ECO3431–0003.sp20 Analysis of Economic Data (Online) Spring 2020

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Please mark these important dates on your calendar now!

Item	Date Available	Date Due
First Day Attendance	12:01 AM Monday 1/6	5:00 PM Wednesday $1/8$
Exam 1	12:01 AM Monday 2/10	11:59 PM Friday 2/14
Exam 2	12:01 AM Monday 3/30	11:59 PM Friday $4/3$
Final Exam	12:01 AM Monday $4/27$	11:59 PM Friday $5/1$
Homework and Quizzes	There is a HW and Quiz	due before 11:59 PM almost
	every Friday of the seme	ster when there is not an exam.

Do the following during the first week of the class:

- Go to the "Getting Started" module of the course web page to complete the First Day Attendance quiz so that you are not automatically dropped from the course to make room for other students during the last day of Drop/Add. If you registered for the class during the Drop/Add period you will not be dropped even if you do not complete the First Day Attendance.
- Use the link on the course Canvas page to register for the Pearson MyEconLab and the eText during the first week of the semester you do not need a course ID. To avoid identity conflicts, use your FSU email when registering on Pearson. You can begin with a free temporary account on Pearson but do not let this expire or you may lose your work.
- Download and install the free Gretl software on your personal computers so that you can follow the instructional videos.

Important Notes:

- All assignments and exams will be taken online so you will not need to use a testing center for this class. All quizzes and exams are open book, open notes and you are free to use your econometric software.
- Homework and Quizzes due before 11:59 PM almost every Friday of the semester when there is not an exam. You must complete the homework with a score of at least 60% before you can open the associated quiz. You can submit assignments late but there is a 10% per day penalty for late assignments.
- Read the "Grading" section of the syllabus carefully—most of your procedural questions are answered there.
- You will be assigned to a specific TA for the class. You should address your questions to them first and they will forward questions to me.
- **Prerequisites:** Required courses are both ECO 2013 (Principles of Macroeconomics) and ECO 2023 (Principles of Microeconomics), and one of STA 2023 (Fundamental Business Statistics) or STA 4321 (Introduction to Mathematical Statistics).

This course is a prerequisite for ECO 4421 Introduction to Econometrics.

Course Description: ECO 3431 Analysis of Economic Data (3). This course provides basic skills in graphing and analyzing economics data. The first two blocks of the course are composed of an extensive coverage of probability and statistics that is necessary to understand the theory and practice of regression analysis. The third block of the course is devoted entirely to regression analysis. Some of the concepts discussed in the second and third block of the course are illustrated with widely-used statistics and econometrics software giving the student the opportunity to learn the application of some of the concepts discussed in class to economics data.

Course Outcomes: At the end of this course, the student will be able to:

- list the basic concepts of probability theory, the rules of probability, conditional probabilities, and statistical independence of events.
- work with both discrete and continuous random variables, and use the probability distribution or density function as well as the cumulative distribution function to calculate probabilities.
- explain the mean and variance of a random variable and to calculate the mean and variance of a discrete random variable.

 $\mathbf{2}$

- describe the concepts of random sampling, sampling distributions, and the Central Limit Theorem, and will be able to find the sampling distribution of the sample mean.
- explain what is a point estimator and a confidence-interval estimator, what are the desirable properties of an estimator, and to find point and confidence-interval estimators of the population mean.
- explain the foundations of hypothesis testing, types I and II errors, size of a test, the p-value, and will be able to perform hypothesis testing for the population mean.
- interpret scatter plots, covariance, and sample correlation.
- describe the linear regression model, estimation of the linear regression model by the method of ordinary least squares (OLS), the sampling distribution of the OLS estimator, and confidence intervals and hypothesis testing in the linear regression framework.
- interpret the output from estimation and hypothesis testing from widely-used statistics and econometrics software.
- **Textbook and Course Materials:** Homework, quizzes and exams will be delivered through the Pearson MyEconLab online system. You will be able to register for MyEconLab through a link on the course web page page. There is an additional fee for the MyEconLab access which will also include access to the textbook as an eText.

The required textbook for the class is: *Introduction to Econometrics*, 4th ed., by James H. Stock and Mark W. Watson, Pearson, 2019. (The text is available as an online ebook through the course website.)

