Title of the Course	:	**Data Science using SPSS**
Course Code	:	
Nature of the Course	:	**Add on**
Total Credits	:	**02**
Distribution of Marks	:	**40 (End Sem) + 10 (In-Sem)**

COURSE OBJECTIVES:
- To be familiar with basic tools of SPSS and data analytic techniques.
- To apply the tools for real-life data analysis projects and reporting.

UNITS	CONTENTS	L	T	P	Total Hours
1 (08 Marks)	Starting SPSS, Working with data file, Different data types, Scale of measurements, Dialogue boxes. Preparing the Data file, Creating data file, Entering data, Variable types in SPSS, Defining the variables, Modifying data file, Import data. Screening and cleaning data, Manipulation of data.	-	-	04	08
2 (08 Marks)	Variable Transformation/Recoding, Recoding Categorical String Variables using Automatic Recode, Grouping or Splitting Data, Replacing missing values, Computing new variables, Selecting cases, Sorting cases, Merging files, Generating random number.			04	08
3 (14 Marks)	Descriptive statistics: Graphs- Creating and editing graphs and charts, Categorical variables, continuous variables, Frequencies, Descriptive, Explore, Cross Tabulation, Checking normality, Outliers checking, Correlation: Pearson product moment correlation, Spearman rank correlation, Partial correlation, Simple linear regression, Multiple regression analysis, One sample and two Independent sample t test, Paired sample t test, One way Analysis of variance, Two way ANOVA, Analysis of Covariance	-	-	04	08
4 (10 Marks)	Chi square Test, Mann- Whitney test, Kruskal- Wallis test, Wilcoxon signed rank test. One sample and Two sample Kolmogorov – Smirnov test, Median Test.	-	-	03	06
	Total	-	-	15	30

Where,   L: Lectures   T: Tutorials   P: Practicals

MODES OF IN-SEMESTER ASSESSMENT: **(10 Marks)**
- One Internal Examination   -   **05 Marks**
- Others   -   **05 Marks**
  - Group Discussion/Assignment

LEARNING OUTCOMES:

After the completion of this course:
- Students are expected to develop a clear understanding of the fundamental concepts of Data Analytics.
- Students will also learn SPSS tools, handling various types of data and their graphical representation.
- Students are expected to apply different data analytic tools in real life problems.

SUGGESTED READINGS:
1. Performing Data Analysis using IBM SPSS, Lawrence S. Meyers, Glenn C. Gamst, A. J. Guarino, Wiley Publication
2. SPSS for Windows Step by Step A Simple Guide and Reference, Darren George and Paul Malley.
3. SPSS in Simple Steps, Kiran Pandya, Smruti Bulsari, Sanjay Sinha, Dreamtech Press.