

### Course Information

**CRN:** 70552 | **Prof:** Todd R. Yarbrough, Ph.D. | **Lab Prof:** Kier Hanratty, Ph.D.

**Lecture:** Tue/Thur 1:50-3:15pm | **Labs:** see catalog for times/location

**Description:** A capstone course in which students learn the methods of conducting original research. Students examine an economic issue in depth and learn how to access existing research and data. Students develop a major research project and present their research.

**Pre-reqs:** Mat140, Eco240, and Senior standing. Course requires Chair's permission to join.

### Course Objectives

- Understand and use fundamental tools in applied economic research.
- Comprehend and synthesize relevant academic literature.
- Recognize the advantages and limitations of using quantitative analysis.
- Pursue a specific research agenda for the entire semester.
- Improve analytical, writing, and thinking skills while you develop marketable econometric skills.

### Materials and Resources

**Book:** [Introduction to Econometrics by Stock and Watson](#). ISBN: 978-9352863501

For those especially serious about econometric skill development it is also recommended that you have:

**Book:** Mostly Harmless Econometrics by Angrist and Pischke

**Book:** Causal Inference: The Mixtape by Cunningham

**Software:** [Stata Six-month License](#)

Students fluent in  $R$  may utilize it instead of Stata, however the course will be taught using Stata. When possible I will provide R-code that aligns with the Stata-code being used in class.

**Website:** [Economics 400 Course Website](#)

**Help:** [Discord Server](#)

**Office Hours:** [Calendly link to Dr. Yarbrough's office hours](#)

### Grading

15% **Participation:** Students must come to class prepared to discuss recently covered topics and having consumed required readings/viewings.

20% **Weekly Assignments:** Each Thursday a new assignment will be posted that is due the following Thursday in hard copy.

20% **Preliminary Paper Work:** Throughout the semester students will turn in preliminary portions of their paper, such as the introduction, literature review, and reference list among others.

45% **Final Project**

— 15% **Presentation:** Students will present the findings from their research to an audience of economics faculty and their peers. See page 4 for more info.

— 30% **Paper:** You will submit a professional quality final paper. See page 3 for more info.

## Support

**Pace University COVID-19 Safety:** Students are expected to be familiar with the current COVID-19 regulations, which are posted on the [Return to Campus website](#). See also up-to-date policies and announcements [here](#) and more information about [Pace University's response to COVID-19](#).

**Tutoring Center:** The tutoring center is staffed with students who have been chosen by economics faculty because they are very strong students. Students will find their assistance throughout the semester very beneficial and are encouraged to visit when they are stuck on material. The tutoring center is found at 153 Williams Street (17th floor). [Tutoring Center Website](#).

**For students with disabilities:** The University's commitment to equal educational opportunities for students with disabilities includes providing reasonable accommodations for the needs of students with disabilities. To request a reasonable accommodation for a qualified disability a student with a disability must self-identify and register with the Office of Disability Services for his or her campus. No one, including faculty, is authorized to evaluate the need for or grant a request for an accommodation except the Office of Disability Services. Moreover, no one, including faculty, is authorized to contact the Office of Disability Services on behalf of a student. You can reach the Office of Disability Services for the NYC campus at (212) 346-1526 or drop by 156 William St., 8th fl. NYC Staff include Kate Torres, Associate Director, [ktorres@pace.edu](mailto:ktorres@pace.edu); Ashley Sanguinetti, Accommodations Coordinator, [asanguinetti@pace.edu](mailto:asanguinetti@pace.edu); and Kate Sullivan, Accommodations Coordinator, [csullivan2@pace.edu](mailto:csullivan2@pace.edu). For further information, please see Resources for Students with Disabilities at [the Office of Disability Services](#).

**Academic Honesty:** The Academic Integrity Code supports Pace University's commitment to academic honesty and creates a culture at the University that emphasizes high standards of academic integrity, ethical behavior, and responsible conduct. The purpose of the Code is to educate students about what constitutes academic misconduct, to deter cheating and plagiarism, and to create a fair process and a set of procedures to handle cases of academic misconduct including documentation and application of sanctions. Academic integrity is defined as honesty and ethical conduct in learning and the educational process. The educational environment is enhanced when students believe that their academic competence is being judged fairly and that they will not be at a disadvantage because of the dishonesty of another. All members of the University community are expected to uphold the highest standards of academic integrity. [Pace University Academic Code of Integrity](#).

**Title IX:** As a faculty member, I am considered an Individual with Title IX Reporting Responsibilities. This means that if you disclose to me instances of sexual assault, sexual harassment, other sexual misconduct, dating violence, domestic violence, or stalking, I am required to share this information with the Title IX Coordinator of the University. This person's job is to advise members of our community on their options regarding remaining anonymous, confidentiality, the University's process for investigating complaints of sexual misconduct, dating violence, and stalking, and the University's disciplinary process. If you wish to contact the Title IX Coordinator directly about any of these matters, you can do so by emailing Lisa Miles at [amiles@pace.edu](mailto:amiles@pace.edu); calling (212) 346-1310; or in person at 163 William Street (10th Floor), Room 1017, New York, NY 10038. For more information, please visit [Pace University Title IX Coordinator's Website](#).

