P.B. SIDDHARTHA COLLEGE OF ARTS & SCIENCE

Siddhartha Nagar, Vijayawada – 520 010
Autonomous -ISO 9001 – 2015 Certified

Statistical Data Analysis Using SPSS

Offered to: B.SC (CSCS-Computer Science with Cognitive Systems)/ SDCSTAT001
Course Type: Core (Practical)

Year of Introduction:2021	**Percentage of Revision: Nil**
Semester: III Paper No. 1	**Credits: 1**
Hours Taught: 30periods per Semester	**Max.Time: 2** Hours

Course Prerequisites: Students required basic knowledge in handling computers.
Course Description: This course gives a working knowledge of SPSS software to students with the aim of getting to use data analysis. Students will be able to apply appropriate statistical tool for given data set using SPSS Software and get the output and report the finding.

Course Objectives:
1)   To train students in SPSS Software.
2)   To expose the students to the analysis of statistical data.
   Learning Outcomes: At the end of the course, the student will
1)   able to do data analysis using SPSS
2)   known to represent the data visualization

S. No	PROGRAMME OUTCOMES
PO1.	**Effective Communication**: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.
PO2.	**Effective Citizenship**: Demonstrate empathetic social concern and equity centred national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.
PO3.	**Ethics:** Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
PO4.	**Environment and Sustainability**: Understand the issues of environmental contexts and sustainable development
PO5.	**Critical Thinking**: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.
PO6:	**Specialized Skills / Transferable Skills:** Acquisition of communication and soft, analytical and technological skills that aid in enhancing
PO7.	**Self-directed and Life-long Learning:** Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes**.**

Course Outcomes:

Course Outcome	Upon successful completion of this course, students should have the knowledge and skills to:	Programme Outcomes Mapping
CO 1	To understand the SPSS packages and describing a variety of statistical variables and enter the data in the statistical Packages.	PO - 5
CO 2	To integrate and access the data base from different source of file format.	PO - 5
CO3	To analyse and apply the appropriate Charts and graphs and functions for the given data	PO – 6
CO 4	To recommend the best statistical tool for basic statistical analysis.	PO - 6
CO 5	To Apply statistical analysis that can test hypotheses under parametric approaches.	PO - 7

Syllabus

Course Details

Unit	Learning Units	Lecture Hours
I	Overview of SPSS. Open and save SPSS data file - Import from other data source - Data entry - Labeling for dummy numbers and recode in to same variable - Recode in to different variable and transpose of data - Insert variables and cases merge variables and cases - Split data - Select cases - Compute total scores.	6
II	Simple Bar diagram and Multiple bar diagram - Subdivided Bar diagram - Pie Diagram – Histogram - Scatter diagram & Box plot –	6
III	Measure of central tendency and Dispersion - Karl Pearson's and Spearman's Rank Correlation – Simple and Multiple Regression, R^2	6
IV	One sample &Two sample Independent t test - Paired t test	6
V	Chi-square test – Goodness fit and Independence of attributes. One way and Two way ANOVA.	6

Text Book:

1. Andy Field, 2017, Discovering Statistics Using IBM SPSS Statistics, Fifth Edition, SAGE Publications Ltd

Reference Books

1. Jesus Salcedo, Keith McCormick, Jon Peck and Andrew Wheeler, 2017, SPSS Statistics for Data Analysis and Visualization, First Edition, Wiley.

Websites of Interest: https://students.shu.ac.uk/lits/it/documents/pdf/analysing_data_using_spss.pdf

***