

**COURSE NAME:** Applications of Econometrics in Agricultural Economics

**COURSE NUMBER:** 11:373:425

**SEMESTER:** Fall 2019

**MEETING DAYS, TIMES, AND PLACE:** T, TH 2:15PM – 3:35pm, WAL 210

**PREREQUISITE:** 11:373:121 and 11:373:122 and 11:373:215 and 01:640:135 **OR** 11:373:121 and 11:373:122 and 11:373:215 and 11:373:211 **OR** 11:373:121 and 11:373:122 and 01:960:285 and 01:640:135 **OR** 11:373:121 and 11:373:122 and 01:960:285 and 11:373:211 **OR** 11:373:121 and 11:373:122 and 01:960:211 and 01:640:135 **OR** 11:373:121 and 11:373:122 and 01:960:211 and 11:373:211

**CONTACT INFORMATION:**

Instructor(s): Dr. Michael J. Camasso

Office Location: Cook Office Building, Room 110

Phone: 848-932-9129

Email: [mcamasso@sebs.rutgers.edu](mailto:mcamasso@sebs.rutgers.edu)

Office Hours: By Appointment

**COURSE WEBSITE, RESOURCES AND MATERIALS:**

Gujarati, D. N. (2009). Essentials of Econometrics 4<sup>th</sup> Edition. New York: McGraw-Hill. [GU]

The text is available at Amazon and Barnes & Noble.

**COURSE DESCRIPTION:**

Econometrics is a set of conceptual and statistical tools that can help you find the answers to important economic questions. Economists have used econometric methods to answer such questions as: Does raising the minimum wage lead to higher rates of unemployment among unskilled workers? Can the type of college you attend (public/private) predict your returns to education (future earnings)? Are public school class sizes related to scores on academic achievement tests? Can abortion rates among poorer women be used to forecast future crime rates? Do ‘shotgun weddings’ reduce the number of children born in poverty? The methods taught in this course have been used to answer these questions and a great many others as well.

The course will focus on the application of econometrics through class lectures, discussion, and ‘hands-on’ computer applications and problem sets. The techniques of linear regression will be emphasized but the course will also cover some statistical alternatives when regression assumptions are not appropriate for the problem at hand.

**LEARNING GOALS:**

- Student will learn the basic principles, theory and assumptions underlying multiple regression analysis.
- Student will learn how to apply regression analysis to economic/business data for the purposes of estimation and prediction.
- Student will learn how to interpret the results of regression analyses in their own applied work and as these analyses are discussed in the economics and business literature.

**ASSIGNMENTS/RESPONSIBILITIES, GRADING & ASSESSMENT:**

- Participation in class. Students are expected to attend all classes.
- Completing six problem sets. Doing problem sets is the primary way of really understanding the material.
- A midterm exam and a cumulative final exam.

## Course Grade:

The course grade will be computed as follows:

Problem Sets (6)	30%
Midterm Exam	30%
Final Exam	40%

## Grading scale will be as follows:

A = 90% or above

B+ = 85-89%

B = 80-84%

C+ = 75-79%

C = 70-74%

D = 60-69%

F = Below 60%

## Cell Phones/Blackberries/Related Electronics:

The use of these devices in class is disruptive to the teaching process. All devices must be turned off in class.

## **ACCOMODATIONS FOR STUDENTS WITH DISABILITIES**

Please follow the procedures outlined at <https://ods.rutgers.edu/students/registration-form>. Full policies and procedures are at <https://ods.rutgers.edu/>

## **ABSENCE POLICY**

Students are expected to attend all classes; if you expect to miss one or two classes, please use the University absence reporting website <https://sims.rutgers.edu/ssra/> to indicate the date and reason for your absence. An email is automatically sent to me.

## **COURSE SCHEDULE:**

### Course Outline:

This outline gives the topics that we will cover; however, we may spend more time on some topics and less on others if this is necessary.

