

### Course: 301 : Statistical Methods

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| Course Code                | 301  |
| Course Title               | Statistical Methods  |
| Credit                     | 2  |
| Teaching per Week          | 2 Hrs  |
| Minimum weeks per Semester | 15 (Including Class work, examination, preparation etc.)   |
| Review / Revision          | June 2015  |
| Purpose of Course          | To develop statistical problems solving abilities relevant to Computer Science.  |
| Course Objective           | <ol style="list-style-type: none"> <li>1. To make students understand various statistical methods.</li> <li>2. To develop the ability to compute descriptive statistics including diagrammatic representation and interpretation.</li> <li>3. To be able to carry out simple linear regression analysis</li> </ol>   |
| Pre-requisite              | None   |
| Course Out come            | Ability to use computers to analyze the data   |
| Course Content             | <p><b>Unit 1. Introduction and Presentation of statistical data</b></p> <ol style="list-style-type: none"> <li>1.1. Types of variables</li> <li>1.2. Univariate, bivariate and multivariate data</li> <li>1.3. Univariate and bivariate frequency distributions</li> </ol> <p><b>Unit 2. Measure of central tendency-mean, median and mode</b></p> <p><b>Unit 3. Measures of dispersion (absolute as well as relative)</b></p> <ol style="list-style-type: none"> <li>3.1. Mean deviation</li> <li>3.2. Standard deviation</li> <li>3.3. Coefficient of mean deviation and coefficient of variation</li> </ol> <p><b>Unit 4. Correlation</b></p> <ol style="list-style-type: none"> <li>4.1. Introduction</li> <li>4.2. Types of correlation and scatter diagrams</li> <li>4.3. Rank correlation coefficient</li> </ol> <p><b>Unit 5. Regression</b></p> <ol style="list-style-type: none"> <li>5.1. Concept of dependent and independent variables</li> <li>5.2. Introduction to liner regression</li> <li>5.3. Line of regression (with one independent variable)</li> </ol> <p>Methods should be explained conceptually and corresponding examples should be given. No proof should be given to any of the methods.</p> |
| Reference Book             | <ol style="list-style-type: none"> <li>1. Introduction to mathematical statistics – Hogg RV &amp; Cragg AL Tata McGraw Hill</li> <li>2. An introduction to the theory of statistics – Yule UG &amp; Kendall MG – Chailes Griffin &amp; Co.</li> <li>3. Statistical Methods by S.P. Gupta – Sultan Chand &amp; Co</li> </ol>  |
| Teaching Methodology       | Class Work, Discussion, Self Study, Seminars and/or Assignments  |
| Evaluation Method          | 30% Internal assessment.<br>70% External assessment.   |