# Add on Course:

**1. Introduction:** Today we are living in a 21st century where we need different skills in order to survive in this competitive world. The rapid changes in the field of social sciences requires additional set of knowledge and skills beyond the prescribed curriculum of the educational institutions. Now a day we gather different types of data and in order to develop better understanding about that, we need to process the data in a rapid manner. Though our university curriculum clearly defines the programme specific courses, but our students needs some specialised knowledge about the uses of different data analysis software available in the market. In view of this, Department of Education of L. T. K. College like to offer an Add-On course in the field of Data Analysis using SPSS software. This course will be conducted by the experts who have knowledge in the field of SPSS which help the students to stand apart from the rest in the job market by adding further value and skills to their resume.

**2. Objectives:** This course intends to provide sound understanding of data analysis process and how this could be applied in different research activities. The learning objectives are described in the following manner:

i. To enhance the knowledge and skills in the field of data analysis by using SPSS software.
ii. To bridge the gap between theory and practice.
iii. To provide hands-on-training in using SPSS in the data analysis process.
iv. To develop an in-depth understanding about the descriptive statistics which are used for the analysis of data.
v. To develop a comprehensive understanding about the inferential statistics which are used for making inferences about the study.

**3. Learning Outcome:** After the completion of the course the learners will be able to-

i. Define the concept of data, variable, hypothesis, normal probability curve
ii. Understand the meaning of level of significance, degrees of freedom

iii.  Develop the mastery in setting up an SPSS file

iv.  Develop different graphs by using SPSS software

v.  Develop in-depth understanding about the concept of descriptive statistics

vi.  Comprehend the concept and situation where they can use inferential statistics.

## 4. Syllabus

| Unit | Content | Marks | L | P | T |
|------|---------|-------|---|---|---|
| 1 | **Concept**<br>1.1. Data<br>1.2. Variable<br>1.3. Hypothesis<br>1.4. Normal Probability Curve<br>1.5. Scales of Measurement<br>1.6. Level of Significance<br>1.7. Degrees of Freedom<br>1.8. One-tailed Test and Two-tailed Test<br>1.9. Setting Up an SPSS Data File | | 5 | 3 | 2 |
| 2 | **Graphical Representation of Data**<br>2.1. Bar Diagram<br>2.2. Histogram<br>2.3. Pie-diagram<br>2.4. Frequency Polygon | | 1 | 3 | 1 |
| 3 | **Descriptive Statistics**<br>3.1. Frequencies<br>3.2. Measures of Central Tendency<br>3.3. Correlation | | 3 | 3 | 1 |
| 4 | **Inferential Statistics**<br>4.1. t-test<br>4.2. F-test | | 3 | 4 | 1 |