

OBE based Teaching Lesson Plan 2019-20

Program: M.Com (Financial Analysis)

Course Name: Econometrics

Course Code: P5 16 EC 301

Semester: III

Lecture hours: 30

Faculty in-charge: Dr. Poornima Vijaykumar

Course Outcome No.	Course Outcomes	T level Indicator
CO1	Derive an ordinary least squares (OLS) estimator for a simple regression model proving that it is unbiased, BLUE, and consistent.	T3
CO2	Estimate an ordinary least squares (OLS) for a Multi - variate regression model proving that it is unbiased, BLUE, and consistent.	T6
CO3	Justify the criteria of selecting estimation technique either 2SLS or GMM in Panel data estimation.	T5
CO4	Generate a pooled ordinary least squares (OLS) for a Multi - variate regression model proving that it is unbiased, BLUE, and consistent.	T6

Module No. & Topics Covered	Course Outcome No.	No. of Lecture Hours	Pre-Class Activity	Instructional techniques	Assessment	T level
Module 1: introduction to Econometrics The FAQs of economic research. Causal Relationships - Experiments and Quasi-experiments - Identification and Statistical Inference. The selection of problem - Cross Sectional and Longitudinal Data. The Simple	CO1	6	Read on simple linear regression	Lecture and Discussion	Read Economics related News Papers, and Articles	T3

<p>Regression Model - Deviation of OLS estimates, Mechanics and Properties - Units of measurement and functional form - Unbiasedness and efficiency.</p>						
<p>Module 2: Multi-Variate Regression Analysis Multiple sources of variation - Mechanics and Interpretation of OLS - The "partialling out" interpretation and linear projections. Inference in the Multi-Variate Regression Model - sampling distributions of the OLS estimators. Testing of Hypothesis - Confidence Intervals. Asymptotic Properties of OLS - Consistency, asymptotic normality and asymptotic efficiency - The LM test - Sources of endogeneity: omitted variables, measurement error, and simultaneity. Dummy Variables, Proxy Variables.</p>	CO2	6	Read on Multiple Regression	Lecture and Discussion	Read Economics related News Papers, and Articles	T6

Missing Data and Outliers.						
Module 3: Heteroscedasticity Consequences for OLS- Heteroscedasticity - robust inference. Breusch-Pagan and White Tests - WLS and FGLS. Instrumental Variables and 2SLS Instruments as a solution to endogeneity - Reduced for equations. Exclusion restrictions - Rank condition - Two stage least squares and GMM. Consistency and other asymptotic properties - Potential pitfalls - Local Average Treatment Effects.	CO3	8	Read on heteroscedasticity	Lecture and Discussion	Read research articles pertaining to heteroscedasticity	T5
Module 4: Introduction to Panel Data Methods Panel Data problems with panel data: attrition, Pooled OLS, random effects and fixed effects estimators	CO4	9	Read on Panel Data and Time Series	Lecture, Discussions & Presentation	Read research articles relating to application of Panel Data for analysis	T6

Continuous Internal Assessment

- Case study analysis
- Class test

Books for Reference:

1. Wooldrige J. M. *Introductory Econometrics: A Modern Approach*. South-Western College Publishing, 2000. (WOO)
2. Angrist, J. and Pischke, J. *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton Univ Press, 2009. (AP) *Additional Readings*
3. Johnston J. and DiNardo, J. *Econometric Methods*. 4th Ed. McGraw-Hill 1997. (JD) 2. Wooldrige J. M. *Econometric Analysis of Cross Section and Panel Data*. The MIT Press, 2002. Cameron, C.A. and Trivedi, P.K. *Microeconometrics: methods and applications*. Cambridge U.P., 2005. (CT)
4. Cameron, C.A. and Trivedi, P.K. *Microeconometrics Using STATA*. STATA Press, 2009.
5. Ruud P.A. *An Introduction to Classical Econometric Theory*. Oxford U.P., 2000. 2
6. *Syllabus: Econometrics M.Sc. ICEF* 6. Greene, W.H. *Econometric Analysis*. 6th Ed. Prentice-Hall, 2008. Morgan, S.L. and Winship, C. *Counterfactuals and Causal Inference: Methods and Principles for Social Research*. Cambridge U.P., 2007.
5. Kennedy, P. *A Guide to Econometrics*. The MIT Press, 2003.
6. Damodar N. Gujarati, Dawn C. Porter, and Sangeetha Gunasekar. *Basic Econometrics (Fifth Edition)*, MacGraw Hill Education Pvt. Limited, 2012.
7. G. S. Maddala & Kajal Lahiri. *Introduction to Econometrics (Fourth Edition)*, Wiley, 2013.

Approved by: