17HS060 ECONOMETRICS

Course Description and Objectives:

Econometrics is a set of research tools used to estimate and test economic relationships. The methods taught in this introductory course can also be employed in the business disciplines of accounting, finance, marketing and management and in many social science disciplines. The aim of this course is to provide you with the skills helpful in filling the gap between being "a student of economics" and being "a practicing economist." By taking this introduction to econometrics you will gain an overview of what econometrics is about, and develop some "intuition" about how things work. The emphasis of this course will be on understanding the tools of econometrics and applying them in practice.

Course Outcomes:

Upon completion of the course, the student will be able to achieve the following outcomes:

COs	Course Outcomes
1	Students who successfully complete this subject can feel comfortable with basic statistics and probability.
2	Students can able to use a statistical/econometric computer package to estimate an econometric model.
3	Ability to acquire knowledge to report the results of their work in a non-technical and literate manner.
4	To estimate and interpret linear regression models and be able to distinguish between economic and statistical importance.
5	Students can able to critique reported regression results in applied academic papers and interpret the results for someone who is not trained as an economist.

UNIT-1

Introduction to econometrics: Two variable linear models, three variable linear models of sources, sequences, estimation and significance procedures; generalized linear models.

UNIT-2

Introduction to Multi collinearity: Multi collinearity, sources, consequences and tests on multi collinearity-detection, Farrar-Glauber Test; remedies, Ridge family of estimators and its properties; heteroscedasticity, sources and consequences; Tests for heteroscedasticity; Glejser's test Goldfeld-Quandt test; remedies, estimation under heteroscedasticity.

UNIT-3

Introduction to Autocorrelation: Concepts of Autocorrelation, sources and consequences; first order auto regressive scheme, tests of autocorrelation-Durbin-Watson test; Estimation under autocorrelation.

UNIT-4

Finite distributed lag models; Arithmetic lag, inverted V-lag; Almon's Polynomial lag and Shillers lag models; Infinite distributed lag models; Geometric lag models; OLS and Koyek's two step.

UNIT-5

Simultaneous linear equations models, introduction, identification, rank and order conditions, IV, ML and FIML estimation methods.

Reference Books:

1. Johnston, J (1984): Econometrics Methods, 3rd Edition, MC Graw Hill.
2. Judge, CG, Griffths and Hill, RC et al (1985): Theory and Practice of Econometrics, John Wiley.
3. Gujarathi, D (1979): Basic econometrics, Mc Graw Hill.
4. Intrilligator, MD (1980): Econometric Models, Techniques and Applications, Prentice Hall.