PROGRAM	**Master of Business Administration**
SEMESTER	**3**
COURSE TITLE	**Econometrics**
COURSE CODE	**04MB0353**
COURSE CREDITS	**3**
COURSE DURATION	**42 Hrs (42 sessions of 60 minutes each)**

COURSE OUTCOMES:

- Understand some useful tools for empirical economic models
- Develop a way of thinking in quantitative terms for economic analysis
- Estimate the economic models with econometric modeling software Developing critical thinking and the application of both logical and quantitative skills.
- Learn basic econometric techniques and their applications to business, economics, and finance
- Understand how to postulate and test hypotheses related to economic issues or problems.

COURSE CONTENTS:

Unit No	Unit / Sub Unit	Sessions
I Introduction to Econometrics	Introduction to Econometrics and its application in business and economics, Methodology of Econometrics. Structure of Economic Data – Cross-sectional, Time series and Panel data. Introduction to Time series Econometrics - Stationary and non-stationary data, tests of stationarity, Data handling using Eviews – Raw data and log values and data differencing	08
II Modeling through Non-Stationary Time-series processes	transformation of non-stationary data to stationary data, Deterministic and stochastic trends, Integrated process and random walk, random walk with drift, Unit root and tests for unit root- Dickey-Fuller and Augmented Dickey Fuller tests, Phillips-Perron Test and KPSS test, Unit Roots and Structural Breaks, Unit roots in regression residuals and spurious regression, Cointegration and its testing using Engel-Granger method, Lead-lag and Long Run relationships, Characteristic Root, Rank and Cointegration, Testing for and estimating cointegrating systems using the Johansen method based on VARs, Vector Error Correction Models.	10
III Modeling through volatility clustering	Volatility-Meaning and measurement, Volatility clustering, Econometric models of volatility, Conditional heterscedasticity in ARMA models, Estimation and Testing for ARCH and GARCH models for volatility clustering in economic time-series, multivariate regression models and conditional heterscedasticity, Asymmetric GARCH models-GJR model and EGARCH.	08
IV Regression model using SPSS and STATA	Two variable regression model – assumptions – method of least squares – properties – BLUE – R-square – maximum likelihood method – testing of hypotheses using point and interval estimates – forecasting – solving problems using SPSS and STATA. General linear model (matrix approach) – specification – OLS estimators – testing significance of individual and overall regression coefficients – restricted least squares – structural regression models – dummy variables – problems and application using STATA.	08

Unit V Relaxing the Assumptions of the Classical Model	Violation of classical assumptions – Nature and estimation of multicollinearity; Hetroscedasticity – problems – causes – consequences, the method of Genralised least Squares (GLS) – remedial measures Autocorrelation – OLS Estimation in the presence of autocorrelation, OLS versus FGLS and HAC.	08

EVALUATION:

The students will be evaluated on a continuous basis and broadly follow the scheme given below:

	Component	Weightage
A	Continuous Evaluation Component (Assignments / Presentations/ Quizzes / Class Participation/ etc.)	20% (C.E.C.)
B	Internal Assessment	30% (IA)
C	End-Semester Examination	50% (External Assessment)

SUGGESTED READINGS:

Text Books:

Sr. No	Author/s	Name of the Book	Publisher	Edition and Year
T-01	DamodarN. Gujarati and Sangeetha	Basic Econometrics	McGraw Hill Education	6th Edition Special Indian Edition
T-02	J. Johnston	Econometric Methods,	McGraw Hill Education	4rth Edition
T-03	Brooks, C.	Introductory Econometrics for Finance	Cambridge University Press,	3rd Edition

Reference Books:

Sr. No	Author/s	Name of the Book	Publisher	Edition and Year
R-01	Hamilton, J. D.	Time Series Analysis,	Princeton University Press, 1994	2nd Edition
R-02	Baltagi, Badi.	Econometric Analysis of Panel Data,	Wiley Publication	5th Edition
R-03	Shankar Kumar Bhaumik	Principles of Econometrics: A Modern approach using Eviews	Oxford Publication	Latest Edition