

Semester	VII
Paper Code	<b>C4EC230822</b>
Paper Title	<b>Quantitative Economic Analysis-III: Advanced Econometrics</b>
No. of Credits	6
Theory/Practical/Composite	Composite
No. of periods assigned	3 Theory 1 Practical
Minimum No. of preparatory hours per week a student has to devote	4 Theory 2 Practical
Course description/objective	The objective is to 1. Introduce advanced tools of exploratory data analysis 2. Apply the techniques of Cointegration and error correction 3. Analyse simultaneous stochastic equations 4. Understand the interplay of economic theory and economic applications. 5. Introduce students to system estimators 6. Compare single equation and systems' estimation methods
Syllabus	<b>Module 1: Exploratory Data Analysis - (15 marks)</b> Principal Components, Factor Analysis using Principal Component method of estimation. <b>(No. of classes per week: 1)</b>
	<b>Module 2: Time Series Analysis (20 marks)</b> Cointegration and error correction model; Vector Auto Regression Model; Vector Error Correction model; Applications of Time Series Techniques in Economics <b>(No. of classes per week: 1)</b>
	<b>Module3: Simultaneous Equations System (15 marks)</b> Rank & Order Condition – Linear Homogeneous Restriction - Zero Restriction (Special case). Single Equation Modelling- OLS, ILS, Instrumental Variable Estimator, 2 SLS, K- class, LIML, System Estimation Method- 3SLS, FIML <b>(No. of classes per week: 1)</b>
	<b>Practical (20 marks)</b> <b>(No. of classes per week: 1)</b>
Readings	<ol style="list-style-type: none"> <li>1. Johnson, R. A, and Wichern, D. W (2013).: Applied Multivariate Statistical Analysis, Pearson Education, 6th Edition.</li> <li>2. Johnston and Dinardo: Econometric Methods, 4th Edition, The McGraw Hill Companies Inc.</li> <li>3. Judge. et.al. (1993) :Theory and Practice of Econometrics, Wiley</li> <li>4. Richard Harris and Robert Sollis, Wiley Student Edition</li> <li>5. Bridge J.L.: Applied Econometrics, North Holland Publishing Company. Theil (1971) : Principles of Econometrics. Wiley</li> <li>6. Maddala, G.S (1988) : Econometrics, McGraw hill</li> <li>7. G.C. Chow: Econometrics (1984)</li> </ol>

Evaluation	Continuous Internal Assessment: 30 marks End- Semester Theory Examination: 70 marks				
Paper Structure for End Semester	Module	No. of Questions to be Answered	No. of Alternatives	Marks	
	Module 1	2	3	15 x 1 = 15	
	Module 2	2	3	10 x 2 = 20	
	Module 3	1	2	15 x 1 = 15	
	Total Marks (Theory)			50	
	Total Marks (Practical)			20	
	Total Marks			70	