

University of Florida
College of Agricultural and Life Sciences
Food and Resource Economics Department

AEB 4931: Econometrics
Spring 2017

Section 1597

Monday, Wednesday 12:50pm – 1:40pm, in MCCB G108
Friday 12:50 – 1:40pm, in WEIL 0408D

Instructor and Contact Information

Instructor: Maria Vrachioli
Office: 2111 McCarty Hall B
Phone: 352-294-7687
Email: maria.vrachioli@ufl.edu
Office Hours: Monday and Wednesday 2:00pm – 3:00pm
Other times by appointment.

FRE Program Assistant: Ms. Kathy Green, 1170 McCarty Hall A; (352) 294-7640;
Email: kagreen1@ufl.edu

Undergraduate Advisor: Mr. Michael Fitzgerald, 1170 McCarty Hall A; (352) 294-7638;
Email: mgfitzgerald@ufl.edu

E-Learning: There is an E-Learning Canvas web-page for this course. To access E-Learning, you will need your Gatorlink username and password. E-Learning will be accessible via <http://elearning.ufl.edu>. If you are having difficulties accessing E-Learning, please contact the UF Computing Help Desk by calling (352) 392-HELP or via email helpdesk@ufl.edu.

The instructor reserves the right to change the terms and dates stated in this Syllabus at any time. Any changes will be communicated in class and posted on E-Learning, and it is the student's responsibility to stay informed of any changes.

Course Objective:

This course introduces students to the study of modern econometric techniques, as employed in economics. This course will cover the theory and practice of various econometrics concepts, and it will also enable students to formulate and test econometric hypotheses. Finally, the use of Stata will give to the students a hands-on experience to conduct econometric and statistical analysis using real data.

Prerequisites:

A mathematics, or linear algebra course; and a Statistics, or Data Analysis course are required for successful completion of this course. In particular, it is assumed that all students have knowledge of calculus and linear algebra, and are familiar with basic multivariate calculus (first and second derivatives and how to obtain them), summation and integration, matrices and matrix operations. More generally, students are expected to be comfortable following mathematical arguments in the lectures and the textbook.

In addition, it is assumed that all students have knowledge of topics covered in the Data Analysis or a Statistics course. More specifically, students need to know: the difference between the population and the sample; the difference between a parameter and an estimator; the properties of random variables (including both discrete and continuous random variables); how to calculate expectations, variances, correlations and conditional expectations; and the construction of confidence intervals and hypothesis tests. Some of these topics will be briefly reviewed but at a fast pace, designed for people who have already learned this material in a previous course.

Learning Outcomes:

Economics is a quantitative social science, and its claims can only be verified with the quantitative analysis of economic data. *Econometrics* is the main tool for such analysis. With this course, students will have the opportunity to:

1. Understand how to utilize data to approach and test an economic theory.
2. Locate economic data sources suitable to test economic theory.
3. Carry out diagnostic tests for regression models, and determine if the models have been constructed correctly.

4. Understand which statistical models are appropriate to use in different settings according to the nature of the question.

Course Website:

The course website will be available through UF’s E-Learning Canvas page, which is accessible via <http://elearning.ufl.edu>. Lecture slides and homework assignments will be posted on Canvas. This website will be used to post announcements and send emails to the class. Canvas is associated with your *ufl.edu* email address; check your inbox often. The E-Learning page should be operational by the end of the first week of class. Blackboard will also be used a lot throughout the semester and it is the student’s responsibility to keep notes and find notes from their peers if they miss a class.

Required Textbook:

Principles of Econometrics 4th edition, by R. Carter Hill, William E. Griffiths and Guay C. Lim (Wiley, NY). ISBN: 978-0-4706-26733. You will need a copy of this textbook.

Other Recommended Textbooks:

Introductory Econometrics: Modern Approach 5th edition, by Jeffrey M. Wooldridge, Cengage ISBN: 978-1-1115-31041. (Masters level)

Brief Course Outline

Week	Book Chapter	
1-3	1	An Introduction to Econometrics
	2	The Simple Linear Regression Model
4-6	3	Interval Estimation and Hypothesis Testing
	4	Prediction, Goodness-for-Fit and Modelling Issues
6-8	4 (cont.)	Prediction, Goodness-for-Fit and Modelling Issues
	5	The Multiple Regression Model
9-12	6	Further Inference in Multiple Regression Model
	7	Using Indicator Variable
13-15	8	Heteroskedasticity
	9	Regression with Time Series Data: Stationary Variables
16-17	12	Regression with Time Series Data: Non-Stationary Variables
	Review	

This outline is a general plan for the course, deviations may be necessary.

Tentative Schedule of Assignments and Exams

	Week	Mon	Tues	Wed	Thurs	Fri
Jan	1	2	3	4 First Day of Class	5	6
	2	9 No Class	10	11	12	13 PS1 Given
	3	16	17	18	19	20 PS1 Due
	4	23	24	25	26	27 PS2 Given
Feb	5	30	31	1	2	3 PS2 Due
	6	6	7	8	9	10 Exam 1 PS3 Given
	7	13	14	15	16	17 PS3 Due
	8	20	21	22 Project Proposals Due	23	24
Mar	9	27	28	1	2	3 PS4 Given
	10	6 No Class	7	8 No Class	9	10 No Class
	11	13	14	15 PS4 Due	16	17
	12	20	21	22 Exam 2	23	24
	13	27	28	29 Rough Drafts Due	30	31
Apr	14	3	4	5	6	7 PS5 Given
	15	10	11	12	13	14 PS5 Due
	16	17	18	19 Last Day of Class Final Research Project	20	21
	17	24	25	26 Final Exam	27	28

Dates subject to change at the discretion of the instructor.

