Econometrics

POST GRADUATE DEGREE STANDARD

UNIT I: INTRODUCTION

Definition - Scope and Goals of Econometrics — Methodology of Econometric Research.

UNIT II : SINGLE EQUATION REGRESSION MODELS

SIMPLE AND MULTIPLE LINEAR REGRESSION MODELS:

Assumptions – Derivation of OLS estimators – Properties – Test of goodness of fit (R^2 & ^{2}) – Test of significance – Confidence intervals – Testing the overall significance of a regression – Analysis of Variance – Applications in demand and production analysis with time series, cross section, pooled and panel data.

Unit III VIOLATION OF OLS ASSUMPTIONS

Autocorrelation, Multicollinearity and Hetroscedasticity – Definition – Source - Consequences – Detection – Solution.

Unit- IV DUMMY VARIABLE

Dummy variable – Definition - Uses – Dummy variable trap – Estimation - Inference – Applications.

Unit- V DISTRIBUTED LAG MODE

Definition - Koyck model - Partial adjustment model - Adaptive expectation model – Estimation – Inference - Applications

Unit – VI LIMITED DEPENDENT VARIABLE MODELS

Logit - Probit - Tobit models – Estimation – Inference.

UNIT VII: SIMULTANEOUS EQUATION MODELS

Simultaneous equation bias- Structural, reduced form and recursive models – Identification – ILS, Instrumental variable and Two SLS methods of estimation.

UNIT VIII: TIME SERIES ECONOMETRICS

Stationary and non stationary time series – Purely random process – MA process – AR process – ARMA Process - ARIMA – Estimation of AR, MA, ARMA, and ARIMA models

UNIT IX VECTOR AUTO REGRESSION

VAR - Unit root tests – D.F. test – Co-integration – Error correction models Box Jenkins approach - Forecasting using BJ method

Unit – X Econometric Applications

Agriculture – Industry – Monetary Economics – Financial markets

REFERENCE:

1.Damodar Gujarati 'Essentials Of Econometrics', Irwin Mcgraw Hill, Newyork, 1998.

2.G.S.Maddala 'Introduction to Econometrics', John Wiley&Sons Ltd, Newyork,2002.

3.Jack Johnston &John Dinardo 'Econometric Methods'The Mc Graw Hill Companies Inc, Newyork,1997.

4.Peter Kennedy 'A Guide to Econometrics' Blackwell Publishing, U.K., 2003.

5.A.Koutsoyiannis, 'Theory of Econometrics', Palgrave Publishers Ltd, Newyork.1999.

6.Robert S. Pindyck & Daniel L. Rubinfeld, 'Econometric Models And Economic Forecasts', Irwin Mcgraw Hill, Newyork, 1998

7.D. Nachane , "Econometrics" Oxford University Press,2006.

8. K.L Krishna, Econometric Applications in India, Oxford pulblications.