Data Entry and Statistical Analysis Course

Course Overview

Gathering and analyzing information constitute crucial practices in lots of communities, sectors, and organizations. The first step in this process is data collection, which comprises gathering information from various sources. Following that, the obtained data is analyzed, a critical phase in decision-making in which the information is evaluated to find patterns, trends, and useful insights that can influence the decision-making process. This course will cover a number of tools and approaches for effective data input, analysis, and report writing.

Delivery Mode: Face-to-face hands-on training using various industry-specific simulated databases.

Assessment Mode: Practical exercises in each lesson and module.

Course Objectives:

1) Acquire the necessary skills to proficiently gather and analyze data from diverse sources.
2) Develop the ability to evaluate and identify patterns, trends, and valuable insights within collected data.
3) Familiarize oneself with a range of tools and techniques for effective data input, analysis, and report writing.
4) Enhance decision-making capabilities by leveraging data analysis to inform strategic choices and actions.
5) Cultivate the competence to present findings and insights through clear and concise report writing.

Target Audience:

This course on Data Entry and Statistical Analysis is designed for individuals from diverse communities, sectors, and organizations who recognize the significance of gathering and analyzing information for informed decision-making. It is suitable for university students, NGO staff, private businesses, government employees, professionals and aspiring professionals who are involved in data collection, analysis, and report writing processes.

Learning Outcomes:

Upon completion of the training, participants will gain the following skills:

1) Proficiency in designing and implementing data collection forms through computer programs, online platforms, or smartphones to gather data from various sources.
2) Aptitude for conducting thorough analysis to discern patterns, trends, and valuable insights that influence decision-making.
3) Proficient report writing abilities.

Training Software:

Epi data, Epi Info, Excel, Stata, Minitab, SPSS, R-Studio

Fee:

- 500,000/= for all packages.
- 300,000/= for a single package

Modules:

Basic Analysis	Hypothesis testing / Inferential Statistics (Optional)
- Questionnaire design: Participants will learn techniques for designing effective questionnaires to gather relevant and reliable data. - Data entry/capture: The course will provide insights into efficient methods of entering and capturing data accurately and efficiently. - Importing & exporting data from/to other sources and formats: Participants will gain knowledge of how to import and export data between different sources and formats to facilitate data analysis. - Data cleaning to remove errors: The course will teach techniques for identifying and removing errors or inconsistencies in the collected data, ensuring data integrity. - Data transformation: Participants will learn how to transform data into a suitable format for analysis, including data normalization and standardization. - Analysis of categorical data: The course will cover methods for analyzing categorical data, including frequency analysis and cross-tabulation, charts, and custom tables. - Descriptive analysis: Participants will be introduced to descriptive analysis techniques to summarize and present key characteristics of the collected data.	- Hypothesis Testing Basics - Types of Hypotheses (e.g., null hypothesis, alternative hypothesis) - One-Sample t-Test - Two-Sample t-Test - Paired t-Test - Analysis of Variance (ANOVA) - Chi-Square Test – Goodness-of-fit test - Chi-Square Test – Contingency table Analysis - Kruskal-Wallis test - Regression Analysis - Correlation Analysis - Nonparametric Tests (e.g., Wilcoxon signed-rank test, Mann-Whitney U test) - Power and Sample Size Determination - Multiple Comparison Procedures (e.g., Bonferroni correction) - Analysis of Covariance (ANCOVA) - Time Series Analysis - Survival Analysis - Multivariate Analysis