

**Subject Code:1MS1010407**

**Subject Title: Business Statistics**

### 1. Course Objectives:

This Course creates a better understanding of Business Research concepts in solving business, commerce and Management related problems. The course serves as a good foundation for further study in management, accounting, marketing and finance.

### 2. Teaching Scheme (Hours per week)

| Lecture<br>(Hrs.) | Tutorial | Practical | Credit | Evaluation Scheme (Marks) |           |                     |           |
|-------------------|----------|-----------|--------|---------------------------|-----------|---------------------|-----------|
|                   |          |           |        | University Assessment     |           | Internal Assessment |           |
|                   |          |           |        | Theory                    | Practical | Theory              | Practical |
| 4                 | -        | -         | 4      | 70                        | -         | 30                  | -         |

### 3. Syllabus:

| Module No. | Contents                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Total Hours | Weight |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|
| 1          | <b>Sampling Methods:</b><br>Meaning of Population and Sample, Difference Between Population Survey V/s Sample Survey, Characteristics of Ideal Sample, Sampling Methods: Procedure, Merits, Demerits and Calculation - Simple Random Sampling, Stratified Random Sampling, Multistage Sampling (Theory Only), Cluster Sampling (Theory Only).                                                                                                                  | 12          | 25%    |
| 2          | <b>Statistical Quality Control (SQC):</b><br>Concepts of Quality, Quality Control and Statistical Quality Control, Causes of Variation in Quality, Meaning, Uses and Advantages of SQC, Theory of Control Charts, Theory of Runs, Control Limits and Revised Control Limits, Types of Control Charts, Control Charts for Variables ( X and R Charts) and Their Interpretations, Control Charts for Attributes ( p, np and C Charts) and Their Interpretations. | 12          | 25%    |

|          |                                                                                                                                                                                                                                                                                                                                          |    |     |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----|
| <b>3</b> | <b>Probability:</b><br><br>Concept of Probability, Mathematical & Statistical Definition of Probability, Definition of Different Terms (Random Experiment, Sample Space, Types of Events...etc), Addition Theorem, Condition Law, Multiplication Theorem, Bay's Theory, Examples.                                                        | 12 | 25% |
| <b>4</b> | <b>Probability Distribution:</b><br><br>Concept of Discrete Random Variable and Its Probability Distribution, Mathematical Expectation of Discrete Random Variable, Properties and Application of Binomial & Poisson Distribution, Examples of Probability functions of Binomial & Poisson Distribution, Mean and Variance of B.D & P.D. | 12 | 25% |

#### 4. Suggested Readings

##### Books:

1. Fundamental of Mathematics and Statistics by V. K. Kapoor and S. C. Gupta, Sultan Chand & Sons, New Delhi.
2. Fundamental of Statistics by S. P. Gupta, Sultan Chand & Sons, New Delhi.
3. Business Statistics by J. K. Sharma, Vikas Publication, Noida.
4. Comprehensive Statistical Methods by P. N. Arora, Sumeet Arora & S. Arora, Sultan Chand & Sons, New Delhi.
5. Practical Business Statistics by Frederick F. Croxton & Dudley, Asia publishing House, Delhi.