MANIPAL UNIVERSITY JAIPUR

School of Business and Commerce

Department of Commerce
Course Hand-out

Business Statistics | MA1202 | 4 Credits | 3 1 0 4

Session: Jan 18 – May 18 | Faculty: Dr. Monika Saini | Class: BBA (II Sem)

COURSE OBJECTIVES: At the end of the course, students will be able to

[1202.1]. Collect appropriate data from the field for the empirical study and applying measures of central tendency & Dispersion.

[1202.2]. Describe a data set using correlation which improve their skills and make them employable.

[1202.3]. Demonstrate knowledge of forecasting using regression analysis.

[1202.4]. Construction of index number for analyzing data which improve their data skills.

[1202.5]. interpret the random phenomena of business data using probability distributions.

[1202.6]. Analysis of time series data related to business and commerce which enhance their data analysis skills and make them employable.

A. SYLLABUS

Measures of Central Value: Meaning. Need for measuring central value. Characteristics of an ideal measure of central value. Types of averages – mean, median, mode, harmonic mean, geometric mean. Measures of dispersion: range, quartile deviation, mean deviation, standard deviation, variance &coefficient of variation.

Probability: Meaning and need. Theorems of addition and multiplication, Conditional probability. Bayes" theorem. Random Variable - discrete and continuous. Probability Distribution: Meaning, characteristics (Expectation and variance) of Binomial, Poisson, Geometric, Uniform, Exponential, Normal distribution, Central limit theorem.

Correlation Analysis: Meaning and significance. Correlation and Causation. Types of correlation. Methods of studying simple correlation - Scatter diagram, Karl Pearson"s coefficient of correlation, Spearman"s Rank correlation coefficient. Regression Analysis: Meaning and significance, Regression vs. Correlation, Regression lines (X on Y, Y on X).

Index Numbers: Meaning and significance. Problems in construction of index numbers. Methods of constructing index numbers Weighted and Un-weighted (simple aggregative and Un-weighted simple average of price relative methods. Analysis of Time Series: Measurement of trend - Freehand method, Semi average method Moving average, Method of least squares, Measurement of seasonal variations - method of simple averages, ratio to trend method.

B. TEXT BOOKS:

1. B.L Agarwal, Basic Statistics, New Age Publications, 2013.
2. Goon, Gupta, Dasgupta : Fundamental of Statistics Vol. 1., New Age Publications, 2013.
3. S.P. Gupta (S.P.) : Statistical Methods, Sultan Chand & Sons, 34th Edition
4. Richar Levin & David Rubin : Statistics for management, Prentice Hall
5. Boot & Cox : Statistical analysis for managerial decisions, Tata McGraw Hill
6. I.C. Dhingra & M.P. Gupta: Lecture in business statistics.