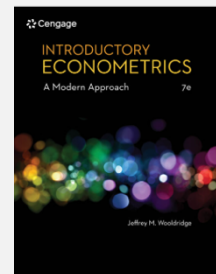




Lincoln University

BA 466 Econometrics COURSE SYLLABUS Spring 2025

Instructor:	Dr. Mohamed Tailab
Lecture Schedule	Th 9:00 am – 11:45 am
Credit:	4 units (3 units/45 lecture hours + 1-unit individual research project)
Level	Mastery 2/Research (M2R)
Office Hours:	Monday, 10:30 am – 12:00 pm, 4th Floor, Room 402 Wednesday, 11:00 am – 12:00 pm, 4th Floor, Room 402 E-mail: mtailab@lincolnuca.edu)
Textbooks:	Introductory Econometrics: A Modern Approach (7th Edition, 2020), Jeffrey M. Wooldridge. ISBN-13: -978-1337558860 ISBN-10: 1337558869
Last Revision:	January 1, 2025
NOTE:	This schedule is subject to change.



CATALOG DESCRIPTION

The course introduces students to a comprehensive review of econometric methods for linear models. Among topics covered are: the linear regression, linear simultaneous equations systems, maximum likelihood and instrumental variables estimation strategies, hypothesis testing. Different data and variables presentations and features are discussed. A one-unit written research project and its oral presentation are required for the course. (4 units) Prerequisite: BA 241 or BA 360

LEARNING OBJECTIVES

Econometrics is the intersection of statistical techniques, business, and finance. Econometrics will provide students with a set of tools that are useful for modeling financial/business data, forecasting, and testing beliefs about market behavior. Econometrics is a specialized area of statistics which deals with the measurement of economics and business data. It is broadly applied in business and industry. It requires the application of economics and business theories and use of dedicated statistical software. This application can easily be learned with the aid of personal computers. The study of econometrics addresses the unique features of stochastic behavior which characterize Business and Economics. It involves the study of multiple linear regression and time series analysis and forecasting. Its methods are tailored to deal with the departure of the economic and business

behavior from the standard models of regression analysis. In this class, we will start with univariate random variables and their distributions, will cover linear models and generalized linear models, hypothesis testing, and concepts of bias and risk. Students will be introduced to Constant Expected Return model and Portfolio Theory. Finally, students will be exposed to multivariate statistical concepts of principle component analysis (PCA), exploratory factor analysis (EFA) and confirmatory factor analysis (CFA).

COURSE LEARNING OUTCOME¹

Course LO	Program Learning Outcomes	Institutional Learning Outcomes	Assessment activities
1. Demonstrate ability of modeling business and economics relationships based on economics and business theories.	PLO 1	ILO 1c, ILO 2c	Homework, case analysis
2. Understand the assumptions of the classical Linear Multiple Regression model, and the departure in econometrics from these assumptions.	PLO 1	ILO 1c, ILO 2c	Homework, case analysis, and empirical project
3. Gain familiarity with transformation of economics models	PLO 1	ILO 1c, ILO 2c	Homework, case analysis, and empirical project
4. Demonstrate ability to estimate parameters of the Linear multiple Regression model, how to test hypotheses regarding the parameters values, and how to forecast based on this model	PLO 1	ILO 1c, ILO 2c	Homework, case analysis, and empirical project
5. Gain experience in computer processing of econometric data	PLO 2	ILO 1c, ILO 2c, ILO 4c	Homework, case analysis, and empirical project
6. Demonstrate ability to estimate the biased effects of errors in variables on the estimated variable and how to use instrumental variables to eliminate or minimize the bias.	PLO 2	ILO 1c, ILO 2c, ILO 4c	Homework, case analysis, and empirical project
7. Demonstrate ability to test for serial correlation, estimate it and how to take advantage of the estimate in generating forecasts.	PLO 2	ILO 1c, ILO 2c, ILO 4c	Homework, case analysis, and empirical project
8. Demonstrate ability to deal with multicollinearity.	PLO 2	ILO 1c, ILO 2c, ILO 4c	Homework, case analysis, and empirical project

MATERIAL

Required Textbook: Jeffrey M. Wooldridge, "Introductory Econometrics: A Modern Approach", 7th Edition. Access the eBook, ISBN: 9780357693223, (Access until June 30, 2025, \$62.99) Buy or Rent the Textbook, ISBN: 9781337558860, (Access until June 30, 2025, \$75.00)

¹ Detailed description of learning outcomes and information about the assessment procedure are available at the [Learning Outcomes Assessment](#) section of LU website.