You will see two options when you go through the registration process from Canvas. One option will be to purchase access directly from Pearson during the registration process at \$99.95 to get access to MyLab with an eBook. You will not need any ISBN number for the direct purchase option.

The second option will be to enter an access code that was purchased at the bookstore as part of a print package (print book + access code).

I recommend the eBook option because MyLab has hyperlinks that take you to the relevant eBook pages when you are working problems.

We will cover all of chapters 1 through 5 and sections 8.1 and 8.2 of chapter 8. The table of contents for the chapters that we will cover are attached to the end of this syllabus. There will be additional course materials posted on the course web page and MyEconLab page.

Software: Throughout this course I will use *Gretl* (Gnu Regression, Econometrics and Time-series Library), a public domain (free) graphical and statistical computer software, to illustrate how to solve the problems in the textbook. Gretl is a "point-and-click" program and the installation includes a detailed User's Guide. Gretl is installed on several computers in the Carothers computer lab. Since I will make extensive use of Gretl, you should install Gretl on your personal computer (it runs on Windows and Mac) and make sure that it works properly. You can download Gretl at http://gretl.sourceforge.net/. You will find a Gretl installation video along with a description of a test to make sure that is working properly on the course web page. You may also find many useful YouTube videos on Gretl online.

4

I will post tutorials and help files on the course web page to help you get started with Gretl. It is important that you begin to use Gretl early so that you can follow along with the video tutorials. Note that the tutorial videos may have been made using an earlier version of Gretl than the one you download so there may be minor differences.

- **Grading:** In the past we have spotted a few erros on MyEconLab such as correct problems being marked incorrect and vague instructions about rounding precision. Let us know as soon as possible if you find any problems. As a rule you should do your computations in as high a precision as you can and enter your answers in exactly the precision the Pearson requests. I.e. if you compute 2.0001 and they ask for two decimal point precision then enter "2.00". I recommend that you use Gretl (as I do in the online tutorials) or an online statistical calculator to compute p-values and test statistics rather than trying to interpolate answers from the statistical tables in the eText.
 - There will be no extra credit, re-weighting of course grade components or adjustments to the grade scale.
 - All homework and quizzes have a specific due date/time. Late assignments will be penalized at 10% per day. If a quiz is due on Friday and you turn it in on Saturday you can earn no more than 90% on the quiz. You must get at least a 60% on the homework before you can open the associated quiz. For the last assignments of the semester you only have to the last day of the semester to complete all assignments even if that is less than ten days after the original due date.
 - You have a full week (12:01 AM Monday through 11:59 PM Friday) to take each exam. Once you begin the exam you must complete it within the allotted time—90 minutes for the midterms and 2 hours for the final. Since you have a full week to schedule your exam, there will be no make-up exams unless

you have an extraordinary circumstance that can be verified by the Dean of Students.

• **Illness:** Due to the large number of student requests for makeup assignments due to illness and mental health issues, we have attempted to standardize the way such requests are handled. If you feel that you need to make-up a significant portion or drop a class for health related issues you need to contact the Dean's Office of your College and they will explain the process to you. They will inform you about what documentation you will need about the timing and severity of your condition and how the condition has effected your class performance. The most common resolution is a medical withdrawal from all classes during the semester.

Your grade will be determined as follows:

20% (the two lowest scores are dropped on the fly)
30% (the two lowest scores are dropped on the fly)
15%
15%
20%

To compute your grade:

- Some of the homework scores may have a different number of total points so some assignments may count more than others.
- The two homework scores that drop your total score by the most are dropped and your homework score is then computed as the percentage of the total points (less the two dropped assignments) that you got correct.
- The quizzes component is computed the same way as the homework score with your two lowest percent quiz scores being dropped.
- To satisfy university reporting rules, the Final Exam consists of two parts: a short Part 1 and a longer Part 2. The Final Exam score is the percent correct of the combined total possible points on both parts.
- The "Weighted Total" column in the course Grade book is computed as we go to let you know how you are doing in the class. If your current score is reported as 80% then you have earned 80% of the points available up to that time in the semester. This accounts for dropping your lowest homework and quiz scores up to that date. However, blank scores are ignored until zeros are entered for missed assignments.
- The total score reported on MyEconLab is unweighted and therefore *not accurate*. The total score reported on Canvas is weighted correctly and is the correct score.

