



# BUSINESS STATISTICS

## **PROF. MUKESH KUMAR BARUA**

Department of Management Studies  
IIT Roorkee

**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 is also seconded faculty 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