SYMBIOSIS COLLEGE OF ARTS & COMMERCE

An Autonomous College | Under Savitribai Phule Pune University

Reaccredited 'A+' with 3.51 CGPA For Third Cycle By NAAC | College with Potential for Excellence

COURSE TITLE	**Principles of Econometrics and Its Applications**

Course Learning Outcomes:

On successful completion of the course students will be able to:

1. To be able to understand the nature of Statistical Inference.
2. Apply the concepts and basic understanding of econometrics theory.
3. apply the basic methods of inference to the practical problems in econometrics and empirical economics
4. To be able to interpret the econometric results.
5. To be able to demonstrate the practical computing skills and interpret the methods applied.

Gist of this course in maximum 3 to 4 lines	The students will understand the nature and scope of Econometric Analysis for economic applications. Students will be able to draw inferences based on economic data using practical computing skills.

Unit	**CONTENTS OF THE COURSE**	**No. of Lectures**
1.	**Simple Linear Regression Model** **1.1.** Specifications of Model –Assumptions –Deriving the Ordinary Least Squares **1.2.** OLS Estimates – Gauss Markov Theorem – Estimation of Error Variance **1.3.** Confidence Interval Approach of Estimated Parameter and Testing of Hypothesis **1.4.** Computer Applications : Excel, Eviews , R	**20**
2.	**Problems in OLS Method** **2.1.** Multicollinearity : Problem , Detection, Remedies **2.2.** Heteroscadesticity : Problem , Detection, Remedies **2.3.** Autocorrelation: Problem , Detection, Remedies **2.4.** Computer Applications : Excel , R, Eviews	**20**
3.	**Introduction to Multiple Linear Regression Model** **3.1** Qualitative Variables : Dummy Variables **3.2** Anatomy of Multivariate Regression Analysis	**10**

	3.3 Computer Applications : Excel, Reviews	
4.	**Time Series Analysis** 4.1 Model of Time Series Analysis: Purely Random Process, Random Walk, Moving Average 4.2 Auto Regressive Process, Auto Regressive Moving Average process. 4.3 Differential Component of Time Series and their measurement. 4.4 Computer Application: Excel, Reviews.	**10**
	Total Number of Lectures	**60**
Teaching Methodology :	**1.Lecture** **2.Class Discussions and Presentations** **3. Case Study in the form of data handling**	

Internship for Students if any:

Recommended Reading:

1. D. N. Gujarati and D.C. Porter, Essentials of Econometrics, McGraw Hill, 4th edition, International Edition, 2009.
2. Christopher Dougherty, Introduction to Econometrics, Oxford University Press, 3 edition, Indian Edition, 2007.
3. Jan Kmenta, Elements of Econometrics, Indian Reprint, IChosla Publishing House, 2nd edition, 2008.
4. Maddala, G. S.: Introduction to Econometrics, Wiley
5. Ramanathan, R.: Introductory Econometrics with Applications, Harcourt Publishers.
6. Wooldrige J. M. Econometric Analysis of Cross Section and Panel Data. The MIT Press, 2002.
7. Johnstone & Dinardo, Econometric methods, McGraw Hill
8. Nachane, D. M.: Econometrics: Theoretical foundations and empirical perspectives,
9. OUP Ramanathan, R.: Introductory Econometrics with Applications, Harcourt Publishers.
10. Principles of Econometrics: An Introduction (Using R), Neeraj Hatekar, SAGE Publication

Suggested Journals :

1. Journal of Econometrics
2. Econometrica
3. Journal of Applied Econometrics