

SYLLABUS FOR QUANTITATIVE TECHNIQUES- I
(WITH EFFECT FROM THE ACADEMIC YEAR 2016-2017)

Objective:

The main objective of this course is to introduce quantitative techniques to undergraduate students of commerce, arts and management studies so that they can use them in the field of research and industry.

Distribution of topics and sessions

a. Workload: 1 session of 2 hours per week.

No. of working weeks in a semester: 15

Total no. of hours in a semester = 30 hours.

Quantitative techniques I	Topic	Number of Sessions
	Unit I	1
	Unit II	4
	Unit III	3
	Unit IV	5
	Unit V	2
	Total	15

Total credits: 2

Course: Quantative Techniques - I

Unit I: INTRODUCTION TO STATISTICS

Meaning, use and limitations of statistics; concept of population sample, variate, attribute, statistic, parameter; Primary and secondary data ;sampling techniques.

Unit II: measures of central tendency and locations:

Definition of Average, Types of Averages: Arithmetic Mean, Median, and Mode for grouped as well as ungrouped data. Quartiles, Deciles and Percentiles. Diagrams and graphs: Ogives and Histogram.

Unit III: Measures of Dispersions:

Concept and idea of dispersion. Various measures: Range, Quartile Deviation, Mean Deviation, Standard Deviation, Variance, skewness and kurtosis.

Unit IV: Bivariate linear Correlation, Regression and time series analysis.

(a) **Correlation analysis:** Meaning, Types of Correlation, Determination of Correlation : Scattered diagram, Karl Pearson's Method of Correlation Coefficient(excluding Bivariate Frequency Distribution Table) and Spearman rank correlation coefficient.

(b) **Regression Analysis** : Meaning, Concept of Regression equation, Regression Coefficient (excluding Bivariate Frequency Distribution Table), Relationship between Coefficient of Correlation & Regression Coefficients, finding the equation of regression lines by method of Least Squares.

(c) **Time Series analysis**: Concepts and components of time series. Estimation of Trend using moving average method and Least Squares method (linear trend only). Concept of Forecasting using least square method.

Unit V: computer application and practical on quantitative techniques

Introduction of computer softwares: excel add-in: Data Analysis and mega Stat

Examination:

Final Examination will be held out of 100 Marks.

Fees for the entire course : Rs.2000/-

Reference Books:

1. Quantitative Methods-Part-I By S. Saha and S. Mukerji, New Central Book Agency, 1996.
2. Fundamentals of Statistics - D. N. Elhance.
3. Statistical Methods - S.G. Gupta (S. Chand & Co.)
4. Statistics for Management -Lovin R. Rubin D.S. (Prentice Hall of India)
5. Statistics - Theory, Method & Applications D.S.Sancheti& V. K. Kapoor.

Coordinator : Prof. Thomson Thomas