We use the official FSU grading scheme below for this class. Note that there is no rounding, a 89.9% is a B+, not an A-.

\leq	А		
\leq	A-	<	93
\leq	B+	<	90
\leq	В	<	87
\leq	В-	<	83
\leq	C+	<	80
\leq	С	<	77
\leq	C-	<	73
\leq	$\mathrm{D}+$	<	70
\leq	D	<	67
\leq	D-	<	63
	F	<	60
		$\begin{array}{cccc} \leq & A \\ \leq & A- \\ \leq & B+ \\ \leq & B \\ \leq & C+ \\ \leq & C+ \\ \leq & C+ \\ \leq & C+ \\ \leq & D+ \\ \leq & D- \\ \leq & D- \\ F \end{array}$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

- Homework: There will be homework assignments on MyEcon-Lab for each chapter that we cover. You may attempt he homework assignments as often as you like before the due date and there will be a 10% per day penalty for each day after the due date. The homework assignments must be completed with a score of at least 60% before you can take the quiz. In other words, you must complete HW2.1 with a score of at least 60% before you can take Quiz 2.1. Your lowest two homework scores will be dropped from the course score computation. Note that the assignments that are dropped by Canvas are those with the most points lost, not by the lowest percent score on individual assignments. Thus, a 10 point assignment is more highly weighted than an 8 point assignment.
- Quizzes: There will be short quizzes on MyEconLab covering each chapter. The quizzes will be open book and open notes but will have a **60 minute time limit** so make sure that you are well-prepared before starting the quiz. You cannot attempt the quiz until you have completed the accompanying homework assignment with a score of at least 60%. Quizzes must be completed by their due date or there will be a 10% per day penalty for each day after the due date. Quiz questions are drawn randomly from a pool of questions and include True/False, Multiple Choice but mostly Algorithmic types of questions. Many of the questions have similar wording but may have randomly generated numbers in them or slight wording changes—so read the questions carefully. You should work the computational problems with at least 4 decimal point precision and then round at the end if the question asks for less precision. Note that if MyEconLab will automatically round for you if you enter answers in

higher precision than asked for. Your lowest two quiz scores will be dropped from the course score computation.

- Midterm Exams: The midterm exams will be available from 12:01 AM Monday through 11:59 PM Firday of the week they are due. You will have 90 minutes to complete the exam once you begin it. You must complete and submit the exam before 11:59 PM on Friday or your score as of 11:59 PM will be registered in the grade book.
- Final Exam: The final exam will be available from 12:01 AM Monday through 11:59 PM Friday of finals week. The exam will be cumulative and cover the whole semester. You will have 30 minutes to complete Part 1 and 120 minutes to complete Part 2 once you begin. You must complete and submit the exam before 11:59 PM Friday or your score as of 11:59 PM will be registered in the grade book.
- **Course Schedule:** There will be a detailed schedule for each unit of the course (each covered chapter of the text) on the Modules page of the course web page. Check this schedule and your Pearson MyEconLab page frequently to see when quizzes, projects and exams will be scheduled.
- **Course Delivery:** The course is composed of six modules. Each module will require two to three weeks to complete and consists of reading assignments, instruction videos, homework assignments and quizzes. Students should plan on needing 4 to 8 hours for the reading assignments, 2 to 4 hours for the videos, 5 to 10 hours for the homework, and 1 hour for each of the quizzes. Comments and questions on the module materials should be directed to the TA's by email or through the discussion board on the course web page. In addition, there are two midterm exams and a final exam. All homework, quizzes and exams will be implemented through Pearson MyEconLab during a specific timed window. You will not be required to visit the testing center.
- **Contacting your Instructors:** Your first point of contact should be the TA's. Since some online students are not on campus, we discourage office visits and request that you contact the TA's via email or the course web page Discussion Forums set up for the class. We will respond to your emails within 24 hours during weekdays. We often answer the same question many times so I strongly encourage you to make use of the Discussion Forums so that everyone can benefit from the discussions. The TA's will pass along to me any issues that I can help with.