Any changes will be communicated on Canvas and in class.

Software:

We will use **Stata** for data applications. Stata is a very capable econometrics software that will meet your analytical needs even after you finish the course.

- a) Free through UF Apps (<https://info.apps.ufl.edu>)
- b) To purchase at a heavily discounted rate, go to <http://www.stata.com/order/new/edu/gradplans/>

Out of Class Collaboration:

You are allowed to work together in groups for the homework assignments, but each student must turn in an individual problem set with their own solutions. You may not copy solutions from others, or discuss strategies to such an extent that you and your collaborator(s) submit exactly (or close-to-exactly) the same solutions.

Evaluation of Performance and Grading**Grading**

Components	Weights
Midterm and Final Exams (3 * 15%)	45%
Problem Sets (5 * 6%)	30%
Research Project	15%
Attendance	5%
In-Class Effort	5%
	100%

Grading Scale

A	93 - 100	4.00
A-	87 - 92	3.67
B+	84 - 86	3.33
B	81 - 83	3.00
B-	78 - 80	2.67
C+	75 - 77	2.33
C	72 - 74	2.00
C-	69 - 71	1.67
D+	65 - 68	1.33
D	60 - 64	1.00
D-	56 - 59	0.67
E	<56	0.00

Attendance

Attendance is mandatory and the instructor needs to be notified of absences. If the student misses three classes their attendance grade will be lowered to 3% of the student's total grade, and if the student misses 5 or more classes attendance grade will be 0%.

In-Class Effort

This part of the grade will be used to evaluate the student's in-class participation. Students will be rewarded for demonstrating effort in class. Effort includes, but is not limited to, the following:

- *Arriving on time:* Late arrivals impede your learning process and can result in lowered effort scores, with the penalty increasing with each day of tardiness. Tardiness is disruptive and disrespectful to those who arrived on time.
- *Engagement:* The use of mobile phones, tablets and laptops is not permitted in class as it interferes with the student's learning process and can result in lowered effort scores.
- Leaving class early without prior permission is not tolerated and can result in lowered effort scores.
- *Utilizing office hours for additional help or clarification:* Most students will face at least some material that they do not immediately understand. Following up with questions during office hours is a great way to gain a better understanding of course material.

Make-up policy

No Make-up exams will be given under any circumstances. If you miss one of the exams for a reasonable, well-documented excuse (court, illness, etc.), then your remaining exam scores will each account for 22.5% of your total grade instead of 15%. If you don't have an acceptable excuse, you will not receive any credit for the missed exam. It is at the instructor's discretion to determine whether an excuse is acceptable or not.

Problem Sets

Late submissions of problem sets will not be accepted. There will be a total of five problem sets throughout the semester. Students are encouraged to discuss problems with their peers, but must

write up their problem sets separately. The exact due dates will be specified on each assignment. Assignments will consist of conceptual and computational questions.

Research Project

Throughout the course, each student will develop a research project on a topic of their choice from a list that will be provided by the instructor in Canvas.

- Students must submit a 1-page research proposal of their topic before 8 p.m. on Wednesday Feb. 22. Students are encouraged to talk to me during office hours before then to discuss possible topics and questions trying to answer using empirical data. All students who submit a research proposal by the date will earn complete credit, worth 2% of your grade.
- A rough draft is due on March 29. This will be worth 5% of your grade. I will provide comments to be incorporated into the final draft.
- The final research project is due in class on April 19, and this will be worth 8% of your final course grade. No late submissions! If you have an excused absence on that day, you need to turn in the paper before the due date. The research project should include: introduction, literature review, methodology, data and conclusions. The length of the research project should be approximately 10-15 pages, double-spaced, 12 pt. font, Times New Roman, 1-1.25" margins.
- A grading rubric for the rough draft and final research project will be provided to students through Canvas. All research proposal, rough draft and final research project will be graded on content, grammar, spelling, referencing and style, too.
- University Writing Studio (UWS) is committed to helping UF students become better writers and readers. The UWS is a FREE service for current UF students seeking to improve their writing and study skills, while they have the opportunity to work one-on-one with a consultant. For more information, please visit the UWS website in <https://writing.ufl.edu/writing-studio/>.

UF POLICIES

Grades and Grade Points

Information on current policies for assigning grade points, see <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Academic Honesty

In 1995 the UF student body enacted an [honor code](#) and voluntarily committed itself to the highest standards of honesty and integrity. When students enroll at the university, they commit themselves to the standard drafted and enacted by students. **The Honor Pledge: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.**

On all work submitted for credit by students at the university, the following pledge is either required or implied: **"On my honor, I have neither given nor received unauthorized aid in doing this assignment."**

Students should report any condition that facilitates dishonesty to the instructor, department chair, college dean, Student Honor Council, or Student Conduct and Conflict Resolution in the Dean of Students Office. (*Source: 2012-2013 Undergraduate Catalog*) It is assumed all work will be completed independently unless the assignment is defined as a group project, in writing by the instructor.

Software Use:

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are

available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu/cwc/*

Counseling Services

Groups and Workshops

Outreach and Consultation

Self-Help Library

Training Programs

Community Provider Database

- *Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/*

Services for Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues.

-0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/

If you have any questions about the content, requirements, and grading for this course, please ask!

GO GATORS!!!