-person class. If you choose to take the proctored exam in the College at a different date than the in-person class, please make the arrangement at least a week before the scheduled exam date with our

department secretary, Ms. Anne Dugan (anne.dugan@msutexas.edu). You'll then take the proctored exam in a computer lab in Dillard College.

### **Extra Credit**

No extra assignments are provided.

### **Late Work**

For Business cases, late work may be accepted but only with advance permission from instructor and with severe penalties attached.

### **Make Up Work/Tests**

Except for medical, campus, or governmental requirements, students are not allowed to make up missed assignments. The appropriate paper work should accompany the reason for missing an assignment.

### **Important Dates**

- Last day for term schedule changes: January 23
- Deadline to file for graduation: February 16.
- Last Day to drop with a grade of "W": April 29.
- Refer to: [Drops, Withdrawals & Void](#)
- For other dates refer to this site: [Academic-Calendars](#)

### **Desire-to-Learn (D2L)**

Extensive use of the MSU D2L program is a part of this course. Each student is expected to be familiar with this program as it provides a primary source of communication regarding assignments, examination materials, and general course information. You can log into [D2L](#) through the MSU Homepage. If you experience difficulties, please contact the technicians listed for the program or contact your instructor.

### **Online Computer Requirements**

Taking an online class requires you to have access to a computer (with Internet access) to complete and upload your assignments. It is your responsibility to have (or have access to) a working computer in this class.

**\*Assignments and tests are due by the due date, and personal computer technical difficulties will not be considered reason for the instructor to allow students extra time to submit assignments, tests, or discussion postings.** Computers are available on campus in various areas of the buildings as well as the Academic Success Center. **\*Your computer being down is not an excuse for missing a deadline!!** There are many places to access your class! Our online classes can be accessed from any computer in the world which is connected to the internet. Contact your instructor immediately upon having computer trouble If you have technical difficulties in the course, there is also a student helpdesk available to you. The college cannot work directly on student computers due to both liability and resource limitations however they are able to help you get connected to our online services. For help, log into [D2L](#).

## **Instructor class Policies**

### **Lower Grades:**

The instructor reserves the right to lower any student's final grade by a letter grade (i.e., A to B, D to F) for:

- (A) A negative, rude, unreasonably argumentative attitude in class, or
- (B) Repeatedly disrupting the class for any reason (tardiness), or
- (D) NOT showing respect for fellow classmates' questions or opinions, or
- (E) NOT following exam instructions

### **Academic Integrity:**

With regard to academic honesty, students are referred to the "Student Honor Creed" of Midwestern State University Undergraduate Catalog, which may be found using the following MSU link: [Link to Student Honor Creed](#).

### **Plagiarism statement:**

By enrolling in this course, the student expressly grants MSU a 'limited right' in all intellectual property created by the student for the purpose of this course. The 'limited right' shall include but shall not be limited to the right to produce the student's work product in order to verify originality and authenticity, and educational purposes.

### **Correspondence:**

All correspondence regarding grades or class issues must be conducted through email using MSU email or through D2L. It is recommended that student use and regularly monitor their MSU email and D2L account. In your correspondence with instructor, use the instructor's email account. In your email to instructor, preface your text with 'BUAD 5603 First, Last Name" otherwise your text will be disregarded.

### **Netiquette:**

Students are expected to follow rules of common courtesy in all email messages, class discussions, chats, etc. Inappropriate or offensive messages will be forwarded to the appropriate authorities.

### **Change of Schedule**

A student dropping a course (but not withdrawing from the University) within the first 12 class days of a regular semester or the first four class days of a summer semester is eligible for a 100% refund of applicable tuition and fees. Dates are published in the Schedule of Classes each semester.

### **Refund and Repayment Policy**

A student who withdraws or is administratively withdrawn from Midwestern State University (MSU) may be eligible to receive a refund for all or a portion of the tuition, fees and room/board charges that were paid to MSU for the semester. **HOWEVER**, if the student received financial aid (federal/state/institutional grants, loans and/or scholarships), all or a portion of the refund may be returned to the financial aid programs. As described below, two formulas (federal and state) exists in determining the amount of the refund. (Examples of each refund calculation will be made available upon request).

