ECO 5434: Analysis of Economic Data

Spring 2020
MW 2:00–3:15 PM BEL 202 & MS Computer Lab

Instructor:	Paul Beaumont
Office:	Bellamy 276
Email:	beaumont@fsu.edu
Office Hours:	MW 1:00–2:00 PM or by appointment.

Course Description: This course is specifically designed for MS Economics students and is intended to provide a quick overview of some of the data analysis methods that you may run across in your career as a practicing economist. We will focus particularly on forecasting methods. The course will be organized as a business workshop. As in any business environment, attendance and promptness are critical and expected. Dress will be casual. We will generally meet in 202 Bellamy but occasionally we will meet in your computer lab room when we want to focus on some hands-on computer applications.

Course Goals and Objectives: By the end of this course you will: be familiar with the essential techniques in economic forecasting; how to specify a model that is consistent with economic theory; choose an appropriate statistical method; interpret your results; and prepare a brief technical report that can be understood by a non-specialist.

Textbook: There is no required textbook for this course. I will post reading material on the course Canvas page.

Course Software: We will use a lot of software in this course. Some of it casually to just become familiar with it and some of it intensively. Almost all of the software used is Open Source and in the public domain. We will use primarily *Gretl* (Gnu Regression, Econometrics and Time-series Library) and R and some SAS. I recommend that you install RStudio on your laptops. Gretl is a "point-and-click" program and the installation includes a detailed User's Guide which also serves as a handy reference for statistics and econometrics. If you want to install Gretl on your personal computer you can download Gretl at `http://gretl.sourceforge.net/`. Gretl also includes a scripting language called, brace yourself, *Hansl*, that is very similar to R and Stata. You may also want use SAS or Stata in the class, indeed, I would recommend this, but all of the examples in class will be done in Gretl and R so you should invest some time in learning to use them.

Grading: Your course grade will be determined as follows:

30%: Quizzes
60%: Projects – White Papers
10%: Group assigments

The quizzes over each general topic are to encourage you to keep up and to determine if you have understood the readings and learned how to use the software to carry out the tasks. The quizzes will be short, about 30 minutes, and we will go over the answers immediately after the quiz. I anticipate that there will be 5 quizzes and they will account for 30% of your grade.

There will be 4 individual projects that are intended to give you hands on experience with the methods we cover and in presenting them to a lay audience. The projects will be in the form of short business White Papers that make use of R Markdown so that all results can be reproduced from a single file that incorporates the code. We will learn how to do this in our first project. You will submit your papers online and a group of 4 or 5 of your peers will grade your project according to a standard grading rubric. Part of your "Group" grade will depend upon your performance as a peer grader. The first three projects are rather narrowly defined on specific topics. The final project will be on a topic and method that you choose. Time permitting, each student will present a proposal to the class for their final project in order to get some feedback to refine the idea. Each project accounts for 15% of your grade for a total of 60%.

On occasions I may assign some group assignments. These informal projects will account for 10% of your grade. The two most common problems that arise with group projects are the free-rider who does little and the dominant member who asserts expertise and coerces the group into following. The most straight-forward way to deal with these problems is to simply tell the group member that their behavior is hurting the group and to come up with ways to deal with this within the group. Another approach is to let me know through peer evaluations so that this poor group behavior can be reflected in grades (in the "real world" you will simply be fired). Please take the peer group evaluations seriously. No one in this class should be worried about a poor grade. What we should be concerned with is learning how to make teams work productively and to help improve our own and others performance.

Topics: What we cover and how much time we spend on what is somewhat negotiable. There is more here than we can adequately cover so we can short-change or skip some topics. The following topics each have a module on the course Canvas page.

(1) Preliminaries: software, data sources, etc. (first day)
(2) Review of estimation, inference and regression analysis using R. (3 weeks)
(3) Overview economic models. (2 weeks)
(4) The term structure of interest rates and the probability of a recession. (2 weeks)
(5) Univariate time series models: ARIMA. (3 weeks)
(6) Multivariate time series models: VAR & VECM. (2 weeks)
(7) Concurrent and leading economic indicators. (1 week)
(8) Impact & event studies. (1 week)
(9) Big Data, Mixed frequency data (MIDAS) and nowcasting. (1 week)

Syllabus Blurbs:

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.

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.