Name of the Programme : Master of Commerce
[M.Com]Course Code: COM-601
Title of the course : Basic Econometrics
Number of Credits : 4
Effective from AY : 2022 – 2023

Prerequisites for the course:	NIL	
Objective:	1. To acquire foundational knowledge of regression analysis and develop skills in applying regression models to data. 2. To understand basic knowledge and skills of diagnostic testing concerning regression models. 3. To enable learners to master basic econometric techniques for analysis of cross-section data. 4. To enable learners to acquire basic time series analysis and forecasting skills using econometric and event study methodology.	
Content:	**Unit 1** **Introduction to Econometric Methodology and Regression Analysis** Econometrics – meaning and significance of econometrics in business decisions - Methodology of econometric analysis – Nature and sources of data for econometric analysis – Preparation of data for analysis - Introduction to classical linear regression model - Assumptions of CLRM – Specification and estimation of bivariate and multiple regression models – Hypothesis testing and statistical inference – Properties of least square estimators (BLUE) – Basic model diagnostics using the goodness of fit statistics– Regression terminology – Regression vs. causation – Regression vs. correlation – Reporting the results of regression analysis. **Unit 2** **Econometric Modelling and Diagnostic Testing** Selection of model variables – Selection of functional form of regression – Model selection criteria – Issues in regression modeling - Autocorrelation, Heteroscedasticity, Multicollinearity – Consequences, tests for detection and remedial measures – Model misspecification errors – Types, consequences, and tests of misspecification errors – Errors of measurement and relevant consequences. **Unit 3** **Analysis of Cross-Section Data** Cross-section data – Data considerations and preparation, Sources of cross-sectional data – Cross-section data models - Dummy variables: Nature, ANOVA & ANCOVA Models – Cautions in the use of Dummy Variable – Interaction Effect using Dummy Variable – Applications of Dummy Variables - Seasonal Analysis, Structural breakpoint analysis using dummy variables. **Unit 4** **Analysis of Time Series Data** Time series concepts – Stationarity in time series: Concept, Significance, Tests of stationarity in time series, ACF and PACF functions, Unit root tests, Transforming non-stationary time series	**15 Hours** **20 Hours** **10 Hours** **15 Hours**

	– Econometric modeling and forecasting using time series data – A.R., MA, ARMA and ARIMA modeling – Diagnostics and forecasting using ARIMA – Event study methodology.	
Pedagogy:	Lectures / case analysis / assignments / classroom interaction / lab. Practical problems may be solved using available open source software.	
References/ Readings	1. Asteriou Dimitrious, Stephen Hall, ***Applied Econometrics***, Palgrave Macmillan, New York, 4th edition, 28th May 2021. 2. Cameroon Samuel, ***Econometrics***, McGraw Hill, New York, 2005. 3. Davidson, J, ***Econometric Theory***, Blackwell, USA, 1st edition, 7th April 2000. 4. Goldberger, A.S. ***Introductory Econometrics***, Harvard University Press, Cambridge, 1998. 5. Greene, W. ***Econometric Analysis***, Prentice Hall, New York, 5th edition. 6. Gujarati, D. ***Basic Econometrics***, McGraw Hill, New Delhi, 5th edition, 1st July 2017. 7. Hayashi, F, ***Econometrics***, Princeton University Press, Princeton, 19th November 2000. 8. Pattreson, Kerry, ***An Introduction to Applied Econometric: Time Series Approach***, Palgrave Macmillan, New York, 2000th edition29th June 2000. 9. Ramanathan Ramu, ***Introductory Econometrics with applications***, Thomson South Western, Singapore, 5th edition, 15th March 2005. **10.** Wooldridge, ***Introductory Econometrics***, Thomson-South Western, Singapore, 5th edition, 26th September 2012. **Online Resources:** 1. https://www.youtube.com/user/econometricsacademy 2. https://www.youtube.com/user/patobi1 3. https://sites.google.com/site/econometricsacademy/home 4. https://www.economicsnetwork.ac.uk/teaching/Online%20Text%20and%20Notes/Econometrics 5. https://www.ssc.wisc.edu/~bhansen/econometrics/Econometrics.pdf	

Course Outcomes	Upon completion of the course, learners will be able to: **CO1:** Apply methodology of regression analysis in developing models for data in social sciences. **CO2:** Perform diagnostic tests on regression models and improvise their models. **CO3:** Demonstrate application of dummy variables for varied purposes in the context of cross-section data. **CO4:** Develop basic time series models for forecasting using the ARIMA structure. **CO5:** Apply event study methodology on time series data for research and analytical purposes	

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