Week 1	Introduction to Course [GU] Chapter 1
Week 2	Normal Curve, Sampling and Sampling Distributions [GU] Appendix A and B
Week 3	Estimation Procedures [GU] Appendix C
Week 4	Hypothesis Testing [GU] Appendix D
Week 5	The Linear Regression Model [GU] Chapter 2
Week 6	Hypothesis Testing – Bivariate Regression [GU] Chapter 3

Week 7	Multiple Regression - Estimation [GU] Chapter 4
Week 8	Multiple Regression – Hypothesis Testing [GU] Chapters 4, 7
Week 9	<b>[Midterm Exam]</b>
Week 10	Selecting Functional Forms [GU] Chapter 5
Week 11	Dummy Variable Regression and Interactions [GU] Chapter 6
Week 12	Binary Dependent Variables [GU] Chapter 12
Week 13	Problems in Estimating Regression Models Multicollinearity [GU] Chapter 8
Week 14	Problems in Estimating Regression Models Heteroscedasticity and Autocorrelation [GU] Chapters 9, 10
Week 15	Problems in Estimating Regression Models Endogeneity and Instrumental Variables [GU] Chapter 11

Problem Sets:

Problem Set I	Simple Regression
Problem Set II	Multiple Regression Estimation & Hypothesis Testing
Problem Set III	Functional Forms
Problem Set IV	Dummy Variables
Problem Set V	Statistical Interaction
Problem Set VI	Regression Diagnostics

**FINAL EXAM/PAPER DATE AND TIME**

Online Final exam Schedule: <http://finalexams.rutgers.edu/>

## **ACADEMIC INTEGRITY**

The university's policy on Academic Integrity is available at <http://academicintegrity.rutgers.edu/academic-integrity-policy>. The principles of academic integrity require that a student:

- properly acknowledge and cite all use of the ideas, results, or words of others.
- properly acknowledge all contributors to a given piece of work.
- make sure that all work submitted as his or her own in a course or other academic activity is produced without the aid of impermissible materials or impermissible collaboration.
- obtain all data or results by ethical means and report them accurately without suppressing any results inconsistent with his or her interpretation or conclusions.
- treat all other students in an ethical manner, respecting their integrity and right to pursue their educational goals without interference. This requires that a student neither facilitate academic dishonesty by others nor obstruct their academic progress.
- uphold the canons of the ethical or professional code of the profession for which he or she is preparing.

Adherence to these principles is necessary in order to ensure that

- everyone is given proper credit for his or her ideas, words, results, and other scholarly accomplishments.
- all student work is fairly evaluated and no student has an inappropriate advantage over others.
- the academic and ethical development of all students is fostered.
- the reputation of the University for integrity in its teaching, research, and scholarship is maintained and enhanced.

Failure to uphold these principles of academic integrity threatens both the reputation of the University and the value of the degrees awarded to its students. Every member of the University community therefore bears a responsibility for ensuring that the highest standards of academic integrity are upheld.

## **STUDENT WELLNESS SERVICES**

Just In Case Web App <http://codu.co/cee05e>

Access helpful mental health information and resources for yourself or a friend in a mental health crisis on your smartphone or tablet and easily contact CAPS or RUPD.

### Counseling, ADAP & Psychiatric Services (CAPS)

(848) 932-7884 / 17 Senior Street, New Brunswick, NJ 08901 / [www.rhscaps.rutgers.edu/](http://www.rhscaps.rutgers.edu/)

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

### Violence Prevention & Victim Assistance (VPVA)

(848) 932-1181 / 3 Bartlett Street, New Brunswick, NJ 08901 / [www.vpva.rutgers.edu/](http://www.vpva.rutgers.edu/)

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

### Disability Services

(848) 445-6800 / Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854 / <https://ods.rutgers.edu/>

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>.

### Scarlet Listeners

(732) 247-5555 / <https://rutgers.campuslabs.com/engage/organization/scarletlisteners>

Free and confidential peer counseling and referral hotline, providing a comforting and supportive safe space.