Semester V
Discipline Specific Elective

DSE : ADVANCED ECONOMETRICS

Discipline Specific Elective 6 (DSE-6): Advanced Econometrics

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
V/VII	Advanced Econometrics – ECON036	4	3	1	0	Class 12th with Mathematics	Basic Econometrics (ECON024)

Learning Objectives

The Learning Objectives of this course are as follows:

- A prerequisite for this course is the knowledge of concepts in the Basic Econometrics course.
- It builds on the compulsory Basic Econometrics course and teaches students a broad set of commonly used econometric methods.
- These include estimating models with limited dependent variables, the use of instrumental variables to estimate models with endogenous regressors, as also estimation methods for time series and panel data sets.

Learning outcomes

The Learning Outcomes of this course are as follows:
Students will learn the theoretical and practical basis for techniques widely used in empirical research and consider their application in a wide range of estimation problems.

Syllabus

UNIT I: Stages in empirical econometric research

UNIT II: The linear regression model: The matrix approach, Review of model specification, estimation and testing

UNIT III: Limited dependent variables: Logit and Probit models for binary responses, Tobit models for truncated data.

UNIT IV: Selected Topics: Instrumental variable estimation, Simultaneous equation models, Experiments and Quasi-Experiments.

UNIT V: Dynamic econometric models: distributed lag models, autoregressive models; Panel data models and estimation techniques

UNIT VI: Introduction to econometric software (R/GRETL/EViews/Stata: ANY ONE); publicly available data sets and software will be used to estimate models and apply the techniques learnt.