Training Course on Statistical analysis using R

Professional Development Training Course Outline

Category	Research and Data Analysis	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In today's data-driven world, the ability to analyze and interpret data has become a critical skill for businesses and researchers alike. Statistical analysis using R is a powerful way to uncover insights, solve complex problems, and make data-informed decisions. This introductory course is tailored for professionals and students who want to harness the potential of R for statistical analysis and visualization.

R, an open-source programming language, has gained global recognition for its versatility in statistical modeling, data manipulation, and graphical representation. Whether you are new to R or looking to refine your skills, this training program is designed to build your confidence and competence in statistical analysis. By the end of this course, you will be equipped with the tools and knowledge to conduct meaningful analyses and present your findings effectively.

Through a hands-on, practical approach, participants will learn the fundamentals of R programming and how to apply it to real-world datasets. Our expert trainers will guide you step-by-step, ensuring you understand core statistical concepts while mastering R's extensive capabilities. From data cleaning to advanced analytics, this course will transform your approach to data.

Programme Curriculum

Training Course on Statistical analysis using R

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Course Duration

5 Days

Course Objectives

1. Develop a foundational understanding of R programming.
2. Learn essential data manipulation techniques using R.
3. Explore various statistical methods and their applications.
4. Master data visualization tools and techniques in R.
5. Perform hypothesis testing and regression analysis.
6. Implement advanced statistical models, including multivariate analysis.
7. Utilize R for time-series data analysis and forecasting.
8. Gain hands-on experience working with real-world datasets.
9. Enhance problem-solving skills through practical case studies.
10. Equip participants with the skills to present data-driven insights effectively.

Organizational Benefits

1. Improved decision-making through enhanced data analysis capabilities.
2. Empower employees with a versatile and powerful analytical tool.
3. Increased efficiency in handling and interpreting complex data.
4. Strengthened research and development processes.
5. Enhanced capability to identify trends and patterns for strategic planning.
6. Cost-effective solutions using open-source tools.
7. Boosted productivity with streamlined workflows and automation.
8. Better stakeholder communication through effective data visualization.
9. Foster a culture of data-driven decision-making.
10. Gain a competitive edge in the market through informed strategies.

Target Participants

- Data analysts and scientists
- Research professionals
- University students and faculty members
- Business analysts
- Market researchers

- Professionals transitioning into data-centric roles
- Decision-makers seeking to understand data-driven insights
- IT and software development teams working with data
- Statisticians and econometricians
- Enthusiasts keen on exploring R for statistical applications

Course Outline

Module 1: Introduction to R Programming

1. Setting up R and RStudio.
2. Understanding R syntax and data types.
3. Writing and executing basic R scripts.
4. Navigating RStudio's interface.
5. Importing and exporting data.

Module 2: Data Manipulation in R

1. Introduction to data frames, matrices, and lists.
2. Data cleaning and preprocessing techniques.
3. Using dplyr and tidyr for data manipulation.
4. Working with large datasets efficiently.
5. Case study: Cleaning and organizing survey data.

Module 3: Data Visualization

1. Overview of R's visualization packages.
2. Creating basic plots using ggplot2.
3. Customizing charts for better storytelling.
4. Visualizing complex relationships with multi-dimensional graphs.
5. Case study: Visualizing sales data trends.

Module 4: Statistical Analysis Fundamentals

1. Descriptive statistics and exploratory data analysis.
2. Performing t-tests and ANOVA in R.
3. Correlation and chi-square tests.
4. Introduction to regression analysis.

5. Case study: Examining the factors affecting customer satisfaction.

Module 5: Advanced Statistical Models

1. Multivariate analysis techniques.
2. Logistic regression and classification models.
3. Cluster analysis and segmentation.
4. Time-series data analysis and forecasting.
5. Case study: Predicting stock market trends.

Module 6: Reporting and Automation

1. Generating reproducible reports using R Markdown.
2. Automating repetitive tasks with R scripts.
3. Building interactive dashboards with Shiny.
4. Sharing insights with stakeholders.
5. Case study: Creating a dashboard for project performance metrics.

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- 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	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com