## **Services for Students with Disabilities**

In accordance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Midwestern State University endeavors to make reasonable accommodations to ensure equal opportunity for qualified persons with disabilities to participate in all educational, social, and recreational programs and activities. After notification of acceptance, students requiring accommodations should make application for such assistance through Disability Support Services, located in the Student Wellness Center, (940) 397-4140. Current documentation of a disability will be required in order to provide appropriate services, and each request will be individually reviewed. For more details, please go to [Disability Support Services](#).

## **College Policies**

### Campus Carry Rules/Policies

Refer to: [Campus Carry Rules and Policies](#)

### Smoking/Tobacco Policy

College policy strictly prohibits the use of tobacco products in any building owned or operated by WATC. Adult students may smoke only in the outside designated-smoking areas at each location.

### Alcohol and Drug Policy

To comply with the Drug Free Schools and Communities Act of 1989 and subsequent amendments, students and employees of Midwestern State are informed that strictly enforced policies are in place which prohibits the unlawful possession, use or distribution of any illicit drugs, including alcohol, on university property or as part of any university-sponsored activity. Students and employees are also subject to all applicable legal sanctions under local, state and federal law for any offenses involving illicit drugs on University property or at University-sponsored activities.

### Campus Carry

Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes has prohibited. The new Constitutional Carry law does not change this process. Concealed carry still requires a License to Carry permit, and openly carrying handguns is not allowed on college campuses. For more information, visit [Campus Carry](#).

### Active Shooter

The safety and security of our campus is the responsibility of everyone in our community. Each of us has an obligation to be prepared to appropriately respond to threats to our campus, such as an active aggressor. Please review the information provided by MSU Police Department regarding the options and strategies we can all use to stay safe during difficult situations. For more information, visit [MSUREady – Active Shooter](#). Students are encouraged to watch

the video entitled “*Run. Hide. Fight.*” which may be electronically accessed via the University police department’s webpage: [“Run. Hide. Fight.”](#)

### **Grade Appeal Process**

Update as needed. Students who wish to appeal a grade should consult the Midwestern State University [MSU Catalog](#)

**\*Notice:** Changes in the course syllabus, procedure, assignments, and schedule may be made at the discretion of the instructor.

### **Course Schedule:**

Week or Module	Activities/Assignments/Exams
Week 01: 1/18-1/24	Chap. 1
Week 01: 1/18-1/24	Video 1
Week 02: 1/25-1/31	Chap. 2 and Video 10
Week 03: 2/01-2/07	Chap. 3 and Video 2
Week 04: 2/08-2/14	Intro to SAS OnDemand
Week 04: 2/08-2/14	Chap. 4 and Video 3
Week 05: 2/15-2/21	Video 4
Week 06: 2/22-2/28	Chap. 6 and video 5
Week 07: 3/01-3/07	Exam I Review
Fri. 3/06-Sat. 3/07	<b>Exam I</b>
Week 08: 3/08-3/14	Spring Break
Week 09: 3/16-3/21	Chap. 5
Week 10: 3/22-3/28	Chap. 7
Week 11: 3/29-4/01	Chap. 8 and Video 7
Week 12: 4/05-4/11	Chap. 9
Week 13: 4/12-4/18	Video 8 and 9
Week 14: 4/19-4/25	Review Research Project
Week 15: 4/26-5/02	Review Research Project
Week 16: 5/03-5/09	<b>Exam II Review</b>
Thur. 5/07	<b>Exam II</b>
Sun. 5/07	Research Project due by midnight.
Final Exam Schedule	<a href="#"><u>Spring 2026Final Exam Schedule</u></a>

### **Research Project for Econ 3543 – Econometrics**

#### **Guidelines to follow:**

1. By signing this assignment, you agree to work independently. However, if the instructor finds out that you have received help, you and the helper (if in this class) will receive zero credits.