Software: The main software we will use is Gretl. Gretl is freeware econometric software, which can be downloaded at: <https://gretl.sourceforge.net/>

Excel will be used for data management.

A computer with 365 Office is required to attend the class. Lincoln University Computer provides students with free Office 365.

KEY TO SUCCESS

To prepare well for class, you need to follow these steps:

1. Before class, read the PowerPoint slides posted on Canvas.
2. Take notes in the class; summarize the main ideas in your index cards.
3. Read the specified chapter of the textbook and work through the end of chapter problems and solutions to supplement your understanding of the material.
4. If you are still facing some challenges, stop by my office either during office hours or any time by appointment through e-mail.

GRADING

All activities will be graded according to the points as shown below.

Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	F
Points	95-100	90-94	87-89	84-86	80-83	77-79	74-76	70-73	67-69	60-66	0-59
Tentative Weights	Participation and Homework					15%		Course group project			10%
	Course individual project					25%		Mid-term exam			20%
	Quizzes					5%		Final Exams			25%
Note: Missing the final exam will result in a failing grade for the course, no matter how many points you have accumulated.											

CLASSROOM PROTOCOL

Students are expected to arrive on time and be prepared to take quiz and participate. If for some reason you are running late, **do not skip the class**. I prefer that you come late than not at all. If you must leave class early, please tell the instructor before class starts. If you cannot attend the class or other activities such as homework or quizzes for a strong reason, please inform the instructor in advance so that arrangements can be made to complete any missed work after the absence. All communication and electronic devices should be turned off or silent in the classroom (cell phones, music devices, etc.). **Please, do not eat food in class. It is distracting to me and your fellow students. Bottled water, coffee, tea, and soft drinks are allowed.**

ATTENDANCE

Students are expected to attend each class session. If you cannot attend a class due to a valid reason, please notify the instructor prior to the class. Students will not receive any credit for missed assignments or quizzes.

Administrative policies on absences from classes are as follows:

- A student receives a warning notice after missing 20% of class meetings completed in a course.
- A student is placed on probation after missing 30% of class meetings completed in a course.
- A student may be dismissed after missing more than 40% of class meetings completed in a course

GENERAL SAFETY ON CAMPUS

The capacity of the elevator is four people, please practice common sense and do not take it if you are the fifth person.

HOMEWORK

The homework problems cover all chapters from 1 through 14 in the textbook which will be posted on canvas weekly. These assignments will typically consist of some theoretical exercises, conducting analyses on provided data and turning in a results report (write-up) describing the findings, but may include other questions. Although these are individual assignments, students are welcome to work with other classmates on the homework, but it is expected that each student turns in his/her own, independently written. The assignments must be submitted on time. To request an extension on the deadline for an assignment, students must speak to the instructor one week prior to the due date. Students will receive feedback from the instructor in the class, and they will be able to correct answers to master the material.

QUIZZES

Eight (8) lesson quizzes will be given at the very beginning of the class. The primary purpose of these quizzes is to encourage and reward the student's timely progress through the course materials. Each lesson quiz covers only the material for the previous lecture. Each lesson quiz consists of some combination of true/false, multiple choice, and calculated questions. Only the 5 best out of the 8 possible quiz scores will be used in determining a student's final grade. **There will be no makeup quizzes given.**

EXAMS

Two examinations [**Written Essay Exams and Closed Book**] will be given throughout the course. the exam will run for two hours and a half. If you need additional time for an exam because of a university-recognized disability, you need to request a special accommodation. Lincoln University assists students with disabilities by helping to remove barriers to success. To request accommodations, please fill out and submit this form. [ADA Accommodations – ACQA website \(lincolnuca.edu\)](https://www.lincolnuca.edu/ada). If a student is unable to take an exam at the scheduled time due to an emergency or extenuating circumstance, the student can take the exam during the instructor's office hours. Gum Chewing during exams: Please be advised that gum chewing may impede the concentration process of your fellow students because gum chewing can be noisy and distracting to other students.

