

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI
COURSE PLAN June - November 2024

Department : Economics
Name/s of the Faculty : Dr. J. Regi Manimagala
Course Title : Econometric Methods I
Course Code : 23EC/PC/EM34
Shift : I

COURSE OUTCOMES (COs)

COs	Description	CL
CO1	Provides students with an in-depth understanding of the analytical and data processing tools	K1
CO2	Demonstrate and formulate scientific solutions to the real-life economic problems	K2
CO3	Discover and verify economic phenomenon by identifying cause and effect relation ship	K3
CO4	Estimate to navigate economic problems using the most appropriate inferential statistics	K4
CO5	Evaluate the consequences of Multicollinearity, Heteroscedasticity, Autocorrelation in the Multiple Regression model to solve scientific problems	K5, K6

Week	Unit No.	Content	Cognitive Level	Teaching Hours	COs	Teaching Learning Methodology	Assessment Methods
Jun 19 – 26, 2024 (Day Order 1 - 6)	I	Unit 1 Introduction 1.1 Econometrics – Definition 1.2 Stages in Empirical Econometric Research- Classical methodology	K1 K1-K2	5	1-5 1-5	Lecture Lecture	Applications of econometrics in the field of economics Applications of econometrics in the field of economics
Jun 27 – July 4, 2024 (Day Order 1 - 6)	II	Unit 2 Two Variable Linear Regression Analysis 2.1 Linear Regression Model – Assumptions, Principle of Least Squares 2.2 Derivation of OLS Estimator and its Properties	K1 – K3 K1 – K4	18	1-5 1-5	Participatory Learning Methods Participatory Learning Methods	Assignment/ Problem / CA Problem Assignment/ Problem / CA
July 5 – 12, 2024 (Day Order 1 - 6)	II	2.3 Standard Error 2.4 Gauss Markov Theorem- Derivation	K1-K4 K1-K3		1-5 1-5	Lecture Lecture	Assignment/ Problem / CA Assignment/ Problem / CA

July 15 – 23, 2024 (Day Order 1 - 6)	II	2.5 Estimation of a Two Variable Model	K1-K5		1-5	Lecture, Discussion	Assignment/ Problem / CA
		2.6 Coefficient of Determination	K1-K5		1-5	Problem Solving	Assignment/ Problem / CA
		2.7 Hypothesis Testing	K1-K5		1-5	Problem Solving	Assignment/ Problem / CA
July 24 – 31, 2024 (Day Order 1 - 6)	III	Unit 3 Three Variable Linear Regression Model		20			
		3.1 Introduction to the Model	K1-K3		1-5	Lecture	Seminar/ Problem / CA
		3.2 Estimations of the Model by OLS Method	K1-K5		1-5	Lecture	Seminar/ Problem / CA
		3.3 Hypothesis Testing: ANOVA	K1-K5		1-5	Experiential Learning	Seminar/ Problem / CA

<p>Aug 1 – 5, 2024 (Day Order 1 - 3)</p>	<p>III</p>	<p>3.4 Coefficient of Determination</p> <p>3.5 Functional Form of Regression Models: Double Log, Semi Log, Reciprocal Models, Polynomial regression models</p> <p>3.6 Regression Using Dummy Variables- Testing for Structural Stability of Regression Model, Interaction Effects, Seasonal Analysis, Use of Dummy Variable in Analysing Time Series & Cross – Sectional Data</p>	<p>K1-K5</p> <p>K1-K6</p> <p>K1-K6</p>		<p>1-5</p> <p>1-5</p> <p>1-5</p>	<p>Experiential Learning</p> <p>Lecture</p> <p>Lecture</p>	<p>Seminar/ Problem / CA</p> <p>Seminar/ Problem / CA</p> <p>C.A & to use dummy variables techniques to test for structural stability of the model Also to test for gender, regional, seasonal variations and impact of policy measures</p>
<p>Aug 6 – 10, 2024</p>	<p>C.A. Test – I</p>						
<p>Aug 12 – 14, 2024 (Day Order 4-6)</p>	<p>III</p>	<p>3.6 Regression Using Dummy Variables- Testing for Structural Stability of Regression Model, Interaction Effects, Seasonal Analysis, Use of Dummy Variable in Analysing Time Series & Cross – Sectional Data</p>	<p>K1- K6</p>		<p>1-5</p>	<p>Lecture</p>	<p>C.A & to use dummy variables techniques to test for structural stability of the model Also to test for gender, regional, seasonal variations and impact of policy measures</p>

Aug 16 – 23, 2024 (Day Order 1-6)	III	3.6 Regression Using Dummy Variables- Testing for Structural Stability of Regression Model, Interaction Effects, Seasonal Analysis, Use of Dummy Variable in Analysing Time Series & Cross – Sectional Data	K1- K6		1-5	Lecture	C.A & to use dummy variables techniques to test for structural stability of the model Also to test for gender, regional, seasonal variations and impact of policy measures
Aug 27 – Sep 3, 2024 (Day Order 1-6)	IV	Unit 4 General Linear Model (Matrix Approach) 4.1 Matrix Approach to Linear Regression model: ‘k – variable’ Linear Regressionmodel, Assumptions	K1-K6	15	1-5	Lecture	Problem assignment
Sep 4 – 11, 2024 (Day Order 1-6)	IV	4.1 Matrix Approach to Linear Regression model: ‘k – variable’ Linear Regressionmodel, Assumptions	K1-K6		1-5	Lecture	Problem assignment
Sep 12 - 20, 2024 (Day Order 1-6)	IV	4.2 Derivation of Gauss Markov theorem	K1 – K6		1-5	Lecture	Problem assignment

Sep 23 - 26, 2024 (Day Order 1-4)	IV	4.3 OLS estimation, Testing significance of the model using ANOVA	K1 -K6		1-5	Lecture	Problem assignment
Sep 27 – Oct 3, 2024	C.A. Test - II						
Oct 4 – 5, 2024 (Day 5 & 6)	V	Unit 5 Violation of CLRM assumptions 5.1 Multicollinearity- Nature, Consequences, tests for detection and Remedial measures	K1-K6	20	1-5	Lecture	
Oct 7 - 15, 2024 (Day Order 1 to 6)	V	5.2 Heteroscedasticity- Nature, Consequences, tests for detection and Remedial measures	K1 -K6		1-5	Lecture	
Oct 16 - 22, 2024 (Day Order 1 to 6)	V	5.3 Autocorrelation- Nature, Consequences, tests for detection and Remedial measures	K1 -K6		1-5	Lecture	
Oct 23 - 24, 2024 (Day Order 1 to 2)	REVISION						