In addition, there will also be discussion boards set up for the class:

- Readings and HW Q&A Forum: You should use this forum to post questions about the readings and homework. This is where you should also post any questions you may have about using the Pearson MyEconLab web page. I encourage you to offer suggestions to help your fellow students—one of the best ways to learn is to try and explain the concept to someone else. The TA's and I will monitor this forum, steer the discussion and post responses on a daily basis.
- **Gretl Q&A Forum:** You should use this forum for questions on how to use the Gretl software to solve problems from the text and MyEconLab. Please offer assistance to your fellow students whenever you can. The TA's and I will monitor this forum, steer the discussion and post responses on a daily basis.
- Office Hours Forum: You should use this forum for questions that you may have about grading issues, potential applications of the material, or how you might pursue additional material related to the class or your careers. I will monitor this forum on a daily basis and respond to you within 24 hours. You may choose to email me directly if you prefer.

As a rule, I will monitor each of these forums for about and hour each day in the mid-morning.

On-line Orientation and Access: This is an asynchronous, online course so you must be familiar with using web browsers and navigating in the FSU Canvas web page system. For more information, see FAQ. Canvas is accessed through the use of an internet web browser. Contact the ODL User Support Team if you encounter problems with browser compatibility when using course web page applications.

If you have any questions or problems, please contact the User Support by email at help@campus.fsu.edu or by phone at 850-644-8004.

- **University Attendance Policy:** Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.
- Academic Honor Policy: The Florida State University Academic Honor Policy outlines the Universitys expectations for the integrity of students academic The Florida State University Academic Honor Policy outlines the Universitys expectations for the integrity of students academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout

the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to . . . be honest and truthful and . . . [to] strive for personal and institutional integrity at Florida State University. (Florida State University Academic Honor Policy, found at FSU Honor Policy.)

Americans with Disabilities Act: Students with disabilities needing academic accommodation should: (1) register with and provide documentation to the Student Disability Resource Center; and (2) bring a letter to the instructor indicating the need for accommodation and what type.

Please note that instructors are not allowed to provide classroom accommodation to a student until appropriate verification from the Student Disability Resource Center has been provided. This syllabus and other class materials are available in alternative format upon request.

For more information about services available to FSU students with disabilities, contact the:

Student Disability Resource Center 874 Traditions Way 108 Student Services Building Florida State University Tallahassee, FL 32306-4167 (850) 644-9566 (voice) (850) 644-8504 (TDD) sdrc@admin.fsu.edu http://www.disabilitycenter.fsu.edu

Free Academic Support for FSU Online Learners: FSU provides services and resources to support your academic success. The Academic Center for Excellence (ACE) provides online materials, individual academic consultations with an ACE instructor via Skype, and on-campus tutoring in the ACE Learning Studio in Johnston. The Reading-Writing Center offers online and in-person writing assistance through multiple campus locations, including Johnston, Williams, and Strozier. University Libraries provides research assistance via email, phone, Skype, and virtual reference (Ask a Librarian chat box). Students may also access FSU Library books and articles (http://www.lib.fsu.edu), as well as those outside of FSU by using UBorrow and Interlibrary Loan. For more information, please visit the departmental websites:

http://wr.english.fsu.edu/Reading-Writing-Center, and http://www.lib.fsu.edu/department/distance-learning.

Free Tutoring from FSU: On-campus tutoring and writing assistance is available for many courses at Florida State University. For more information, visit the Academic Center for Excellence (ACE) Tutoring Services comprehensive list of on-campus tutoring options - see http://ace.fsu. edu/tutoring or contact tutor@fsu.edu. High-quality tutoring is available by appointment and on a walk-in basis. These services are offered by tutors trained to encourage the highest level of individual academic success while upholding personal academic integrity.

Syllabus Change Policy: Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice.

Contents

Preface xxvii

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PART ONE	Introduction and Review
CHAPTER 1	Economic Questions and Data 1
1.1	Economic Questions We Examine 1
	Question #1: Does Reducing Class Size Improve Elementary School Education? 1 Question #2: Is There Racial Discrimination in the Market for Home Loans? 2 Question #3: How Much Do Cigarette Taxes Reduce Smoking? 3 Question #4: By How Much Will U.S. GDP Grow Next Year? 4 Quantitative Questions, Quantitative Answers 4
1.2	Causal Effects and Idealized Experiments 5 Estimation of Causal Effects 5 Prediction, Forecasting, and Causality 6
1.3	Data: Sources and Types 6
	Experimental versus Observational Data 7 Cross-Sectional Data 7 Time Series Data 8 Panel Data 9
CHAPTER 2	Review of Probability 13
2.1	Random Variables and Probability Distributions 14 Probabilities, the Sample Space, and Random Variables 14 Probability Distribution of a Discrete Random Variable 14 Probability Distribution of a Continuous Random Variable 16
2.2	Expected Values, Mean, and Variance 18
	The Expected Value of a Random Variable 18 The Standard Deviation and Variance 19 Mean and Variance of a Linear Function of a Random Variable 20 Other Measures of the Shape of a Distribution 21 Standardized Random Variables 23
2.3	Two Random Variables 23
	Joint and Marginal Distributions 23 Conditional Distributions 24 Independence 28 Covariance and Correlation 28 The Mean and Variance of Sums of Random Variables 29

