



# ECON 526 - INTRODUCTION TO ECONOMETRICS

The University of Kansas  
Department of Economics

Course Syllabus

Spring 2020

**Instructor:** Caio Vigo Pereira

**E-mail:** caiovigo@ku.edu

**Office Hours:** TuTh 12:15 - 1:45 PM (or by appointment)

**Office:** Snow 337

**Place:** Wescoe Hall, 4045

**Time:** TuTh 11:00 AM - 12:15 PM

## Course Objectives

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**ECON 526** seeks to introduce undergraduate students to the theory and applications of econometric analysis. This course emphasizes both the theoretical and the practical aspects of statistical analysis, focusing on techniques for estimating econometric models of various kinds and for conducting tests of hypotheses of interest to economists.

The goal is to help students develop a solid theoretical background in introductory level econometrics, the ability to implement the techniques and to critique empirical studies in economics.

This is a technical course, and the key to success is to read the textbook to fully grasp the material and to practice as much as possible using the problem sets and the exercises at the end of the chapters.

The course also has an applied emphasis. Students should be aware and expect to learn the basics of at least one statistical/econometric softwares, such as R and STATA. Notice, however, that for this specific class/semester primary focus will be given to R.

## Prerequisites

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- ECON 142 - Principles of Microeconomics,
- ECON 144 - Principles of Macroeconomics,
- MATH 526 - Applied Mathematical Statistics (or equivalent).

## Textbook

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**Required:** Wooldridge, Jeffrey M. (2015). Introductory Econometrics: A Modern Approach. 6th edition, Cengage Learning [**Earlier editions are acceptable**]

## Calendar & Important Dates

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### Exams & Final Project

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March/03		(Tuesday)		Midterm at 11:00 AM
April/23		(Thursday)		Final Project is due
May/12		(Tuesday)		Final Exam at 10:30 AM

### Holidays & Breaks

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March/10		(Tuesday)		Spring Break		No classes
March/12		(Thursday)		Spring Break		No classes
May/08		(Friday)		Stop Day		No classes



JANUARY						
Mo	Tu	We	Th	Fr	Sa	Su
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2
3	4	5	6	7	8	9

FEBRUARY						
Mo	Tu	We	Th	Fr	Sa	Su
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	1
2	3	4	5	6	7	8

MARCH						
Mo	Tu	We	Th	Fr	Sa	Su
24	25	26	27	28	29	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

APRIL						
Mo	Tu	We	Th	Fr	Sa	Su
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	1	2	3
4	5	6	7	8	9	10

MAY						
Mo	Tu	We	Th	Fr	Sa	Su
27	28	29	30	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
1	2	3	4	5	6	7

	Regular classes		Final Project is due
	Exams		No classes



## Grading

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Your final grade on this course will be computed following the equation below:

$$\text{Final Grade} = \text{Attendance} * \left[ \begin{array}{l} 30\% * \alpha * \text{Midterm} \\ + 40\% * \text{Final Exam} \\ + 20\% * \text{Homework} \\ + 10\% * \text{Final Project} \end{array} \right]$$

where,

$$\alpha = \begin{cases} 1 & , \text{ if no missed midterm or if missed midterm } \mathbf{with a documented reason} \\ 0.6 & , \text{ if missed midterm } \mathbf{without a documented reason} \end{cases}$$

$$\text{Homework} = \frac{\sum_j^n \text{homework}_j}{n}, \text{ for } j = 1, \dots, n$$

where  $n$  is the number of homework assigned.

## Grade Breakdown

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Final course grades will be assigned following the scale below. This class is not graded on a +/– system.

<b>A</b>	: [90% , 100%]
<b>B</b>	: [80% , 90%)
<b>C</b>	: [70% , 80%)
<b>D</b>	: [60% , 70%)
<b>F</b>	: [0% , 60%)

The course will be graded on regular scale of 100%. However, depending on student performance, the grade distribution may be curved in your favor.

## Exams

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- There will be **2 exams**: one midterm exam and one final.
- In this course students are not allowed to “drop” one exam.
- The Final Exam is comprehensive.
- Exams must be taken in person.

