Statistical Analysis using SPSS for Trade Unions Training Course

Professional Development Training Course Outline

Category	Trade Unions	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Trade unions today operate in an increasingly data-driven, evidence-based, and digitally transformed labor environment where decisions must be backed by robust statistical insights. The use of IBM SPSS Statistics, a leading tool for social science analytics, labor research, and workforce data modeling, enables trade union leaders, researchers, and analysts to interpret complex membership trends, wage disparities, strike patterns, and labor market dynamics with precision. Statistical Analysis using SPSS for Trade Unions Training Course equips participants with practical skills in descriptive statistics, inferential analysis, regression modeling, and predictive analytics tailored specifically for union operations and labor advocacy.

In an era of AI-driven labor analytics, workforce digitization, and real-time decision intelligence, trade unions must leverage statistical tools to strengthen collective bargaining power and policy influence. This course provides hands-on experience in SPSS for analyzing membership retention, grievance trends, wage negotiations, employment conditions, and occupational safety data. Participants will gain the ability to transform raw labor data into actionable intelligence that supports strategic union leadership, policy advocacy, and socio-economic impact assessment.

Programme Curriculum

Statistical Analysis using SPSS for Trade Unions Training Course

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Course Objectives

1. Understand data-driven labor analytics and workforce intelligence systems
2. Apply IBM SPSS Statistics for trade union research and reporting
3. Conduct descriptive statistical analysis for membership and workforce data
4. Perform inferential statistics for labor market decision-making
5. Use cross-tabulation for union demographics and segmentation analysis
6. Implement regression analysis for wage and employment trend forecasting
7. Analyze strike patterns and industrial action datasets using SPSS
8. Evaluate labor productivity and workforce performance metrics
9. Apply chi-square tests for labor relations hypothesis testing
10. Develop predictive models for membership retention and attrition
11. Interpret data visualization dashboards for union leadership reporting
12. Strengthen evidence-based collective bargaining strategies
13. Enhance policy advocacy using advanced statistical insights and labor intelligence

Target Audience

- Trade union leaders and executive committee members
- Labor economists and industrial relations officers
- HR and workforce planning professionals
- Union researchers and data analysts
- Policy makers in labor ministries and agencies
- NGO workers in labor rights and advocacy
- Academic researchers in labor studies and sociology

Course Modules

Module 1: Introduction to Labor Data Analytics

- Overview of labor data ecosystems
- Role of statistics in trade unions
- Introduction to SPSS interface
- Data types in labor research
- Case Study: Union membership decline analysis

Module 2: SPSS Basics and Data Entry

- Dataset creation and variable definition
- Coding labor variables (wages, hours, strikes)
- Data cleaning techniques
- Importing Excel labor datasets
- Case Study: Factory workforce dataset preparation

Module 3: Descriptive Statistics

- Mean, median, mode interpretation
- Frequency distributions in labor data
- Central tendency in wages
- Variability and dispersion
- Case Study: Wage distribution in textile unions

Module 4: Data Visualization in SPSS

- Bar charts and histograms
- Pie charts for union demographics
- Line graphs for labor trends
- Custom dashboards
- Case Study: Strike frequency visualization

Module 5: Cross Tabulation Analysis

- Gender vs wage analysis
- Department-wise union membership
- Relationship matrices
- Interpretation of contingency tables
- Case Study: Gender wage gap in factories

Module 6: Chi-Square Tests

- Hypothesis formulation
- Observed vs expected values
- Statistical significance testing
- Labor relation assumptions
- Case Study: Job satisfaction vs union membership

Module 7: T-Test Analysis

- Independent samples t-test
- Paired sample comparisons
- Wage comparison across sectors
- SPSS output interpretation
- Case Study: Public vs private sector wages

Module 8: ANOVA in Labor Studies

- One-way ANOVA concepts
- Variance comparison techniques
- Post hoc tests
- Group differences in labor data

- Case Study: Regional wage comparison

Module 9: Correlation Analysis

- Pearson correlation
- Relationship between variables
- Strength of association
- Labor productivity correlation
- Case Study: Training hours vs productivity

Module 10: Regression Analysis

- Linear regression modeling
- Wage prediction models
- Employment trend forecasting
- Model evaluation (R-square)
- Case Study: Predicting union membership growth

Module 11: Time Series Analysis

- Trend analysis in labor markets
- Seasonal employment patterns
- Forecasting strikes
- Moving averages
- Case Study: 10-year employment trend

Module 12: Factor Analysis

- Data reduction techniques
- Identifying labor satisfaction factors
- Rotated component matrices
- SPSS factor extraction
- Case Study: Worker satisfaction index

Module 13: Reliability Testing

- Cronbach’s Alpha interpretation
- Survey validation techniques
- Questionnaire reliability
- Internal consistency checks
- Case Study: Union survey validation

Module 14: Advanced SPSS Modeling

- Multivariate analysis
- Cluster analysis for worker groups
- Discriminant analysis
- Predictive segmentation
- Case Study: Worker risk profiling

Module 15: Reporting and Decision Intelligence

- SPSS output reporting

- Policy brief creation
- Dashboard interpretation
- Data storytelling for unions
- Case Study: National labor report development

Training Methodology

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Online	$2,000

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Physical	$3,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

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