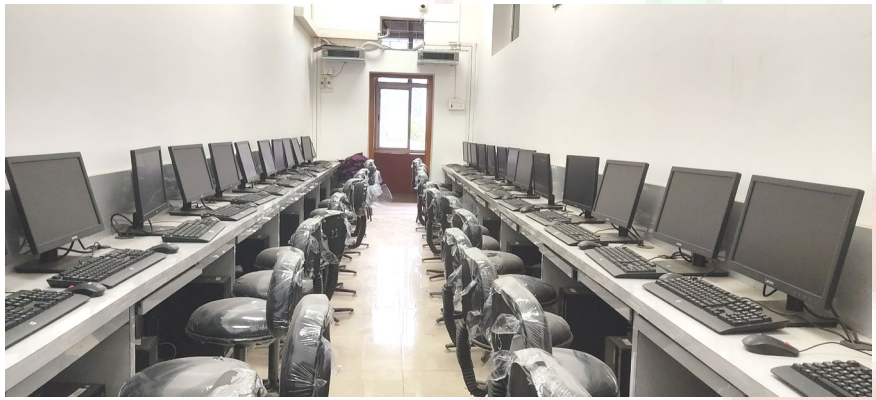
# Add-On Certificate Course in Data Analysis Using SPSS Software

(Duration: 06 Months)

Student learning centre, IQAC, St. Xavier's College (Autonomous) Ranchi introduces a -

Certificate Course in Data Analysis Using SPSS Software

**Commencement of Classes- 1st week of April 2025**



**Computer Lab**

**No. of seats:** **30**

Course eligibility: Students pursuing B.A/B.Sc./B.Com or M.A. / M.Sc. / M.Com from the college.

Requirement: Basic operation of Computer

Course Fee: 6000/- (including admission application form fee)

**NOTE:** **ADMISSION IS GOING ON.**

Course Registration through College website- www.sxcran.ac.in

**About the course:**

Department of Mathematics and Statistics, St. Xavier's College, Ranchi; has specially designed certificate course in Data Analysis using SPSS SOFTWARE for the students pursuing degree in Social Sciences, Biological Science, Computer Science (CA/IT), Humanities, Education, Commerce, Commerce Vocational Courses and Management Course. In this course the students shall undergo hands on training in SPSS Software. The course is of 60 hours (20 hours Theory & 40 hours Practical) duration and course will be taught in computer lab using SPSS Software. The course will be conducted two times in a year.

**Course Content:**

| Sr. No. | Title | Content of syllabus |
|---|---|---|
| 1 | Introduction | Type of Scale of Measurements, choosing appropriate scale and measurements to the data, preparing codebook<br>Getting to know SPSS, starting SPSS, working with data file, SPSS windows, Menus, Dialogue boxes.<br>Preparing the Data file: creating data file and entering data, defining the variable, entering data, modifying data file, import file. Screening and cleaning data, Manipulation of data. |
| 2 | Preliminary Analysis | Descriptive Statistics: categorical variables, continuous variables, checking normality, outlier checking.<br>Choosing the right statistics: overview of different statistical techniques, Decision making process. |
| 3 | Statistical techniques: Explore relationship among variables | Correlation: Pearson product moment correlation: Spearman's rank correlation, partial correlation, simple linear regression<br>Multiple linear regression: Assumptions, overall significance, variable selection methods. |
| 4 | Statistical techniques: Compare means | One sample and two independent sample t-test, paired sample t-test , one way ANOVA,two way ANOVA, MANOVA, Analysis of covariance, repeated measures. |
| 5 | Non – parametric statistics | Independent chi – square test, Mann- Whitney test, Wilcoxon signed rank test, Kruskal – Wallis test. |
| 6 | Advanced Models: Multivariate statistical techniques | Logistic regression and Discriminant analysis, Factor analysis, Cluster analysis |