This course will cover various applied microeconometrics topics. The main focus is on estimating treatment effects and dealing with selection issues and measurement error.

To borrow from an anonymous professor’s syllabus: “This class is going to be a drag if people do not add their two cents every now and then. Since economists believe incentives matter, quality participation will be rewarded. The grade will obviously be subjective but the grade will not be capricious or arbitrary. The grade will be based on the quality of the content.”

Textbooks: No textbook is required, but several are very useful:
- Cameron, A.C. and P.K. Trivedi, *Microeconometrics: Methods and Applications*
- Greene, W.H., *Econometric Analysis*
- Morgan, S.L. and C. Winship, *Counterfactuals and Causal Inference: Methods and Principles for Social Research*
- Wooldridge, J., *Econometric Analysis of Cross Section and Panel Data*

Learning Outcomes
- Students will understand how to apply various bootstrap techniques to perform inference
- Students will understand the Rubin Causal Framework, as well as the distinction between selection on observables and unobservables
- Students will understand a host of estimation techniques useful for estimating effects of binary treatments; specifically, what assumptions are required by each technique, what parameter the technique estimates, and how to interpret the parameter
- Students will become familiar with reading and presenting applied papers, as well as critiquing others’ work
- Students will develop competency in Stata in order to apply the techniques learned
University Policies

* Disability Accommodations: Students needing academic accommodations for a disability must first contact Ms. Rebecca Marin, Coordinator, Services for Students with Disabilities (214-768-4557) to verify the disability and establish eligibility for accommodations. They should then schedule an appointment with the professor to make appropriate arrangements. (See University Policy No. 2.4.)

* Religious Observance: Religiously observant students wishing to be absent on holidays that require missing class should notify their professors in writing at the beginning of the semester, and should discuss with them, in advance, acceptable ways of making up any work missed because of the absence. (See University Policy No. 1.9.)

* Excused Absences for University Extracurricular Activities: Students participating in an officially sanctioned, scheduled University extracurricular activity should be given the opportunity to make up class assignments or other graded assignments missed as a result of their participation. It is the responsibility of the student to make arrangements with the instructor prior to any missed scheduled examination or other missed assignment for making up the work. (University Undergraduate Catalogue)

Topics:

1. **OVERVIEW ON EMPIRICAL ANALYSIS, CAUSATION**
2. **SELECTION ON OBSERVABLES**
   2.1 Matching & Propensity Score Estimators
   2.2 Non-Binary Treatments
   2.3 Regression Discontinuity
   2.4 Distributional Approaches
3. **SELECTION ON UNOBSERVABLES**
   3.1 Bounding Treatment Effects
   3.2 Panel Data Methods
   3.3 Instrumental Variables
   3.4 Control Functions, Covariance Restrictions, & Other Methods Not Relying on an Exclusion Restriction
   3.5 Distributional Approaches
4. **DATA ISSUES**
   4.1 Selection Bias
   4.2 Measurement Error