Name of the Programme : **MBA (Financial Services)**
Course Code : **MGF-605**
Course Title : **Financial Econometrics**
Number of Credits : **4**
Effective from AY : **2022-23**

Pre-requisites for the Course:	**MGF-503 or MGF-504**	
Course Objectives:	To familiarize learners with advanced regression models for cross-sectiondata and equip them with knowledge and skills in application of time series and panel data modelling for forecasting and analysis.	
Content:	**Unit 1** **: Introduction to Financial Econometrics andAdvanced Regression Models** *Financial econometrics*: Meaning, nature, process and applications of financial econometrics, Regression models with dummy variables, Applications of Dummy Variables in Seasonal Analysis, andStructural breakpoint analysis, Linear probability model, Binary and Multinomial Logit models, ProbitModel, Tobit model. **Unit 2** **Time Series Econometrics – I** *Stochastic process - Stationarity in time series*: Concept, Significance, Tests of stationarity in time series,ACF and PACF functions, Unit root tests, Econometric modelling and forecasting using time series data, AR, MA, ARMA and ARIMA modelling, Diagnostics and forecasting using ARIMA – Evaluating forecast accuracy, Forecasting using Markov regime switching models. **Unit 3** **Time Series Econometrics – II** Modelling short run and long run relationships between time series, Vector Autoregression models (VAR), Granger causality, Cointegration and error correction models, ARDL model, *Volatility models*: ARCH/GARCH models, DCC GARCH and GARCH-BEKK models, Kalman filter. **Unit 4** **Panel Data Econometrics** Panel data structure – Pooled OLS Regression – Fixed Effects model – Random effects model – Properties of Various Estimators - Fixed Effects versus Random effects model – Wald test - Breuch andPagan Lagrange Multiplier Test – Hausman Test – Non-Stationary Panel - Panel unit root and cointegration tests – Dynamic panels and instrument variables.	**15 Hours** **15 Hours** **15 Hours** **15 Hours**
Pedagogy:	Lectures/ case analysis/assignments/class room interaction/lab sessionsusing software E-views and Gretl applications.	
References/ Readings:	1. Greene, W. (2004). *Econometric Analysis.* Prentice Hall, New York. 2. Gujarati, D. (2004). *Basic Econometrics*. McGraw Hill, New Delhi. 3. P., Kerry. (2000). *An Introduction to Applied Econometric: TimeSeries Approach*. Palgrave Macmillan, New York. 4. Ramu, R. (2002). *Introductory Econometrics with Applications*.Thomson South Western, Singapore. Wooldridge (2006). *Introductory Econometrics*. Thomson-South Western, Singapore.	

Course Outcomes:	Upon completion of the course learners will be able to: **CO1.** Apply probability-based models including LPM, logit, probit andTobit models to financial data. **CO2.** Perform forecasting by developing ARIMA, Markov Regime switching models and VAR Models and examining long-run relationship between financial variables using Johansen's cointegration and ARDL models. **CO3.** Forecast financial market volatility using advanced GARCH volatility models and Kalman filter. **CO4.** Demonstrate ability to develop useful panel data models with appropriate diagnostic procedures.

(Back to top)