APPLIED STATISTICS AND ECONOMETRICS

DR. DEEP MUKHERJEE
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IIT Kanpur

TYPE OF COURSE : New | Both | UG/PG
COURSE DURATION : 12 Weeks (18 Jan' 21 - 09 Apr' 21)
EXAM DATE : 24 Apr 2021

PRE-REQUISITES : Participant should have done mathematics at +2 level (Class XI-XII).

INTENDED AUDIENCE : Students of Economics B.Sc./B.A. (Honors), M.Com. program, M.A. & Ph.D. program (in sociology and psychology disciplines) will benefit the most. The course may be helpful for engineering students who want to learn statistical methods well.

COURSE OUTLINE :

Dr. Deep Mukerjee is an Assistant Professor of Economics, at the Department of Economic Sciences, Indian Institute of Technology Kanpur. He has done Ph.D., Agricultural & Resource Economics, University of Connecticut, 2012. His research interests are Cost Benefit Analysis, Efficiency & Productivity Analysis, Program Evaluation, Valuation of Environment and Public Goods.

ABOUT INSTRUCTOR :

Dr. Deep Mukherjee is currently an associate professor at the Department of Economic Sciences, IIT Kanpur. He obtained his Ph.D. from the University of Connecticut and M.S. from Indian Statistical Institute. His research interests are in the fields of agricultural economics and public policy. He has taught undergraduate level microeconomics, econometrics, and environmental economics courses.

COURSE PLAN :

Week 1**:** Descriptive Statistics (2), Random variable (1), Normal distribution (2)

Week 2**:** Other probability distributions (1), Fitting a distribution (1), Sampling (1), Estimation (2)

Week 3**:** Sampling distribution (2), Hypothesis testing (3)

Week 4**:** Analysis of variance (3), Contingency table and Chi-squared test (2)

Week 5**:** Correlation (2), Regression (2), Classical linear regression model a.k.a. CLRM (1)

Week 6**:** Software sessions (5)

Week 7**:** CLRM with multiple regressors and statistical inference (5)

Week 8**:** Model specification issues (2), Violations of CLRM assumptions (3)

Week 9**:** General linear model – relaxation of CLRM assumptions (5)

Week 10**:** Dummy variable and its uses (2), Logit model (3)

Week 11**:** Fixed effects model (2), Program evaluation (3)

Week 12**:** Software sessions (5)