

- Accounting For Management, Arora M. N, Himalaya Publishing House.
- Essentials of Financial Accounting (Based on IFRS), Bhattacharya, 3/e, Prentice Hall India.
- Comdex (Computer and Financial Accounting with Tally 9.0 Course Kit), Dream Tech.
- Comdex – Tally 9, Namrata Agrawal - DreamTech.
- IFRS: A Practical approach, Jasmine Kaur, McGraw Hill.

## QUANTITATIVE METHODS

Subject Code	: 16MBA14	IA Marks	: 20
No. of Lecture Hours / Week:	03	Exam Hours	: 03
Number of Lecture Hours	: 56	Exam Marks	: 80
Practical Component	: 02 Hours / Week		

### Objectives:

- To introduce statistics as a tool for business decision making.
- To provide an analytical foundation for dealing business situations.
- To learn how to take decision under various situations.
- To familiarize the use of linear programming and project management evaluation techniques.
- To orient the students with statistical tools.

### Course Outcomes:

At the end of the course students are able to:

- Understand and applying descriptive statistical tools in business situations.
- Exhibit the skills in developing and applying probability distribution concepts in business and real time scenario.
- Develop the skills of decision making using Decision Theory.

- Develop mathematical models using Linear Programming technique.
- Illustrate the use of network techniques for successful project implementation

### **Unit 1**

**(10 Hours)**

**Descriptive Statistics:** Measures of Central Tendency- mean, median, mode, Measures of Dispersion- Standard deviation, variance, Co-efficient of Variance.

### **Unit 2**

**(8 Hours)**

**Correlation and Regression:** Scatter Diagram, Karl Pearson correlation, Spearman's Rank correlation (one way table only), simple and multiple regression (problems on simple regression only)

### **Unit 3**

**(8 Hours)**

**Probability Distribution:** Concept and definition - Rules of probability – Random variables – Concept of probability distribution – Theoretical probability distributions: Binomial, Poisson, Normal and Exponential – Baye's theorem (No derivation) (Problems only on Binomial, Poisson and Normal).

### **Unit 4**

**(10 Hours)**

**Decision Theory:** Introduction – Steps of decision making process-types of decision making environments-decision making under uncertainty- Decision making under Risk- Decision tree analysis (only Theory)

### **Unit 5**

**(10 Hours)**

**Linear Programming:** structure, advantages, disadvantages, formulation of LPP, solution using Graphical method.

**Transportation problem:** basic feasible solution using NWCM, LCM, and VAM unbalanced, restricted and maximization problems.



## Unit 6

(10 Hours)

**Project Management:** Introduction – Basic difference between PERT & CPM – Network components and precedence relationships – Critical path analysis – Project scheduling – Project time-cost trade off – Resource allocation, basic concept of project crashing.

**Theory 25 percent and Problems percent**

### **Practical Component:(Student-Centered Learning)**

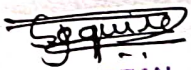
- Students are expected to have basic Excel knowledge-hands on experience.
- Students should be able to relate the concepts to real time business situations.
- Student should demonstrate the application of statistical tools.

### **RECOMMENDED BOOKS:**

- Statistical Methods, S. P Gupta, Sulthan Chand & sons, New Edition,
- Quantitative Techniques in Management, N D Vohra, 4th Edition, Tata McGraw Hill, 2010.
- Fundamentals of Statistics, S.C Gupta, 6th edition, Himalaya Publishing House, 2007

### **REFERENCE BOOKS:**

- Operations Research – Theory & Applications, J K Sharma, 5th edition, Macmillan publishers, 2013.
- Quantitative Methods for Business, Anderson, Sweeney and Williams, Thomson, 2005.
- Analyzing Multivariate Data, James Lattin, Douglas Carroll and Paul Green, Thomson Learning, 2003.

  
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