Datastat Research
Building Capacity in Training and Research

DATASTAT TRAINING IN

OFFICIAL COURSE PROSPECTUS

Center for Advanced Research & Professional Development

Nairobi Training Center • Global Virtual Academy • Corporate On-Site

ACCOUNTING AND FINANCE

Audit Data Analytics and Intelligent Audit Sampling Training Course

Comprehensive Course Syllabus, Practical Modules & Upcoming Schedules

PROGRAM SPECIFICATIONS & HIGHLIGHTS

DURATION
10 Days Practical Hands-on

DELIVERY MODES
In-Person Class & Live Virtual

CERTIFICATION
Accredited Certificate of Completion

INTAKES / DATES
Multiple Cohort Schedules Included

PREPARED FOR:

Valued Participant

Email: training@datastatresearch.org | Issued: November 24, 2026

Academic & Professional Training Year: 2026

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Audit Data Analytics and Intelligent Audit Sampling Training Course

Accounting and Finance • 10 Days Intensive • Accredited Certification

Course Overview

Audit Data Analytics and Intelligent Audit Sampling Training Course is designed to equip finance professionals, internal auditors, external auditors, and risk management practitioners with advanced competencies in data-driven auditing, intelligent sampling methodologies, and technology-enabled assurance.

Key Skills & Software Tools Covered

MS Word • Microsoft Excel • Thomson Reuters ONESOURCE • and Wolters Kluwer CCH AnswerConnect

Upcoming Training Schedules

Confirmed cohort intakes and venues. Both physical in-person classroom and live virtual online seats are available.

TRAINING DATES	LOCATION / VENUE	FORMAT / DURATION	INVESTMENT (FEE)
7 Dec 2026 – 18 Dec 2026	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
21 Dec 2026 – 1 Jan 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
4 Jan 2027 – 15 Jan 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
18 Jan 2027 – 29 Jan 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
1 Feb 2027 – 12 Feb 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
15 Feb 2027 – 26 Feb 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
1 Mar 2027 – 12 Mar 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
15 Mar 2027 – 26 Mar 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
29 Mar 2027 – 9 Apr 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
12 Apr 2027 – 23 Apr 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
26 Apr 2027 – 7 May 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
10 May 2027 – 21 May 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
24 May 2027 – 4 Jun 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
7 Jun 2027 – 18 Jun 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
21 Jun 2027 – 2 Jul 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
5 Jul 2027 – 16 Jul 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
19 Jul 2027 – 30 Jul 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
2 Aug 2027 – 13 Aug 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
16 Aug 2027 – 27 Aug 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
30 Aug 2027 – 10 Sep 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
13 Sep 2027 – 24 Sep 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
27 Sep 2027 – 8 Oct 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**

11 Oct 2027 – 22 Oct 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
25 Oct 2027 – 5 Nov 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
8 Nov 2027 – 19 Nov 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
22 Nov 2027 – 3 Dec 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**
6 Dec 2027 – 17 Dec 2027	Nairobi	Classroom / 10d	**$3,000 USD / KES 220,000**

* Corporate discounts and customized cohort scheduling are available for teams of 3 or more participants.

Course Curriculum & Modules

Audit Data Analytics and Intelligent Audit Sampling Training Course

Introduction

Audit Data Analytics and Intelligent Audit Sampling Training Course is designed to equip finance professionals, internal auditors, external auditors, and risk management practitioners with advanced competencies in data-driven auditing, intelligent sampling methodologies, and technology-enabled assurance. As organisations increasingly adopt digital transformation, artificial intelligence, big data analytics, and automated financial systems, traditional auditing approaches are evolving towards continuous auditing, predictive analytics, and evidence-based decision-making. This course explores modern audit analytics frameworks, statistical sampling techniques, automated audit procedures, anomaly detection, data visualisation, and risk-based audit methodologies to strengthen audit quality, accuracy, transparency, and operational efficiency.

Participants will gain practical knowledge of applying advanced analytics tools to large datasets, identifying financial irregularities, detecting fraudulent transactions, and evaluating internal controls through intelligent audit sampling. The programme incorporates international auditing standards, real-world case studies, machine learning applications, and technology-driven audit practices to improve audit coverage and reduce sampling risks. Through practical exercises and global business scenarios, participants will develop the ability to transform complex financial and operational data into actionable audit insights, enhance fraud detection capabilities, optimise audit resources, and support strategic organisational governance.

Course Objectives

By the end of this course, participants will be able to:

- Apply advanced audit data analytics techniques to modern auditing processes.
- Understand intelligent audit sampling methodologies and statistical principles.
- Develop risk-based audit sampling strategies using data-driven insights.
- Apply artificial intelligence and machine learning in audit procedures.
- Identify anomalies, fraudulent transactions, and financial irregularities.
- Utilise predictive analytics for proactive risk identification.
- Perform automated testing of financial and operational transactions.
- Evaluate sampling risks and improve audit reliability.
- Apply data visualisation techniques to communicate audit findings.
- Implement continuous auditing and real-time monitoring frameworks.
- Analyse large datasets using modern audit analytics software.
- Strengthen internal controls through technology-enabled assurance.
- Develop evidence-based audit recommendations aligned with international standards.

