Business and Economic Forecasting  
ECON 4117, Spring 2018

Location: Friday 106, M/W 2:00pm - 3:15pm  
Instructor: Professor Chris Kirby  
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Office hours: By appointment

Course Description
This is a one semester introduction to econometric time series analysis, forecasting methods, and forecast evaluation. The course will cover theoretical, methodological and applied topics, and much of the work will be hands-on data analysis.

Prerequisites
Undergraduate level ECON 3112 (Minimum Grade of C)

Course Requirements
Please note that the standards and requirements set forth in this syllabus may be modified at any time. Notice of such changes will be by announcement in class and posting on the Canvas webpage.

Attendance: Encouraged but not required. Note, however, that poor attendance is generally a strong predictor of poor grades.

Problem Sets (20%): The problem sets will typically contain of a mix of questions that require numerical answers and programming exercises. The programming exercises must be completed using STATA. This software is available in the Belk College computer labs (Friday 216 & 338), and can be accessed elsewhere via Citrix.

Problem sets must be typed and must be submitted in class on the assigned due date. No late submission will be accepted (late submissions will receive a grade of zero).

If you want to run STATA on your own computer, you can purchase a student license directly at www.stata.com. For this course, you might consider “small STATA”. A six-month license is $35 and a one-year license is $49. It restricts you to 1200 observations and 99 variables, which is sufficient for all but one of the assignments.

Regular Exams (25% each): There will be two exams during the semester. They will consist of problems that test your understanding of the econometric techniques covered in the lectures. You will have 75 minutes to complete each exam.

Final Exam (30%): The final exam is cumulative (comprehensive) and will be similar in format to the other exams. It will be held from 2:30 pm to 4 pm on Monday May 7.
Grades will be based solely on your performance on the exams and problem sets. Individual extra credit assignments will NOT be made.

Textbook
The recommended textbook is *Forecasting for Economics and Business* by Gloria Gonzalez- Rivera.

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.

Accommodations for Disabilities
Students who wish to seek accommodations for disabilities must first consult with the Office of Disability Services and follow the instructions of that office to obtain accommodations.

Other
The last day to withdraw from courses with grades of W is March 19. University policy 3 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 15 (Martin Luther King Day).

Spring break will be the week of March 5-10.

Tentative Course Outline
A list of topics for the course is shown below. Any readings will be posted to the class web page prior to each lecture.

1. Introduction to Forecasting
2. Conditional Forecasts and Introduction to Time Series
3. Prediction Intervals and Trend Models
4. Seasonality and Autocorrelation
5. Moving Average and Autoregressive Models

First Exam

6. Multi-Step Forecasts for Autoregressive Models
7. Incorporating Trends and Seasonality
8. Standard Errors for Time Series Regression Models
9. Model Selection and Distributed Lags

Second Exam
10. Stability and Time-Varying Parameters
11. Unit Roots and Cointegration
12. Forecast Combination and Volatility Models
13. Vector Autoregressive Models

Final Exam