GROUP PROJECT

Group project (2-3 students). Requirements to be announced on February 6. A one-page tentative proposal is due on February 20. The final draft is due in class on April 24. You will provide three status updates throughout the term on the progress you have made to date on your paper. This enables the instructor to provide you with the necessary feedback. The project will be evaluated according to the following writing criteria:

1- Content (60%), Organization (20%), and APA Format (20%)

Individual Research Project: Each student registered for a 400-level course must complete, submit, and present a one-unit research project in addition to the coursework described in this syllabus. The specific topic will be assigned by the instructor. The project requires 45 hours of self-study. The project work results in a written report (not less than 15 pages; APA style) and an oral presentation during the class session. The paper will be evaluated according to the following writing criteria: Content (60%), Organization (20%), and APA Format (20%).

CHEATING AND PLAGIARISM

Cheating is the actual or attempted practice of fraudulent or deceptive acts for the purpose of improving one's grade or obtaining course credit. Acts of cheating include, but are not limited to, the following: (a) plagiarism; (b) copying or attempting to copy from others during an examination or on an assignment; (c) communicating test information with another person during an examination; (d) allowing others to do an assignment or portion of an assignment; (e) using a commercial term paper service. Penalties for cheating and plagiarism range from a 0 or F on an assignment, through an F for the course, to expulsion from the university. Anyone caught cheating or plagiarizing will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Dean of Students, who may place related documentation in a file. Repeated acts of cheating may result in an F in the course and/or disciplinary action.

ACADEMIC HONESTY

In the advancement of knowledge requires that all students and instructors respect the integrity of one another's work and recognize the important of acknowledging and safeguarding intellectual property. Accordingly, Lincoln expects the highest standards of honesty and integrity from all members of the academic community. As a student, you must know that all forms of cheating, falsification, and plagiarism are against the rules of this course and of Lincoln University. It is your responsibility for asking the instructor for clarification, if you are not sure of what constitutes academic dishonesty are.

DISCUSSION AND PARTICIPATION

Participation includes preparing for class, completing assignments on time, engaging in class discussions and team presentations and homework explanations. Students are expected to be prepared for and participate in each week. You would lose some participation points if you were absent without informing the instructor, and if your behavior in the class obstructs other students to learn by leaving and returning to class while it is in session.

EXTRA HELP

If you find the course material challenging, please see me anytime. So, I can help you by clarifying lecture material. Additionally, do not wait to see me, if you are struggling.

METHODS OF INSTRUCTION

The instructor will conduct the course by giving lectures, facilitating solutions to in-class exercises and conducting discussions to encourage class participation by students. Students must read each chapter before class according to the tentative schedule provided (see below), and they are responsible to ask questions and request clarifications during the class session. The PowerPoint slides are designed to give students a head start in learning course materials, but they are not intended to substitute.

Assignments and projects require students to actively use resources of the library. Detailed guide to business resources of the library as well as the description of Lincoln University approach to information literacy are available at the [LU Library](http://lincolnuca.libguides.com) website (lincolnuca.libguides.com).

E-MAIL AND CANVAS

E-mail and Canvas are required for this course. E-mail is the best way to contact the instructor. E-mails are generally answered within 24 hours during the week. If you do not hear from me within that time, please contact me again. Students are required to use their university e-mail for

correspondence and are responsible for checking their account daily for correspondence from the lecturer.

EMAIL POLICY

- Weekdays: emails received by 6.00 pm would be responded by the end of the day. Anything after that hour would be responded in the following day.
- Weekends: emails are to be checked sporadically, and thus you should not expect a response within the same day.
- Longer questions are easier and preferable to be addressed and answered during office hours.
- Please ensure that your email includes both your name and the name of the course.