## Conduct During Exams

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- All exams are closed book.
- The use of calculators is allowed. However, sharing a calculator will be considered cheating and will result in an exam grade of 0 for the students involved.
- If a student arrives late for an exam, s/he will not be given additional time at the end of the time period.



## Policy on Missed Exams

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- There will be **no makeup exams**.
- If you miss the midterm exam, your final exam will be worth up to 70% (i.e., 40% from the Final Exam + 30% from the missed midterm) of your course grade after setting  $\alpha$  accordingly. Notice the following cases:
  - If a student misses the midterm due to a **documented reason**, such as serious illness, death in the family, KU-sponsored activity with required attendance, or religious holiday observance, and has a valid documentation from a doctor or related staff,  $\alpha$  will be set to 1 (please, see “Grading” section). Therefore, the final exam will be worth 70% (40% from final exam +  $1 * 30%$  from the missed midterm) out of the above 70%.
  - If a student misses the midterm for reasons different from the above (i.e., without a valid documentation),  $\alpha$  will be set to 0.6 (please, see “Grading” section). Therefore, the final exam will be worth 58% (40% from final exam +  $0.6 * 30%$  from the missed midterm) out of the above 70%.
- Missing the final exam for reasons different from the above will result in a grade of 0 on that exam.
- If you are an athlete, who will be traveling on the date of an exam, please notify me of your schedule by the end of the second week of classes.

## Final Project

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There will be one final project. The goal is to allow students to apply the regressions techniques covered in class to a small dataset using one statistical/econometric software of their choice. The instructor will assign the project and the details during the semester. Please refer to “Calendar & Important Dates” section for the due date.

## Attendance

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The “Attendance” grade will be assigned following the scale below (please, see “Grading” section):

$$\text{Attendance} = \begin{cases} 1 & , \text{ if the percentage of attended classes } \in [75\% , 100\%] \\ 0.9 & , \text{ if the percentage of attended classes } \in [50\% , 75\%) \\ 0.8 & , \text{ if the percentage of attended classes } \in [0\% , 50\%) \end{cases}$$

- Notice that, the possibility to miss up to 25% of classes without harming your final grade is designed to account for any possible reason (documented or not) to miss a lecture.
- Please, notice as well that in order to reward students who attend classes, the instructor may assign any type of in-class active, such as bonus pop-up quiz or any sort of bonus question/material/assignment.

## Homework

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There will be at least 4 mandatory problem sets in this course. Each one of them will draw from the material covered in class. Late homework will not be accepted under any circumstances. The problem sets will also be posted online, so missing a lecture should not be an excuse for not turning the assignment in when it is due.



## Course Outline / Tentative Lecture Schedule

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1. Review of Mathematics and Statistics (Appendices A, B and C)
2. The Nature of Econometrics and Economics Data (Chapter 1)
3. The Simple Regression Model (Chapter 2)
4. Multiple Regression Analysis: Estimation (Chapter 3)
5. Multiple Regression Analysis: Inference (Chapter 4)
6. Multiple Regression Analysis with Qualitative Information: Binary Variables (Chapter 7)
7. Multiple Regression Analysis: Further Issues (Chapter 6)
8. Heteroskedasticity (Chapter 8)
9. Multiple Regression Analysis: OLS Asymptotics (Chapter 5) [if possible]

## Classroom Behavior

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To avoid disrupting the class, students should turn off their laptop and cell phones before the beginning of class. Please do not engage in any non course-related activities during class. This is distracting for both, the instructor and your classmates.

## Concealed Carry Policy

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Individuals who choose to carry concealed handguns are solely responsible to do so in a safe and secure manner in strict conformity with state and federal laws and KU weapons policy.

## Disability Requirements

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If you have a disability and need accommodations, please contact the Academic Achievement and Access Center (<http://access.ku.edu>). No student will receive accommodations of any kind without an official form provided by the AAAC.

## Agreement of Understanding

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It is understood that the student's continued enrollment in this course is an acknowledgment by the student of the content of and an acceptance of the terms of this syllabus.

## Academic Integrity

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Students are expected to adhere to the rules of academic integrity, specified in the University of Kansas guidelines.

## Disclaimer

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Subsequent changes may be made to any aspect or detail of this syllabus if and when necessary. Any change will be announced in class as soon as practical.

## Additional Notes

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Please feel free to contact me with any question or concern you might have.