Introduction to Econ 671

Gray Calhoun

2015-08-25

Quick introduction

- Instructor: Gray Calhoun (me)
  - Moved here from San Diego in 2009
  - Research interests are time series econometrics & forecast evaluation
  - Course webpage: http://gray.clhn.org/671
- TA: Zack Martin
- Contact information is on the syllabus, which we will hand out momentarily

- We will start with a short pep talk.

What are you supposed to be able to do after the econometrics core?

1. Have background knowledge on common estimation strategies
2. Take future econometrics and applied economics classes
3. Stay current with future developments in econometrics
    - Read academic journals to learn about new techniques
    - Program new estimators that aren't already supported by statistical packages
4. **Conduct your own empirical research**
    - Collect new data or combine existing datasets
    - Plan the data analysis
        - Decide on a model or models and appropriate statistics
    - Estimate some statistics
    - Interpret those statistics
    - Write a research paper summarizing that analysis

How do those expectations match up with teaching strategies?

- Traditional structure
  - Lecture
  - Class discussion (very little in PhD classes)
  - Individual reading and problem sets
- This structure can help with
  1. *Have background knowledge on common estimation strategies*
  2. *Take future econometrics and applied economics classes*
  3. *Stay current with future developments in econometrics*
- It doesn't help very much with conducting your own empirical research

How do those expectations match up with teaching strategies (cont)?

- "Flipped classroom" structure
  - Spend "lecture time" working on difficult and open-ended problems close to what you will encounter in your research or at work
  - Prepare with background reading and exercises outside of class
- This structure will *still* help with
  1. *Have background knowledge on common estimation strategies*
  2. *Take future econometrics and applied economics classes*
  3. *Stay current with future developments in econometrics*
- But it will emphasize skills that help you conduct your own empirical research

Specifics of *Team-Based Learning* (in this class)

- Students (you) will read the material **before** we cover it in class
- How do we incentivize this? Tests and peer evaluations
- For each "module" (there are 6 in the semester)
  1. Pre-class individual study
  2. Readiness Assurance Process: 1 or 2 class meetings
     - 2.1. Individual test
     - 2.2. Team test
     - 2.3. Written appeal process
     - 2.4. Targeted instructor feedback (a short lecture)
  3. Application oriented activities
     - 2 to 5 class meetings
     - Work as teams

Characteristics of effective teams

- Diverse backgrounds & skills
- Broad cohesiveness & balance
- Trust and mutual respect

- Let’s make the teams now.

Team formation

Stand up and come to the front of the room if you…

- are a current or former grad student in Math, Stats, or Physics
- have an undergraduate major in Math, Stats, or Physics
- are a current or former grad student in Engineering
- have an undergraduate degree in Engineering
- are a current or former grad student in Economics or Finance, but not at IA State
- have a previous degree in Economics or Finance
- have not been called up yet
- **Remember the number I give you! It's your team.**

We are going to practice the RATs

1. Form teams and collect your team folder
2. Read the syllabus (10 minutes)
3. Take an individual *Readiness Assurance Test* (RAT) on the contents of the syllabus
4. Take a team RAT on the contents of the syllabus
5. I'll answer any remaining questions about the syllabus and class structure

Today's RAT does not count towards your grade

Key decisions to make as a team

1. Who will bring laptops to class?
   - If your team does not have a laptop, you will not get credit for that class's activities
   - Make sure there is a backup
   - The laptop needs to be able to plug into a small projector
     - I have one that you can try out
2. Determine grade weights
   2.1. Each team will set preliminary weights and select a member to meet with other teams' representatives.
   2.2. Team representatives will meet in the center of the room and develop a consensus (i.e., every representative has to be in agreement about the grade weights for the class as a whole.)
   2.3. There are some limitations on the grade weights listed in the syllabus

Next class meetings

- Next class:
  - If necessary, we will finish the grade weights next class
  - We will also install software on your team's laptop (so bring it)
- Friday: Q&A session for probability reading. You must bring questions, otherwise there will be nothing to discuss
- Next Tuesday: Probability RAT & lecture
- Next Thursday: I will be out of town; needs to be rescheduled
- Next Friday: meet in the computer lab for introduction to R

Homework for next class

1. Describe yourself in 1 paragraph
   - Preparation for this class
   - Potential research interests and any past research experience
   - Anything else you want to share
2. Bring printed copies for me, Zack, and everyone in your team
3. Look at your calendar for times to reschedule next Thurs class