Finance 5330: Financial Econometrics

Spring Semester, 2019

Course Information

- Course Dates: January 7 - April 23
- Course Time: TR 4:30 - 5:45 PM
- Course Room: Huntsman Hall 126
- Slack Channel
- Course Canvas

Instructor Information

- Tyler J. Brough
- Office Hours: TBD & By Appointment
- Office: BUS 605
- Email: tyler dot brough at aggiemail dot usu dot edu (please use this one and NOT my tyler dot brough at usu dot edu account)

Syllabus

Course Description

Prerequisites

- ECN 4330 or equivalent
- ***Strong economic and statistical logic***

Textbooks

The *required* textbook is the following:

- Applied Econometric Time Series - 4th Edition by Walter Enders.

Other books that we may draw from:

- The Econometrics of Financial Markets by Campbell, Lo, and MacKinlay.
- Analysis of Financial Time Series - 3rd Edition by Ruey Tsay.
- Introduction to Statistical Learning by James, Witten, Hastie, and Tibshirani.

Methods of Teaching and Learning

Assessment and Grading

Students will be assessed according to the following:

- Weekly Assignments (10%) - these will be brief writing assignments, computational assignments, etc.
- Replication Study (15%) - students must select a study from the literature on empirical finance to replicate.
- Class Preparation and Participation (25%) - much has been said about this already above.
- Midterm Take-Home Exam (25%) - students will be given two weeks to complete this exam.
- Final Take-Home Exam (25%) - students will be given two weeks to complete this exam (including finals week).

Slack

All class communication will take place using Slack, a messaging system that replaces email. Students will be invited to the Fin 5330 Slack channel prior to the first week of class.

Clients for most computing and mobile platforms can be downloaded from the Slack website, or students may use the web client via a desktop browser.

Schedule of Topics

We will attempt to cover the following list of topics:

1. ***Module I***: Foundations: financial data, difference equations, programming, mathematics and statistics, Monte Carlo studies
2. ***Module II***: Linear time series analysis, volatility models, unit roots and cointegration
3. ***Module III***: Multivariate time series models
4. ***Module IV***: Backtesting trading strategies, data snooping bias, and the bootstrap

NB: I reserve the right to dynamically alter this list as the course progresses. I will announce any such changes in class and on the course Slack channel.