

1 | DATA ANALYSIS THROUGH SPSS

VALUE ADDED COURSE		
Course Nature: Professional Skill Based Course		Course Code: EDN101
Course Title: DATA ANALYSIS THROUGH SPSS		Credits: Nil
Internal Marks: 10	External Marks: 40	Total Marks: 50

Essence of the Course:

The course on **Data Analysis through SPSS** is a professional skill based value addition course which is designed in such a way that it provides the aspirants with holistic training to understand, study, extract, analyze, manipulate, and comprehend data to make conclusions and achieve specified research goals with the help of the data analysis software called SPSS.

Expected Course Outcome:

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

- Analyze the data structure, scales of measurement and data sets
- Compute various statistical measures from data
- Effectively carry out statistical analysis techniques for different types and categories of data
- Develop critical understanding on the unknown patterns of data structure
- Execute different data analysis procedure effectively
- Synthesize and interpret the data qualitatively in various research findings

Course Content:

Unit 1: Introduction to SPSS (4 Hours)

- Introduction to SPSS Software, Installation and Customization of the Data Sheets
- Scales of Measurement, Data Types, Data View and Variable view in SPSS
- Importing of Data from various other data sheets and Creating new variables
- Creating new data sheets and Selection of data of certain cases from large data sets

Unit 2: Descriptive Statistics & Graphical Representation (8 Hours)

- Frequency analysis
- Measures of Central tendency, Variability, Skewness & Kurtosis
- Normality Analysis
- Bar Chats, Scatter Plots, Box and whiskers plot, Histograms, Stem & Leaf plot

Unit 3: Parametric and Non-Parametric Statistics (12 Hours)

- Independent sample t-test and Paired Sample t-test
- ANOVA & MANOVA
- Factorial ANCOVA
- Repeated measures ANOVA
- Chi-square Tests

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- Mann-Whitney U Test
- Wilcoxon Signed Ranks Test
- Kruskal-Wallis H test

Unit 4: Correlation, Regression & Factor Analysis (6 Hours)

- Pearson's Product Moment Correlation, Spearman Rank Order Correlation Partial and Multiple Correlation
- Linear & Multiple Regression
- Reliability Analysis
- Factor Analysis - Exploratory & Confirmatory

Practicum:

- Hands-on Sessions with different data structures
- Representation of a data in graphs, tables and using plots
- Analyzing the data structure based on the objectives of research
- Working on a data in collaborative medium

Modes of Transaction:

- Demonstrations
- Hands-on Training
- Reflective talks
- Data analysis based discussions
- Collaborative Analysis
- Presentations

Learning Activities:

- Analyzing the different data structures for quantitative research
- Comparing Parametric & non-parametric analysis
- Representing the output in pictorial way
- Hand-on training on Data Structure and Visualization
- Coding and sequencing of Qualitative entities of research
- Presentation of Data & Analysis results in Research reports

Assessment Rubrics:

- Performance Task
- Group Activities
- Mini Tasks of Analysis
- Data Interpretation
- Reporting of Analysis results

Suggested Reading:

- Agresti, A. (1996) Introduction to Categorical Data Analysis. New York: Wiley.
- Belsley, Kuh, and Welsh (1980). Regression Diagnostics: Identifying Influential Data and Sources of Collinearity. New York: Wiley.
- Berger, R.L., Boos, D.D., and Guess, F.M. (1988) Tests and confidence sets for comparing two mean residual life functions. Biometrics, 44, 103-115.
- Breslow, N. E. (1970) A generalized Kruskal-Wallace test for comparing K samples

subject to unequal patterns of censorship. *Biometrika*, 57, 579–594.

- Cook, R. D. (1977) Detection of influential observations in linear regression. *Technometrics*, 19, 15–18.
- Cox, D. R. (1972) Regression models and life tables. *Journal of the Royal Statistical Society, B.*, 34, 187–220.
- Davidson, M. L. (1972) Univariate versus multivariate tests in repeated measures experiments. *Psychological Bulletin*, 77, 446–452.
- Dizney, H. and Gromen, L. (1967) Predictive validity and differential achievement on three MLA comparative foreign language tests. *Educational and Psychological Measurement*, 27, 1959–1980.
- Draper, N. R. and Smith, H. (1998) *Applied Regression Analysis* (3rd ed). New York: Wiley.
- Dunn, G. and Everitt, B. S. (1995) *Clinical Biostatistics: An Introduction to Evidence-Based Medicine*. London: Arnold.
- Everitt, B. S. (2002a) *The Cambridge Dictionary of Statistics* (2nd ed). Cambridge: Cambridge University Press.
- Fisher, R. A. (1936) The use of multiple measurements on taxonomic problems. *Annals of Eugenics*, 7, 179–188.
- Gamerman, D. (1991) Dynamic Bayesian models for survival data. *Applied Statistics*, 40, 63–79.
- Hand, D. J., Daly, F., Lunn, A. D., et al. (1994) *Small Data Sets*. Boca Raton, FL: Chapman and Hall/CRC.
- Hollander, M. and Wolfe, D. A. (1999) *Nonparametric Statistical Methods*. New York: Wiley.
- Levene, H. (1960a) Robust tests for the equality of variance. In *Contributions to Probability and Statistics* (O. Aikin, Ed.). Stanford, CA: Stanford University Press.
- Manly (1999). *Randomization, Bootstrap, and Monte Carlo Methods in Biology*. Boca Raton, FL: Chapman and Hall/CRC.
- Marriott, F. H. C. (1974) *The Interpretation of Multiple Observations*. London: Academic Press.
- Miles, J. and Shevlin, M. (2001) *Applying Regression and Correlation*. London: Sage Publications.
- Morant, G. M. (1923) A first study of the Tibetan skull. *Biometrika*, 14, 193–260.
- Piexoto, J. L. (1990) A property of well-formulated polynomial regression models. *American Statistician*, 44, 26–30.
- Preacher, K. J. and MacCallum, R. C. (2003) Repairing Tom Swift’s Electric Factor Analysis. *Understanding Statistics*, 2, 13–44.
- Rawlings, J. O., Pantula, S. G., and Dickey, A. D. (1998) *Applied Regression Analysis*. New York: Springer.
- Rossman, A. (1996) *Workshop Statistics: Discovery with Data*. New York: Springer Verlag.
- Schoenfeld, D. A. (1982) Partial residuals for the proportional hazards regression model. *Biometrika*, 39, 499–503.
- Spicer, C. C., Laurence, G. J., and Southall, D. P. (1987) Statistical analysis of heart rates and subsequent victims of sudden infant death syndrome. *Statistics in Medicine*, 6, 159–166.

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