

BA5106 STATISTICS FOR MANAGEMENT

DETAILED SYLLABUS

OBJECTIVE:

- To learn the applications of statistics in business decision making.

UNIT I INTRODUCTION

Basic definitions and rules for probability, conditional probability independence of events, Baye's theorem, and random variables, Probability distributions: Binomial, Poisson, Uniform and Normal distributions.

UNIT II SAMPLING DISTRIBUTION AND ESTIMATION

Introduction to sampling distributions, sampling distribution of mean and proportion, application of central limit theorem, sampling techniques. Estimation: Point and Interval estimates for population parameters of large sample and small samples, determining the sample size.

UNIT III TESTING OF HYPOTHESIS - PARAMETIRC TESTS

Hypothesis testing: one sample and two sample tests for means and proportions of large samples (ztest), one sample and two sample tests for means of small samples (t-test), F-test for two sample standard deviations. ANOVA one and two way.

UNIT IV NON-PARAMETRIC TESTS

Chi-square test for single sample standard deviation. Chi-square tests for independence of attributes and goodness of fit. Sign test for paired data. Rank sum test. Kolmogorov-Smirnov – test for goodness of fit, comparing two populations. Mann – Whitney U test and Kruskal Wallis test. One sample run test.

UNIT V CORRELATION AND REGRESSION

Correlation – Coefficient of Determination – Rank Correlation – Regression – Estimation of Regression line – Method of Least Squares – Standard Error of estimate.

REFERENCES:

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2. Prem. S. Mann, Introductory Statistics, 7th Edition, Wiley India, 2016.
3. Gareth James, Daniela Witten, Trevor Hastie, Robert Tibshirani, An Introduction to Statistical Learning with Applications in R, Springer, 2016.
4. Aczel A.D. and Sounderpandian J., "Complete Business Statistics", 6th edition, Tata McGraw Hill Publishing Company Ltd., New Delhi, 2012.
5. Anderson D.R., Sweeney D.J. and Williams T.A., Statistics for business and economics, 11th edition, Thomson (South – Western) Asia, Singapore, 2012.
6. N. D. Vohra, Business Statistics, Tata McGraw Hill, 2012.
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