WORK ETHICS

Lincoln University instructs and evaluates students on work ethics. These work ethics have been identified and defined as essential for student success: appearance, attendance, attitude, character, communication, cooperation, organizational skills, productivity, respect, and teamwork. So, Lincoln University' students are expected to adhere to the highest standards of these 10-character traits in their behavior as well as their coursework.

RECOMMENDATION LETTERS

Students are eligible to apply for a Board Trustees Scholarship. This scholarship is awarded from funds provided by the University. The instructor gives only two recommendation letters one week before the semester ends. The best candidates should match the work ethics.

COURSE SCHEDULE

Lecturers	Activities and Assignments	
30-Jan	Introduction to the course (Syllabus): The Nature of Econometrics and Economic Data	Ch.1
6-Feb	Simple Regression Model	Ch.2
13-Feb	Multiple Regression Analysis: Estimation	Ch.3
20-Feb	Multiple Regression Analysis: Inference	Ch.4
27-Feb	Multiple Regression Analysis: OLS Asymptotics.	Ch.5
6-Mar	Multiple Regression Analysis: Further Issues	Ch.6
13-Mar	Midterm Examination	
20-Mar	Spring Recess	
27-Mar	Multiple Regression Analysis with Qualitative Information	Ch.7
3-Apr	Heteroskedasticity	Ch.8
10-Apr	More on Specification and Data Issues	Ch.9
17-Apr	Basic Regression Analysis with Time Series Data	Ch.10
24-Apr	Further Issues in Using OLS with Time Series Data	Ch.11
1-May	Advanced Panel Data Methods	Ch.14
8-May	Project Presentation	
15-Mar	Final Exam	

INDIVIDUAL RESEARCH PROJECT (1 unit)

Each student registered for a 400-level course must complete a one-unit research project in addition to the coursework described in this syllabus. The specific topic will be assigned by the instructor.

The project requires 45 hours of independent study with regular consultations in accordance with the schedule determined by the instructor. The project work results in a written report (not less than 15 pages; APA style) and an oral presentation during the class session.

Evaluation of the student's work on the Individual Research Project will be done using the following rubric:

WRITTEN REPORT				
	<i>Exceeds Standards</i>	<i>Meets Standards</i>	<i>Does Not Meet Standards</i>	<i>Not Present</i>
<i>Research Problem Statement</i>	The statement of a research problem is crystal clear, novel, and thought provoking	Clearly and concisely identifies a research problem	The statement of a research problem is incomplete, lacking precision.	The statement of a research problem is absent.
<i>Organization</i>	The report is logically organized; ideas are exceptionally well-developed and support a thoughtful and engaging conclusion.	The development of ideas is present; the conclusion is effective and directly addresses the original thesis.	Organization is confusing, disjointed, and inconsistent; ideas, if present, are not developed; the conclusion is vague and/or does not address the original thesis.	The report lacks organization
<i>Sources and formatting</i>	A variety of high-quality sources is used; all factual claims are supported with citations. The report follows the APA style guidelines.	A few high-quality sources are used; majority of factual claims are supported with citations. The report mostly follows the APA style guidelines.	Sources used are of a questionable quality; factual claims are not supported. Use of APA style is inconsistent.	Sources are not identified or of a poor quality; factual claims are unsubstantiated. The report is poorly formatted
PRESENTATION				
	<i>Exceeds Standards</i>	<i>Meets Standards</i>	<i>Does Not Meet Standards</i>	
<i>Style and Organization</i>	Presentation is clear, confident, and fully engaging; the use of visual aids enhances its effectiveness; the presentation is well timed and structured.	Presentation is clear; the use of visual aids is not detrimental to audience engagement; all necessary components are given appropriate time.	Presentation lacks clarity, no attempt is made to engage the audience; visual aids are haphazard and distracting; lack of structure results in an inefficient use of time.	
<i>Questions and Answers</i>	Student demonstrates extensive knowledge of the topic by providing confident, precise, and appropriate responses to all audience questions.	Student demonstrates knowledge of the topic by responding adequately to questions of the audience.	Student demonstrates lack of knowledge of the topic by responding inaccurately and inappropriately to audience questions.	