



## GP-EU-TMEC-2027 – Topics in Microeconometrics

**BA/BSc Economics Elective**

### **Course Information**

Course Duration: Feb – May 2026

Credit Hours: 4

Meetings: TBD

Location: TBD

Prerequisites: A+ in Econometrics I and II, Statistics & Probability

Exclusive Course: JSGP Elective

### **Instructor Information**

Instructor: Dr. Manini Ojha

Biography: [here](#)

Email: [mojha@jgu.edu.in](mailto:mojha@jgu.edu.in)

Office: FOB

Office Hours: TBD

### **1. Course Description**

This course an undergraduate level elective offered to B.A. (H)/B.Sc Economics students. It is a follow-up to the core introductory econometrics courses, Econometrics – I and II. The major purpose is to extend the student's econometric knowledge base by covering *limited dependent variable methods*, *common data issues*, *instrumental variables*, and *panel data methods*. The application of these methods will be emphasized. In addition, students will learn to read and evaluate applied econometric papers based on the course material taught utilizing the different methods learnt, make presentations on 'Beamer', use a new document processor 'LyX/LaTeX' as well as perform statistical analyses using 'Stata'.

### **2. Course Intended Learning Objectives (Aim)**

- Going beyond OLS, how to use suitable models for regression analysis with different kinds of dependent variables
- Understanding of common data issues faced by researchers and how to best address them
- Going beyond cross-section models to understanding of panel data methods

- Learn to read applied econometric papers and how best to summarize them and offer some independent assessment of the paper's merits
- Learn a new document processor for high quality typesetting used in scientific documents and how best to present them using Beamer.

### 3. Scheme of Evaluation and Grading

Evaluation is comprised of 70% internals and 30% end-term. The **tentative** break-up is as follows:

Class participation	10%
In - class assessment	15%
4 Presentations (Composition: 3 group +1 individual)	45% (10+10+10+15)
End Term assessment	30%

### 4. Course Material

I will not follow any specific/single textbook. However, the following textbooks might be useful for extending your understanding of the topics covered in class. Further readings are provided within the detailed course outline.

1. Wooldridge, J. M. (2009). *Introductory Econometrics: A modern approach*, 5th edition, Cengage Learning, India. **[JW1]** For datasets, refer to <http://www.swcollege.com/bef/wooldridge/wooldridge.html>
2. Wooldridge, J. M. (2010). *Econometric Analysis of Cross Section and Panel Data*, 2<sup>nd</sup> Edition, The MIT Press **[JW2]**

### 5. COURSE OUTLINE (TENTATIVE)

- Limited Dependent Variable Models (Ch 17.1 – 17.4)
  - a. Introduction to Maximum Likelihood Estimation
  - b. Binary Models (Linear Probability, Logit/Probit)
  - c. Censored Regression Models (Tobit)
  - d. Count Models (Poisson, Zero-Inflated Poisson)
  - e. Qualitative Response Models (Multinomial Logit, Conditional Logit, Nested Logit)
  - f. Ordered Response Models (Ordered Logit/Probit)
- Data Issues (Ch 17.4 – 17.5, 9.3, 15.1-15.5)
  - a. Truncated Regression Model
  - b. Selection Bias
  - c. Measurement Error
  - d. Instrumental Variables
- Pooling Cross-Section/Time Series Data Methods (Chapters 13, 14)
  - a. Simple Panel Data Methods
    - i. Pooled OLS
    - ii. Difference-in-Differences
  - b. Advanced Panel Data Methods
    - i. Fixed Effects
    - ii. Random Effects
    - iii. Specification Tests