2. You must submit your assignment through the Drop Box on D2L by the deadline. Late submissions will receive zero credit. A separate drop box folder has been set up for each part.
3. Please follow the instructions: click on assessments, then on assignments, then on Research Project, then on add file. Choose the file, then open, add, then submit. Then, you will receive a submission receipt email.
4. All three parts are due by midnight on **Thursday, May 07**.
5. Severe penalties will be assessed for late submissions.
6. Submissions must be in Microsoft WORD form.
7. If I cannot open your file due to a different computer operating system, you will receive zero credits. If you have a computer that uses a Mac operating system, make sure your file can be open with a computer that uses Microsoft Windows. The student is responsible for submitting a file that can be managed with Microsoft operating system.
8. In addition to your name, provide a screenshot of your SAS OnDemand Profile Registration name or number for each part (I-IV) of the research project [see below]: Do not provide your Profile in typed form. Failure to use appropriate screenshot procedures will result in you receiving zero credits.

DRAFT

**The research project consists of the following:**

**I. The research project consists of three parts: I - IV**  
**II. For each Part below, answer the following:**

1. Using SAS regression procedures, insert the estimated coefficients for each model A-D in Table I-II below. An WLS model is added as an optional choice.
2. Interpret the results of the output generated for each model. The following summary is useful for interpretation purposes

***Summary of Functional Forms Involving Logarithms***

-	Model	Dep. Var.	Ind. Var.	Beta1
A	Level-level	Y	X	$\Delta Y = \beta_1 \Delta x$
B	Level-Log	Y	Log(x)	$\Delta Y = (\beta_1 / 100) \% \Delta x$
C	Log-Level	Log(Y)	X	$\% \Delta Y = (100 \beta_1) \Delta x$
D	Log-Log	Log(Y)	Log(X)	$\% \Delta Y = \beta_1 \% \Delta x$

3. For each model (A-D), determine if the CLRM assumptions are met. Specifically, answer the following questions:
  - Is their misspecification of the model?
  - Is heteroskedasticity of the error terms present?
  - Is a weighted least squares model needed [WLS Model]?
  - Is multicollinearity present?
  - Is autocorrelation present?
  - Are the error terms normally distributed?
  - To what degree are there significant outliers or observations with extremely high leverage?
4. Evaluate the relative performance of each model? In answering this question, determine if the effect of the two squared variables are jointly significant.
- III. Append your answers to the above questions for each part at the end of each 'b' table.
- IV. At the end of each Part (I-II), create an Appendix (I-II) that consists of the SAS code used for all the regression models for each individual part.

**Part I. (Level-Level Regression Models)**  
**SAS OnDemand Profile Registration name or number:**

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Use data from wage.xlsx to estimate each regression model in the Tables below.

**Table 1a: Level-Level Regression Model**

	Model-A	Model-B	Model-C	Model-D	WLS Model
Dep. Variable	wage	wage	wage	Wage	Wage
Ind. Vars.					
	Constant	Constant	Constant	Constant	
Educ	Educ	Educ	Educ	Educ	
Exper		Exper	Exper	Exper	
Tenure		Tenure	Tenure	Tenure	
Expersq			Expersq	Expersq	
Tenuresq			Tenuresq	Tenuresq	
Female				Female	
Female*educ				Female*educ	

**Table 1b: Level-Level Regression Models**

	Model-A	Model-B	Model-C	Model-D	WLS Model
Dep. Variable	wage	wage	wage	Wage	Wage
Ind. Vars.					
Constant					
Educ					
Exper					
Tenure					
Expersq					
Tenuresq					
Female					
Female*educ					

**Part II. (Log-Log regression Models)**  
**SAS OnDemand Profile Registration name or number:**

III. Use data from wage.xlsx to estimate each regression model 1-4 in Tables 3 below.

**Table 2a: Log-Log Regression Model**

	Model-A	Model-B	Model-C	Model-D	WLS Model
Dep. Var.	lwage	lwage	lwage	lwage	lwage
Ind. Vars..					
	Constant	Constant	Constant	Constant	
Educ	lEduc	lEduc	lEduc	lEduc	
Exper		lExper	lExper	lExper	
Tenure		lTenure	lTenure	lTenure	
Expersq			lExpersq	lExpersq	
Tenuresq			lTenuresq	lTenuresq	
Female				Female	
Female*educ				Female*educ	

**Table 2b: Log-Log Regression Model**

	Model-A	Model-B	Model-C	Model-D	WLS Model
Dep. Var.	lwage	lwage	lwage	lwage	lwage
Ind. vars.					
Constant					
Educ					
Exper					
Tenure					
Expersq					
Tenuresq					
Female					
Female*educ					