

ECON 4117: BUSINESS & ECONOMIC FORECASTING

Busn & Econ Forecasting - 21938 - ECON 4117 – 001

Syllabus for Spring 2019 6:30 PM – 9:15 PM Monday Friday 130

Instructor:

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Office Hours:

By Appointment.

Textbooks and Other Resources:

There is one textbook that is required for this course:

Wooldridge, Jeffrey M. 2015. Introductory Econometrics: A Modern Approach, 6th edition. Boston, MA: Cengage Learning.

There is one textbook that is recommended for this course:

Wilson, J. Holton, Barry Keating, and John Galt Solutions, Inc. 2009. Business Forecasting, 6th edition. New York, NY: McGraw-Hill/Irwin.

The appropriate textbook readings for each topic are indicated on the course outline at the end of this syllabus.

Additional readings may also be assigned from time to time.

Course Description and Objectives:

Analysis of fluctuations in economic activity, including production, employment, prices and industry sales. Topics include: forecasting methods, business cycle theories, historical record, industry and sales forecasting.

Our principal focus will be on understanding how and when to apply various forecasting techniques and how to interpret the results. In this course, we will develop and apply selected time series and regression- based approaches to forecasting.

Software:

I will support R for econometric analysis that you will be doing in this course. I encourage you to use R and will provide an overview of the software as well as key R code to perform basic statistical analysis. A good online resource, both on subjects covered in this course and implementation/analysis in R is “Forecasting: Principles and Practice” by Rob J Hyndman and George Athanasopoulos found [here](#). An additional useful resource for learning R programming

can be found on the R Studio website [here](#). I will designate time throughout the course to review code to conduct analysis in R, but you are welcome to use other software such as E-Views, STATA, GAUSS, SPSS, and SAS.

Means of Student Evaluation:

Course grades will be determined by your performance on two in-class tests, four problem sets, and a comprehensive final examination. These components will have the following weights in the calculation of your final grade: 15% for each of the two tests, 10% for each of the four problem sets, and 30% for the comprehensive final examination.

Letter grades for the course will be based on the following scale:

- A. 90% and above
- B. 80%-89.99%
- C. 70%-79.99%
- D. 60%-69.99%
- F. Below 60%

NOTE WELL: Grades will be based solely on your performance on the two tests, the four problem sets, and the comprehensive final examination. 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 date. 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.

On the day that a problem set is due, if the University is closed or is closing early (i.e., prior to the completion of the allotted time for this class), then the required problem set submission will be postponed until the next regularly scheduled class day on which the University is open for its normal hours.

Tests:

Test #1 will be given on February 25th. Test #2 will be given on April 8th. The final examination will be given at 6:30PM on May 6th (the examination slot assigned for this course).

On the day of a test, if the University is closed or is closing early (i.e., prior to the completion of the allotted time for this class), then the test will be postponed until the next regularly scheduled class day on which the University is open for its normal hours.

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 Disability Services early in the semester. For more information on accommodations, contact the Office of Disability Services at 704-687-0040 or visit their office in Fretwell 230.

Attendance:

Regular attendance is expected and should be considered essential to satisfactory performance in this course, since not all of the material presented in class will be found in the textbook. You are responsible for this material and any other work missed because of an absence.

Other:

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.

The last day to withdraw from courses with grades of W is March 19th. 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 <http://provost.uncc.edu/policies/academic/withdrawals>.

There will be no class meeting on January 21st (Martin Luther King Day). Spring break will be the week of March 4th – 9th.

I will always try to be on time for each class during the semester. If I must be absent because of illness, emergencies, or other reasons, I will make every effort to notify you as far in advance as possible. On any given class day, though, if I am more than 30 minutes late for class and you

have received no notification from me from the contrary, you may assume that class is cancelled.

Between class meetings, any communication I need to have with the class will be done by email; you should therefore check your University-assigned email account on a regular basis.

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 statistics, so we will not review these topics in class. The material that we need is covered in Appendices A, B, and C of Wooldridge (2015).

1. Introduction Recommended: Wilson & Keating, Chapter 1
2. Exponential Smoothing Recommended: Wilson & Keating, Chapter 3
3. Moving Averages and Seasonal Adjustment Recommended: Wilson & Keating, Chapter 6, pp. 298-307
4. Review of Simple Regression Analysis Required: Wooldridge, Chapter 2
5. Forecasting with Simple Regression Recommended: Wilson & Keating, Chapter 4
6. Classical Time Series Decomposition Recommended: Wilson & Keating, Chapter 6, pp. 308-320
7. Review of Multiple Regression Analysis Required: Wooldridge, Chapter 3, Required: Wooldridge, Chapter 4
8. Forecasting with Multiple Regression Recommended: Wilson & Keating, Chapter 5
9. Regression Analysis with Time Series Data Required: Wooldridge, Chapters 10, 11, & 12
10. Advanced Time Series Topics Required: Wooldridge, Chapter 18; Recommended: Wilson & Keating, Chapter 2, pp. 84-88 Recommended: Wilson & Keating, Chapter 7
11. Combining Forecast Results Recommended: Wilson & Keating, Chapter 8
12. Forecast Implementation Recommended: Wilson & Keating, Chapter 10