INTENDED AUDIENCE: Students of B.Tech. M.Tech, PhD and working professionals

COURSE OUTLINE:
This course will introduce you to business statistics, or the application of statistics in the workplace. Statistics is a course in the methods for gathering, analyzing, and interpreting data. You’ll also explore basic probability concepts, including measuring and modeling uncertainty, and you’ll use various data distributions, along with the Linear Regression Model, to analyze and inform business decisions.

ABOUT INSTRUCTOR:
Prof. M.K. Barua is an Associate Professor at Department of Management Studies, Indian Institute of Technology Roorkee. He has also been faculty at Asian Institute of Technology (AIT) Bangkok and Defense Engineering College, FDRE’s Metals and Engineering Corporation, Ethiopia. Also he is visiting faculty at IIM Sirmaur and IIM Rohtak. His research interest includes Operations management, project management and supply chain management. He has published more than 100 research papers in international journals of repute.

COURSE PLAN:
Week 1: Introduction, data collection and presenting data in tables
Week 2: Numerical descriptive measures and basic probability
Week 3: Discrete and continuous probability distributions
Week 4: Sampling and sampling distributions
Week 5: Confidence interval estimation
Week 6: One sample tests and hypothesis testing
Week 7: Two sample tests means
Week 8: Two sample tests proportions and variance
Week 9: ANOVA
Week 10: Chi-Square tests
Week 11: Simple linear regression
Week 12: Multiple regression basics