"Computational Methods in Economics" ECON 21410

Taught by John Eric Humphries, spring 2014

Idea for the Course:

A course aimed at preparing students to: begin empirical research, learn necessary computational tools for research, and prepare for graduate school. Taught almost as a "vocational" course to complement the theoretical training taught to undergraduates.

In some ways a "programming" course, but focused on learning then implementing economic models. Final project was writing a short research paper.

Overall Goals:

- 1) Take theoretical models and translate them into useful economic simulations and empirical tools.
- 2) Use programming for solving economic problems.
- 3) Apply numeric methods to solve economic problems.
- 4) Develop, implement, and manage an empirical project.
- 5) Produce professional output to clearly convey your results.

Specific Capabilities:

- Read and understand R code. Write clear, documented, and reusable R code.
- Summarize empirical work using \LaTeX.
- Use packaged functions and libraries to do work for you.
- Implement your own econometric methods and simulations to solve problems others have not already solved for you.
- Numeric optimization problems

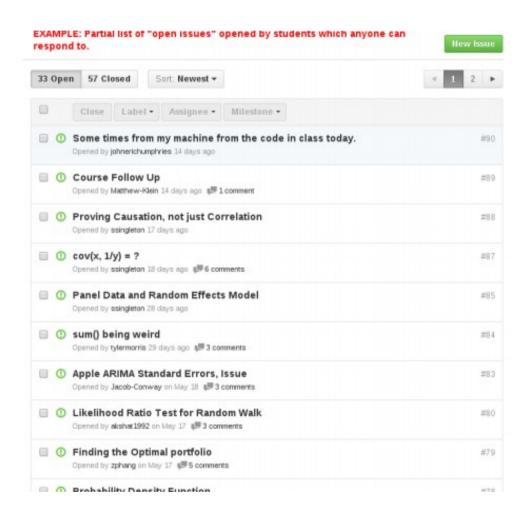
Biggest Challenges:

- Balance between research skills and programming skills.
- Balance between meaningful projects and difficulty of the econometric and economic tools needed.
- Extremely varied background in programming.

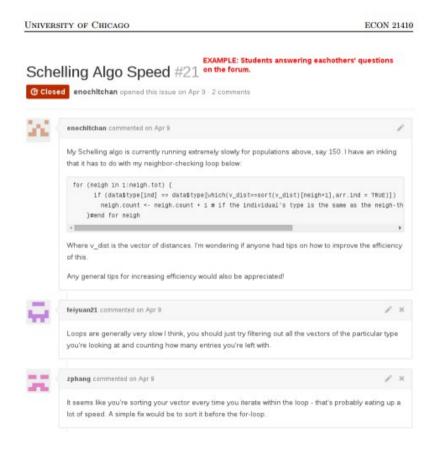
Biggest Successes:

- Github forum and wiki.
- Project-based course structure.
- Research projects (learn a model, then implement it).
- Live coding.

Students could open "issues" to ask questions:



Students answer questions:



Measuring Success

- Having concrete objectives made it easier for me to judge the success of the course.
- Midterm review.
- "Success" on homework.
- Questions and sentiment on forum posts.