# Eco 4306 Economic and Business Forecasting

## Lecture 1 - Introduction

# Contact info

- classes: TR 8:00am-9:20pm, 00154 Holden Hall

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- **please check your emails every day for important class announcements**
- **when sending an email start the subject with 'Eco 4306'**

# Eco 4306 Overview

- introduction to forecasting methods
- main goal is to learn how to apply them in practice to univariate and multivariate models in economics, business and finance
- we will discuss how to analyze time series data, build forecasting models, and critically evaluate competing forecasts
- emphasis is on learning how to apply the forecasting methods to data so expect to spend a nontrivial amount of time outside of class working on assignments in EViews

# Textbook

- Gonzalez-Rivera, G., Forecasting for Economics and Business, 1st edition. Routledge, 2012

# Course Outline

- Module I (Chapters 1 to 3)
  - regression analysis, foundations of time series analysis and forecasting
  - first three weeks of the semester
- Module II (Chapters 4 to 12)
  - forecasting dynamics of the conditional mean with linear univariate and multivariate time series models
  - next eight weeks of the semester
- Module III (Chapters 13 to 15)
  - forecasting dynamics of the conditional variance (crucial in financial applications)
  - last three weeks of the semester

# Learning Outcomes

1. gain familiarity with EViews software package and know how to use it to analyze time series data
2. understand statistical techniques applied to model economic, business and financial time series data
3. be able to independently develop suitable models to forecast economic or financial data
4. be able to evaluate the forecasting performance of various models and choose the most appropriate model among the alternatives

# Software

- Stata is not well suited for time series econometrics and forecasting
- R is less user friendly and requires a bigger time investment to learn
- we will use EViews, a convenient and popular software package
- you will need to purchase a student version for $39.95

# Grading

- about ten homework assignments, lowest one dropped
- about five to ten in class quizzes, lowest one dropped
- two midterms and a cumulative final
- grade will be determined by choosing the maximum from following three

| | | | |
|---|---|---|---|
| Assignments | 30% | 30% | 30% |
| Attendance | 5% | 5% | 5% |
| Quizzes | 5% | 5% | 5% |
| Midterm exam 1 | 22% | 14% | 23% |
| Midterm exam 2 | 22% | 23% | 14% |
| Final exam | 21% | 28% | 28% |

- **note that homeworks account for 30% of the grade; you will not pass if you don't do them**

# Exams

- Midterm exam 1: Tuesday, February 27, in class
- Midterm exam 2: Tuesday, April 10, in class
- Final exam: Monday, May 14, 7:30 a.m.-10:00 a.m. (cumulative exam, covers all material)

# Homeworks

- HW problems are submitted in class at the beginning of the lecture
- they will require you to undertake some analysis in EViews
- HWs not turned in on time will be penalized by 10% for each day; HW can not be submitted more than a week late
- you are encouraged to work in study groups; however you have to submit your own solution and write the names of study group members on your HW
- you will have to present one of the HWs in a team of 3 students

# Class Attendance

- attendance is mandatory, you are allowed 3 absences
- **smartphones, tablets, laptops and any other electronic devices are not to be used in class unless instructed to do so** - there is ample empirical evidence that they disrupt learning and have negative effect on GPA, they are also not particularly efficient for learning even if used for taking notes; here a couple of links to some of these studies

The New Marshmallow Test: Students Can't Resist Multitasking

Advantages of Longhand over Laptop Note Taking

Laptop Multitasking Hinders Classroom Learning for Users and Nearby Peers

In-class Laptop Use and its Effects on Student Learning

Facebook and Texting Made Me Do It

Examining the Impact of Off-task Multi-tasking with Technology on Real-time Classroom Learning