

## **MS-102: Quantitative Methods**

### **Objectives**

The objective of the course is to make the students familiar with some basic statistical and linear programming techniques. The main focus, however, is in their applications in business decision making.

### **Course Contents**

- I. Matrices and their Application, Markov's Analysis, Functions and Progressing of Business applications.
- II. Frequency Distribution and their Analysis; Measures of Central Tendency, Standard Deviation, Variance.
- III. Correlation and Regression Analysis, Time Series Analysis and Forecasting.
- IV. Probability Theory and Probability Distributions - Binomial, Poisson, Normal and Exponential.
- V. Evolution of Management Science, Linear Programming - Basic concepts, Model Formulation, Solution Methods, Duality, Transportation and Assignment, Decision Theory and Decision Trees, Quantitative Methods Packages.

### **Suggested Readings**

1. *Chadha, N. K. Statistics for Behavioral and Social Scientists, Reliance Publishing House, Delhi, 1996*
2. *Gupta, S P and Gupta M P. Business Statistics. New Delhi, Sultan Chand, 1997.*
3. *Kazmier, L J and Pohl, N F. Basic Statistics for Business and Economics. New York, McGraw Hill, 1988.*
4. *Levin Richard I and Rubin David S. Statistics for Management. New Jersey, Prentice Hall Inc., 1995.*
5. *Narag, A S. Linear Programming and Decision Making. New Delhi, Sultan Chand, 1995.*
6. *Sharma, J.K. Fundamentals of Operations Research, Macmillan, New Delhi, 2001*
7. *Terry, Sineich. Business Statistics by Examples. London, Collier Mac Millian Publishers, 1990*
8. *N.D Vora*

The list of cases and specific references including recent articles will be announced in the class at the time of launching of the course.