

FOUNDATION COURSE IN STATISTICAL DATA ANALYSIS USING SPSS



Syllabus (Course code: Foundation- SPSS)

Unit 1: Developing the familiarity with SPSS Processor

Entering data in SPSS editor. Solving the compatibility issues with different types of file. Inserting and defining variables and cases. Managing fonts and labels. Data screening and cleaning. Missing Value Analysis. Sorting, Transposing, Restructuring, Splitting, and Merging. Compute & Recode functions. Visual Binning & Optimal Binning. Research with SPSS (random number generation).

Unit 2: Working with descriptive statistics

Frequency tables, Using frequency tables for analyzing qualitative data, Explore, Graphical representation of statistical data: histogram (simple vs. clustered), boxplot, line charts, scatterplot (simple, grouped, matrix, drop-line), P-P plots, Q-Q plots, Addressing conditionalities and errors, computing standard scores using SPSS, reporting the descriptive output in APA format.

Unit 3: Hypothesis Testing

Sample & Population, concept of confidence interval, Testing normality assumption in SPSS, Testing for Skewness and Kurtosis, Kolmogorov–Smirnov test, Test for outliers: Mahalanobis Test, Dealing with the non-normal data, testing for homoscedasticity (Levene's test) and multicollinearity.

Unit 4: Testing the differences between group means

t – test (one sample, independent- sample, paired sample), ANOVA-GLM 1 (one way), Post-hoc analysis, Reporting the output in APA format.

Unit 5: Correlational Analysis

Data entry for correlational analysis, Choice of a suitable correlational coefficient: non-parametric correlation (Kendall's tau), Parametric correlation (Pearson's, Spearman's), Special correlation (Biserial, Point-biserial), Partial and Distance Correlation

Unit 6: Regression

The method of Least Squares, Linear modeling, Assessing the goodness of fit, Simple regression, Multiple regression (sum of squares, R and R^2 , hierarchical, step-wise), Choosing a method based on your research objectives, checking the accuracy of regression model. Logistic regression, Reporting the output in APA format.

Unit 7: Non-parametric tests

When to use, Assumptions, Comparing two independent conditions (Wilcoxon rank-sum test, Mann-Whitney test), Several independent groups (Kruskal- Wallis test), Comparing two related conditions (Wilcoxon signed-rank test), Several related groups (Friedman's anova), Post-hoc analysis in non-parametric analysis. Categorical testing: Pearson's Chi-square test, Fisher's exact test, Likelihood ratio, Yates' correction, Loglinear Analysis. Reporting the output in APA format.

Lab Work & Project:

All the units will include discussion on theoretical concepts followed by practical SPSS demonstration on real/simulated data. Learners are welcome to bring and discuss their actual problems related to quantitative analysis. Our every learner receives personal attentions and we endeavour to equip every learner to develop a sense of professional competency in quantitative data analysis using SPSS.

Course Faculty/Trainers:

Dr. Sanjay Singh, Ph.D. (Psychology), University of Delhi. Dr. Singh has over 3 years of teaching experience and have been recipient of prestigious European Union Erasmus Mundus fellowship. His area of specialization include psychometrics, statistics, research methodology and decision under uncertainty. Dr. Singh will be mainly handling the software training part of the course. Currently he is working on his book on SPSS & Amos .

Course Fee: INR 15,000 + 12.36% Service Tax. 15% Group discounts available if registered in group of 2. Payment can also be done in installments.

Mode of Teaching: Online. Relevant handout, references and study material will also be given.

Duration of Course: 3 months (classes on weekends). Certificate will be provided to successful students.

Registration: [Click here to Sign Up for the course](#). Also, you can contact or SMS with your name, mobile no, and email for registration at +91 9953511407.

About Heurexler Research:

Heurexler Research Pvt. Ltd. is a privately held research company that works at the interface of standard scientific research and expertise and the corporate requirement and receptiveness for the same. At Heurexler we strive to make the serious scientific research a staple for the practical solutions required for addressing the challenges of modern business life and competitive growth. Our company offers customized human resource and testing services & develops new psychometric tests to suit the special needs of our clients. Our core services include dealing with predictive analytics and data science, providing market research, psychometric, training, assessment, and related human resource services. Our team consists of highly qualified research professionals, academicians and experts working with cutting edge quantitative and qualitative technologies to provide competitive and innovative solutions to our clients. Our clients are spread across Europe, Asia and America. We are proud partner of IBM and Atlas.ti for distribution and training of SPSS, Amos, and Atlas.ti software in India.