

**19HS2501A - QUANTITATIVE TECHNIQUES FOR MANAGEMENT**

|  |           |                                 |       |                      |        |
|--|-----------|---------------------------------|-------|----------------------|--------|
| <b>Course Code</b>                     | 19HS2501A | <b>Year</b>                     | III   | <b>Semester</b>      | I      |
| <b>Course Category</b>                 | IDE-I     | <b>Branch</b>                   | -     | <b>Course Type</b>   | Theory |
| <b>Credits</b>                         | 3         | <b>L-T-P</b>                    | 3-0-0 | <b>Prerequisites</b> | Nil    |
| <b>Continuous Internal Evaluation:</b> | 30        | <b>Semester End Evaluation:</b> | 70    | <b>Total Marks:</b>  | 100    |

| <b>Course Outcomes</b>  |   |
|---|---|
| Upon successful completion of the course, the student will be able to - |   |
| <b>CO1</b>  | <b>Understand</b> the basic concepts for solutions to business problems (L2)  |
| <b>CO2</b>  | <b>Apply</b> the analytical techniques in business transactions that would help in making effective business decisions (L3) |
| <b>CO3</b>  | <b>Analyze</b> problems in business transactions that would help in making effective business (L4)                          |
| <b>CO4</b>  | <b>Apply</b> the least square technique to find the equation of the curve. (L3)   |
| <b>CO5</b>  | <b>Determine</b> the equation of the curve from the given data. (L4)  |
| <b>CO6</b>  | <b>Apply</b> the various methods to find the deviations and <b>submit a report (L3)</b>                                     |

| <b>Contribution of Course Outcomes towards achievement of Program Outcomes &amp; Strength of correlations (3-High, 2: Medium, 1:Low)</b> |     |     |     |     |     |     |     |     |     |      |      |      |      |      |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|
|  | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
| <b>CO1</b>   |     |     |     |     |     |     |     |     |     |      |      |      | 2    |      |
| <b>CO2</b>   | 3   |     |     |     |     |     |     |     |     |      |      |      | 2    |      |
| <b>CO3</b>   |     | 3   |     |     |     |     |     |     |     |      |      |      | 2    |      |
| <b>CO4</b>   | 3   |     |     |     |     |     |     |     |     |      |      |      | 2    |      |
| <b>CO5</b>   |     | 3   |     |     |     |     |     |     | 2   | 2    |      |      | 2    |      |

| <b>SYLLABUS</b> |  |                  |
|-----------------|--|------------------|
| <b>Unit No.</b> | <b>Contents</b>  | <b>Mapped CO</b> |
| I               | <b>Introduction to Statistics:</b> Meaning, Definition, Functions, Importance, Limitations of Statistics, Collection of Primary and Secondary Data.  | CO1,CO2,CO3      |
| II              | <b>Measures of Central Tendency:</b> Definition, Objectives, Characteristics and Techniques: Mean Median, Mode, Geometric Mean and Harmonic Mean.  |                  |
| III             | <b>Measures of dispersion:</b> Definition, Objectives, Characteristics and Techniques: Range, Quartile Deviation, Mean Deviation, Standard Deviation and Coefficient of Variation.                                   |                  |
| IV              | <b>Measures of Skewness &amp; Kurtosis:</b> Definition, types of skewness, types of kurtosis, Karl-Pearson's Co-efficient, Bowley's Co-efficient, Kelly Co-efficient, Calculation of Raw Moments and Central Moments |                  |
| V               | <b>Curve Fitting:</b> Method of least squares, straight line, parabola, exponential curve, power curve   | CO1,CO4,CO5      |

### **Learning Resources**

**Text Books:**

1. S.C. Gupta and V.K. Kapoor, Fundamentals of Mathematical Statistics, 11/e, Sultan Chand & Sons Publications, 2012.
2. Dr.T.K.V. Iyengar, Dr.B.Krishna Gandhi, S. Ranganatham, Dr. M.V.S.S.N. Prasad, "Probability & Statistics", Publications: S.Chand, 4<sup>th</sup> Revised Edition, 2012.

**Reference Books:**

1. S. Ross, a First Course in Probability, Pearson Education India, 2002.
2. Miller and Freunds, Probability and Statistics for Engineers,7/e, Pearson, 2008.

**e- Resources & other digital material:**

1. [www.nptelvideos.com/mathematics/](http://www.nptelvideos.com/mathematics/)(Math Lectures from Mit,Stanford,IIT'S
2. [nptel.ac.in/courses/111/106/111106150/](http://nptel.ac.in/courses/111/106/111106150/)
3. [nptel.ac.in/courses/111105035](http://nptel.ac.in/courses/111105035)