

DEPARTMENT OF STATISTICS				CLASS: I M.Sc. Statistics				
Sem	Course Type	Course Code	Course Title	Credits	Contact Hours/week	CIA	Ext	Total
II	Practical – 4	21P2SMP4	Statistical Data Analysis using SPSS	2	4	40	60	100

Nature of Course			
Knowledge and skill	✓		Employability oriented
Skill oriented	✓		Entrepreneurship oriented

Course Objectives:

- To enrich the technical skills in Data analytics through the statistical methods using software orientation towards job roles.
- To enhance the intuition of the students towards the insights of the theoretical concepts with its application in real time domain through software.

Units	Descriptions	Hours	K-Levels	CLOs
1	Program to Data Visualization: Bar Charts ,Cluster Bar Charts , Pie Charts, Program to Data Visualization: Scatter plots , Dot plot and Box plot, Program to Data Visualization: Histogram, Program to compute Descriptive Statistics	15	K2	1
2	Program to Correlation: Simple and Multiple correlation, Program to compute Simple regression analysis, Program to compute Multiple Regression analysis	10	K3	2
3	Program to compute One sample and two Independent sample t test Program to compute Paired sample t test	10	K3	3
4	Program to compute Non-Parametric tests Program to compute Chi-Square Test	10	K4	4
5	Program to compute Analysis of Variance , MANOVA , ANCOVA, Multivariate statistical techniques - Logistic Regression and Discriminant Analysis, Factor Analysis and Cluster Analysis.	15	K4	5

Books for Study:

- A. Rajathi and P. Chandran (2020), SPSS for you , MJP Publishers, Chennai

Webpages

1. <https://www.open.ac.uk/socialsciences/spsstutorial/files/tutorials/graphs.pdf>
2. https://students.shu.ac.uk/lits/it/documents/pdf/analysing_data_using_spss.pdf
3. http://www.academia.dk/BiologiskAntropologi/Epidemiologi/PDF/SPSS_Statistical_Analyses_using_SPSS.pdf
4. https://stat.utexas.edu/images/SSC/Site/documents/SPSS_DescriptiveStats.pdf
5. <https://www.uvm.edu/~statdhtx/fundamentals8/SPSSManual/SPSSLongerManual/SPSSChapter1.pdf>
6. <https://csass.ucsc.edu/images/spss1.pdf>

Rationale for Nature of the course

SPSS is used by market researchers, health researchers, survey companies, government entities, education researchers, marketing organizations, data miners, and many more for processing and analyzing survey data

Activities having direct bearing on Skill development / Employability / Entrepreneurship

The goal for the lab is to provide an opportunity for you to become familiar with the SPSS software which is designed to solve problems in statistics and to analyze experimental data

Pedagogy

Demonstration and Practical session in computer lab.

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO's	Course Learning Outcomes	Knowledge Level
CLO-1	Understand the basic workings of SPSS and perform basic statistical analyses.	Up to K2
CLO-2	Presenting data using relevant tables, graphical displays, and summary statistics.	Up to K3
CLO-3	Explore relationship among variables	Up to K3
CLO-4	Perform common parametric and non-parametric tests	Up to K4
CLO-5	Perform advanced statistical analyses such as one way and two – way ANOVA, ANCOVA, simple regressions and multivariate analyses (factor and cluster)	Up to K4

Mapping close with PSOs

#	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7
CLO-1	2	1	2	1	3	1	3
CLO-2	2	1	2	2	3	1	3
CLO-3	2	3	3	3	3	2	3
CLO-4	2	3	3	3	3	2	3
CLO-5	2	3	3	3	3	2	3

Advance application – 3; Intermediate level – 2; Basic level – 1

Course Designer:

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