

# **ECON 3112: ECONOMETRICS**

## **Syllabus for Fall 2019**

**2:30 p.m. – 3:45 p.m. MW**

**Friday 141**

### **Instructor**

Rob Roy McGregor

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### **Office Hours**

1:30 p.m. – 2:15 p.m. M

9:30 a.m. – 10:15 a.m. W

4:00 p.m. – 5:30 p.m. MW

If the hours established are not convenient, feel free to make an appointment with me for another time or to stop by at another time when I am in the office.

### **Textbooks**

The textbook for this course is Jeffrey M. Wooldridge, *Introductory Econometrics: A Modern Approach*, 7<sup>th</sup> edition (Cengage Learning, 2020). On the Outline of Topics and Reading Assignments (page 3 of this syllabus), I have listed the relevant readings from Wooldridge (2020).

### **Catalog Course Description**

ECON 3112: Econometrics – Econometric techniques, including simple and multiple regression with problems and analyses. Prerequisites: ECON 2101 and ECON 2102; MATH 1120 or MATH 1241; STAT 1220; and INFO 2130; all with grades of C or above.

### **Course Objectives**

We will study basic data analysis techniques that are commonly used by economists. We will focus on understanding the strengths and limitations of the methods we cover, using econometric software to apply these methods, and interpreting the results we get.

### **Software**

We will use STATA for the applications we do in this course. STATA is available on all Belk College computers. You can purchase STATA at a reduced rate through the STATA website (<http://www.stata.com/order/new/edu/gradplans/student-pricing/>). The STATA/IC version is sufficient for the problem sets that you will be assigned in this course and in ECON 4112 (Econometrics II), which is a course that some of you may choose to take next semester as an elective. The websites <http://data.princeton.edu/stata/>, <http://www.ats.ucla.edu/stat/stata/>, and <https://www.ssc.wisc.edu/sscc/pubs/sfr-intro.htm> have a number of examples and other resources that you may find helpful as you work with STATA.

### **Means of Student Evaluation**

Course grades will be determined by your performance on 4 problem sets (6% each), 10 short quizzes (1% each), 3 tests (12% each), and a comprehensive final exam (30%). Letter grades for the course will be based on the following scale: A, 90%-100%; B, 80%-89.99%; C, 70%-79.99%; D, 60%-69.99%; F, below 60%. Your grade will be based only on your performance on the 4 problem sets, the 10 short quizzes, the 3 tests, and the comprehensive final exam. Individual extra credit assignments will **NOT** be made.

## **Problem Sets**

Problem sets must be typed and must be submitted in class on the assigned due dates. A problem set may be submitted after the due date, but there will be a penalty of one letter grade for each day that the submission is late. Once a problem set has been graded and returned to the class, no late submission will be accepted, and you will receive a grade of zero on that problem set. The first problem set will be due on September 18; the second, on October 16; the third, on November 13; and the fourth, on December 4.

## **Short Quizzes, Tests, and Final Examination**

There will be a short quiz or a test each Wednesday during the semester (except August 21, November 27, and December 4). The short quizzes will be on August 28, September 4, September 11, September 18, October 2, October 9, October 16, October 30, November 6, and November 13. The first test will be given on September 25; the second, on October 23; and the third, on November 20. The comprehensive final exam will be given at 2:00 p.m. on December 9 (the exam slot assigned for this course).

## **Academic Integrity**

All students are required to read and abide by the Code of Student Academic Integrity. Violations of the Code of Student Academic Integrity, including plagiarism, will result in disciplinary action as provided in the Code. Definitions and examples of plagiarism are set forth in the Code. The Code is available from the Dean of Students Office or online at <http://legal.uncc.edu/policies/up-407>. Please be aware that faculty may ask students to produce identification at examinations and that faculty may require students to demonstrate that assignments completed outside of class are their own work.

## **Disability Accommodations**

UNC Charlotte is committed to access to education. If you have a disability and need academic accommodations, please provide a letter of accommodation from the Office of Disability Services early in the semester. For more information about accommodations, you may contact the Office of Disability Services at 704-687-0040 or visit the Office of Disability Services itself in Fretwell 230.

## **Revision of Syllabus during Semester**

The standards and requirements set forth in this syllabus may be modified at any time by the course instructor. Notice of such changes will be by announcement in class and by email.

## **Attendance**

Students are expected to attend every class and remain in class for the duration of the session. Failure to attend class or arriving late may affect your ability to achieve course objectives, which could affect your course grade. An absence—whether excused or unexcused—does not relieve a student of any course requirement. Regular class attendance is a student's obligation, as is a responsibility for all the work done during class meetings. If you do have to miss a class, you should NOT ask me to go over with you the lecture material that you missed. It is your responsibility to get this information from one of your classmates.

## **Instructor Absence or Tardiness**

If I am late in arriving to class, you must wait a full 20 minutes after the start of class before you may leave without being counted absent, or you must follow any written instructions that I give you about my expected tardiness.

## **Computer Use in the Classroom**

Students are permitted to use computers during class only for taking notes and for doing other class-related work. Those using computers during class for work that is not related to this class must leave the classroom for the remainder of the class period.

## **Recording in the Classroom**

Electronic video and/or audio recording is not permitted during class unless the student obtains permission from the instructor. If permission is granted, any distribution of the recording is prohibited. Students with specific electronic recording accommodations authorized by the Office of Disability Services do not require instructor permission, but the instructor must be notified of any such accommodation prior to recording. Any distribution of such recordings is prohibited.

## **Course Withdrawals**

The last day to withdraw from courses with grades of W is October 21. Students are expected to complete all courses for which they are registered at the close of the add/drop period. If you are worried about your ability to succeed in this course, then you should talk with me as soon as possible. University policy allows students only a limited number of opportunities to withdraw from courses. It is important for you to understand the financial and academic consequences of course withdrawals. For more information, see the UNC Charlotte policy on withdrawals at <https://provost.uncc.edu/policies/withdrawal>.

## **Belk College of Business Diversity Statement**

The Belk College of Business strives to create an inclusive academic climate in which the dignity of all individuals is respected and maintained. Therefore, we celebrate diversity that includes but is not limited to ability/disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socio-economic status.

## **Outline of Topics and Reading Assignments**

I assume that you have a basic knowledge of calculus and probability and statistics. The material that you need for this course is covered in Math Refreshers A, B, and C of Wooldridge (2020). You should review this material on your own just as soon as possible; in fact, you should treat this review as the assignment you need to complete between our first class meeting on August 21 and our second class meeting on August 26.

- I. Introduction to Econometrics  
Wooldridge (2020), Chapter 1
- II. Simple Regression Analysis  
Wooldridge (2020), Chapter 2
- III. Multiple Regression Analysis: Estimation  
Wooldridge (2020), Chapter 3
- IV. Multiple Regression Analysis: Inference  
Wooldridge (2020), Chapter 4
- V. Regression Analysis with Qualitative Information  
Wooldridge (2020), Chapter 7
- VI. Heteroskedasticity  
Wooldridge (2020), Chapter 8
- VII. Basic Regression Analysis with Time Series Data  
Wooldridge (2020), Chapter 10, pp. 334-336 & pp. 339-345
- VIII. More about Regression Analysis with Time Series Data  
Wooldridge (2020), Chapter 11
- IX. Serial Correlation and Heteroskedasticity in Time Series Regressions  
Wooldridge (2020), Chapter 12, pp. 395-415