3.7 Scatterplots, the Sample Covariance, and the Sample Correlation 85 Scatterplots 85 Sample Covariance and Correlation 85 APPENDIX 3.1 The U.S. Current Population Survey 99 APPENDIX 3.2 Two Proofs That \overline{Y} Is the Least Squares Estimator of μ_Y 99 APPENDIX 3.3 A Proof That the Sample Variance Is Consistent 100

PART TWO Fundamentals of Regression Analysis

CHAPTER 4	Linear Regression with One Regressor 101
4.1	The Linear Regression Model 102
4.2	Estimating the Coefficients of the Linear Regression Model 105 The Ordinary Least Squares Estimator 106 OLS Estimates of the Relationship Between Test Scores and the Student-Teacher Ratio 107 Why Use the OLS Estimator? 109
4.3	Measures of Fit and Prediction Accuracy 111 The R ² 111 The Standard Error of the Regression 112 Prediction Using OLS 113 Application to the Test Score Data 113
4.4	The Least Squares Assumptions for Causal Inference 114 Assumption 1: The Conditional Distribution of u_i Given X_i Has a Mean of Zero 115 Assumption 2: (X_i, Y_i) , $i = 1,, n$, Are Independently and Identically Distributed 116 Assumption 3: Large Outliers Are Unlikely 117 Use of the Least Squares Assumptions 118
4.5	The Sampling Distribution of the OLS Estimators 119
4.6	Conclusion122APPENDIX 4.1The California Test Score Data Set130APPENDIX 4.2Derivation of the OLS Estimators130APPENDIX 4.3Sampling Distribution of the OLS Estimator131APPENDIX 4.4The Least Squares Assumptions for Prediction134
CHAPTER 5	Regression with a Single Regressor: Hypothesis Tests and Confidence Intervals 136
5.1	Testing Hypotheses About One of the Regression Coefficients 136 Two-Sided Hypotheses Concerning β_1 137 One-Sided Hypotheses Concerning β_1 140 Testing Hypotheses About the Intercept β_0 142
5.2	Confidence Intervals for a Regression Coefficient 142

- x Contents
 - 5.3 Regression When X Is a Binary Variable 144 Interpretation of the Regression Coefficients 144
 - 5.4 Heteroskedasticity and Homoskedasticity 146
 What Are Heteroskedasticity and Homoskedasticity? 146
 Mathematical Implications of Homoskedasticity 148
 What Does This Mean in Practice? 150
 - 5.5 The Theoretical Foundations of Ordinary Least Squares 152 Linear Conditionally Unbiased Estimators and the Gauss-Markov Theorem 152 Regression Estimators Other Than OLS 153
 - 5.6 Using the t-Statistic in Regression When the Sample Size Is Small 154
 The t-Statistic and the Student t Distribution 154
 Use of the Student t Distribution in Practice 155
 - 5.7 Conclusion 155

APPENDIX 5.1 Formulas for OLS Standard Errors 164 APPENDIX 5.2 The Gauss-Markov Conditions and a Proof of the Gauss-Markov Theorem 165



CHAPTER 8 Nonlinear Regression Functions 235

- 8.1 A General Strategy for Modeling Nonlinear Regression Functions 237
 Test Scores and District Income 237
 The Effect on Y of a Change in X in Nonlinear Specifications 240
 A General Approach to Modeling Nonlinearities Using Multiple Regression 243
- 8.2 Nonlinear Functions of a Single Independent Variable 244
 Polynomials 244
 Logarithms 246
 Polynomial and Logarithmic Models of Test Scores and District Income 254

