

## **MA 555: Business Mathematics & Statistics**

The purpose of the course is to provide the student with a mathematical basis for business financial decisions. The course contents include: business applications using arithmetic, algebra, and ratio-proportion and graphing. Applications include payroll, cost-volume-profit analysis and merchandising mathematics. The course also includes statistical representation of data, correlation, time series and exponential smoothing, elementary probability and probability distributions. This course also includes logical reasoning and problem solving skills.

### **Course Contents:**

- ) Basic mathematical concepts and their application in various businesses; Real numbers; Discrete and continuous variables; Functions; linear and exponential functions; Simultaneous equations; Matrix algebra; Compounding and discounting techniques; Basic algebra and set theory; Permutation and combination; Differential calculus
- ) The statistical analysis of managerial problems: Collection and classification of data; Measures of central tendency and dispersion; Probability; Probability distribution; Estimation; Regression and correlation analysis; Time series analysis and forecasting and index numbers

### **Text Books:**

- Mansfield, E.: Statistics for Business & Economics: Methods and Applications.
- Danier, W.W., Terrell, J.C.: Business Statistics: Basic Concepts and Methodology.
- Downen, E.K., Starr, M.K., Basic Statistics for Business and Economics.
- Iqbal Bhatti: Fundamental of Statistics
- Sher Muhammad: Elements of Statistics