Course Title: Research Methodology in Economics

Course Instructor: Dr. Suman Das

Course Level: PhD

Credits: 4

Lectures hours: 4 hours/week

Prerequisites

In addition to introductory statistics and probability, the course assumes a good knowledge of introductory economics and econometrics. Students are also expected to be reasonably proficient in the statistical packages.

Evaluation: Midterm Exam (30%); Assignment (30%); End-term (40%)

Course Objective

This advanced quantitative course is designed to provide a formal exposure to research students/scholars to recent statistical and econometric approaches to applied economics. The goal of the course is to make students understand and apply different statistical methods and research designs that are essential for applied economics and policy research.

Course Outline

The course will focus on the methods designed to address research questions that concern the causal impact of some explanatory variable (such as a change in law, an intervention, a policy tool) on an outcome (e.g., wages, education etc.). It will cover a range of empirical approaches, including randomized experiments, panel data methods, difference-in-differences, instrumental variable and dummy variable estimation The course will focus on the strengths and weaknesses of these methods.

Course Content

1. **Introduction:** Overview of the course, course requirements and review of statistical concepts useful for analysing economic data

2. **Regression with Panel Data**

3. **Instrumental Variables**

4. **Dummy Variable**

5. **Differences-in-Differences**

6. **Randomized controlled Trials**

7. **Regression with Time Series data**

Readings:

1. Angrist and Pischke (2009), Mostly Harmless Econometrics, Princeton University Press

2. W. Greene, Econometric Analysis, Prentice Hall

3. Wooldridge, J. M. (2016). Introductory econometrics a modern approach. South-Western cengage learning.

4. Johnston, J., & Dinardo, J. (1997). Econometric methods, ed. *New York: McGraw-HiU.*

5. Enders, W. (2008). *Applied econometric time series*. John Wiley & Sons.