**Counseling Center:** The University supports students with a fully staffed Counseling Center at 156 William Street, 8th Floor, NYC; Phone: (212) 346-1526, fax (212)-346-1530; Office Hours: 9:00 AM to 5:00 PM, Monday-Friday. Any student who believes they would benefit from discussing their concerns/issues with a trained professional should contact the office at their earliest convenience. A lot more information can be found at the [Counseling Center's website](#).

## The Final Paper

Follow [APA style guide](#) for tables, figures, and references.

And follow these specific rules:

1. 12-point Times New Roman or 10-point Computer Modern.
2. 1 inch margins all around
3. double spaced
4. no headers or footers
5. page number in bottom right
6. paper should be organized as follows:
  - i. Title Page with Abstract, Keywords, [JEL codes](#), and Acknowledgments
  1. Introduction
  2. Literature Review
  3. Pre-estimation Discussion (section title may be specific to your topic)
  4. Data and Methodology
  5. Post-estimation Discussion (again, title likely specific)
  6. Conclusion
  7. References
  8. Appendix [optional]
7. paper length: at least 20 pages and no more than 30 pages. Including tables and figures, but not references.
8. final paper should be submitted as a [PDF](#).

## The Presentation

1. 13 minutes to present your work and 5 minutes for questions. 18 minutes total.
2. You will put together a slide deck using Powerpoint, Google Sheets, or LaTeX.
3. Your slide deck should be organized as follows:
  - i. Title Slide with title, name, and date.
  1. Introduction slides – 2-3 slides
  2. Brief Literature Review – 1 slide
  3. Pre-estimation Discussion – 2-3 slides
  4. Data Description – 1 slide
  5. Summary Statistics – 1 slide
  6. Models – 1-3 slides
  7. Results Tables – 1-2 slides
  8. Post-estimation Discussion – 1-2 slides
  9. Conclusion – 1 slide
4. Generally speaking:
  - i. slides should not be very wordy, avoiding paragraphs completely.
  - ii. at least 24pt font, Times New Roman, Georgia, Cambria, or Computer Modern.
  - iii. white background with dark font (black or dark blue only)
  - iv. use bullets sparingly
  - v. absolutely no animations
  - vi. use non-figure pictures very sparingly
  - vii. make sure tables and figures fit and look professional
  - viii. do not need a references slide
5. slides should be turned in as a PDF.

## Schedule

	sw = Stock and Watson; mhe = Mostly Harmless Econometrics (optional)
Week 1	<b>What is Applied Economic Research?</b> — <i>Statistical Models and Shoe Leather</i> (Freedman 1991) — <i>The Ladder of Causation</i> (Pearl 2014)
Week 2	<b>Natural Experiments and the Difference-in-Differences Approach</b> — sw 1 — mhe 2 — <i>Choosing Among Alternative Nonexperimental Methods for Estimating the Impact of Social Programs: The Case of Manpower Training</i> (Heckman and Hotz 1989)
Week 3	<b>Economic Analysis and OLS</b> — sw 4 and 5 — <i>How Computers Have Changed the Wage Structure: Evidence from Microdata, 1984-1989</i> (Krueger 1993)
Week 4	<b>Multivariate Regression and Causal Inference</b> — sw 6 and 7 — <i>The Returns to Computer Use Revisited: Have Pencils Changed the Wage Structure Too?</i> (Dinardo and Pischke, 1997) — → <b>Research Proposal Due</b>
Week 5	<b>Model Specification and Interpretation</b> — <i>Estimating the Payoff to Attending a More Selective College: An Application of Selection on Observables and Unobservables</i> (Dale and Krueger 2002)
Week 6	<b>Non-linear Models, Probits, and Logits</b> — sw 8 and 11
Week 7	<b>Cross-sectional Data and WLS</b> → <b>List of 10 References Due</b>
Week 8	<b>Catch-up and Breathe</b>
Week 9	<b>Time-series Data and Auto-regressive Models</b> — sw 14 and 15 — <i>Econometrics and Presidential Elections</i> (Fair 1996)
Week 10	<b>Panel Data: Random Effects and Fixed Effects</b> — sw 10 — mhe 5
Week 11	<b>Metrics break: Paper Discussion</b> — sw 9 → <b>Literature Review Due</b>
Week 12	<b>Instrumental Variables and Regression Discontinuity</b> — <i>The Effect of Women's Schooling on Fertility</i> (Sander 1992) — sw 12 — mhe 4
Week 13	Catch-up and Breathe
Week 14	Presentation Prep
Week 15	→ <b>Presentations</b>
Week 16	→ <b>Final Paper and Materials Due</b>