Organisational Benefits

- Improved audit accuracy through advanced analytics and intelligent sampling.
- Reduced audit costs and improved resource utilisation.
- Enhanced fraud detection and prevention capabilities.
- Stronger internal control systems and risk management.
- Increased audit coverage across large transaction populations.
- Faster identification of financial irregularities and anomalies.
- Improved regulatory compliance and audit transparency.
- More reliable financial reporting and assurance outcomes.
- Strengthened corporate governance and accountability.

- Better strategic decisions through actionable audit insights.

Target Audiences

- Internal and external auditors.
- Chief audit executives and audit managers.
- Accountants and financial controllers.
- Risk management professionals.
- Forensic auditors and fraud investigators.
- Compliance and governance officers.
- Data analysts and business intelligence professionals.
- Finance directors and senior management professionals.

Course Duration: 10 days

Course Modules

Module 1: Fundamentals of Audit Data Analytics

- Principles and evolution of data-driven auditing.
- Types of audit analytics and their applications.
- Audit data collection and preparation.
- Data quality, integrity, and validation.
- Global case study: Digital auditing transformation at Deloitte.
- Integrating analytics into traditional audit workflows.

Module 2: Audit Data Management and Integration

- Financial and operational data sources.
- Data extraction, transformation, and loading.
- Database integration and audit data repositories.
- Data cleansing and reconciliation techniques.
- Global case study: Walmart's large-scale transaction analytics.
- Managing data security and audit trails.

Module 3: Intelligent Audit Sampling Principles

- Statistical and non-statistical sampling methods.
- Population definition and sampling units.
- Sample selection and representativeness.
- Sample size determination techniques.
- Global case study: Risk-based sampling in international banking audits.
- Evaluating sampling reliability and effectiveness.

Module 4: Risk-Based Audit Sampling Strategies

- Identifying high-risk transaction populations.
- Materiality and audit risk assessment.
- Stratified and monetary-unit sampling.
- Targeted sampling for high-value transactions.
- Global case study: Financial risk assessment in multinational corporations.
- Developing risk-based sampling plans.

Module 5: Advanced Statistical Sampling Techniques

- Probability and confidence interval analysis.
- Attribute and variable sampling.
- Expected error and tolerable misstatement.
- Sampling deviation and evaluation.
- Global case study: Statistical sampling in financial statement audits.
- Reducing sampling and non-sampling risks.

Module 6: Audit Data Extraction and Analysis

- Extracting data from enterprise systems.
- Analysing general ledger transactions.
- Identifying duplicate and unusual entries.
- Reconciliation and exception reporting.
- Global case study: Transaction analysis in multinational retail operations.
- Automating audit data processing.

Module 7: Artificial Intelligence and Machine Learning in Auditing

- Applications of artificial intelligence in auditing.
- Machine learning algorithms for anomaly detection.
- Predictive modelling and risk scoring.
- Intelligent automation of audit procedures.
- Global case study: AI-powered financial crime detection in banking.
- Ethical considerations in automated auditing.

Module 8: Fraud Detection and Anomaly Analytics

- Identifying suspicious financial transactions.
- Benford's Law and unusual number patterns.
- Duplicate payments and fictitious vendors.
- Detecting procurement and payroll fraud.
- Global case study: Wirecard financial fraud investigation.
- Developing data-driven fraud indicators.

Module 9: Audit Data Visualisation and Reporting

- Principles of effective audit dashboards.
- Visualising financial and operational risks.
- Developing interactive audit reports.
- Communicating exceptions and analytical findings.
- Global case study: Business intelligence dashboards in global banking.
- Presenting actionable audit recommendations.

Module 10: Continuous Auditing and Real-Time Monitoring

- Continuous auditing frameworks.
- Real-time transaction monitoring.
- Automated control testing.
- Exception alerts and escalation procedures.
- Global case study: Continuous monitoring in international financial institutions.
- Measuring continuous auditing effectiveness.

Module 11: Audit Analytics Software and Technologies

- Using Python and R for audit analytics.
- Applying Microsoft Excel and Power BI.
- Introduction to ACL Analytics and IDEA.
- SQL-based audit data interrogation.
- Global case study: Technology-enabled auditing at major accounting firms.
- Selecting appropriate audit analytics platforms.

Module 12: Internal Controls Testing Through Analytics

- Data-driven internal control evaluation.
- Automated control effectiveness testing.
- Identifying control weaknesses and deficiencies.
- Testing segregation of duties.
- Global case study: Internal control failures at Enron.

- Developing analytics-based control improvements.

Module 13: Audit Evidence and Documentation

- Evaluating digital audit evidence.
- Data reliability and source verification.
- Audit documentation and reproducibility.
- Maintaining electronic audit trails.
- Global case study: Digital evidence management in multinational audits.
- Applying international auditing standards.

Module 14: Advanced Audit Sampling Optimisation

- Optimising sample sizes using risk analytics.
- Adaptive and dynamic sampling techniques.
- Combining statistical and intelligent sampling.
- Evaluating sampling efficiency and coverage.
- Global case study: Risk-based sampling in large-scale public sector audits.
- Developing automated sampling frameworks.

Module 15: Integrated Audit Analytics and Practical Applications

- Designing end-to-end audit analytics procedures.
- Integrating sampling with fraud detection.
- Developing comprehensive audit analytics strategies.
- Evaluating analytical findings and reporting outcomes.
- Global case study: Data-driven audit transformation in global financial services.
- Practical simulation of an intelligent audit engagement.

Training Methodology

- Interactive presentations and expert-led technical discussions.
- Practical demonstrations using audit analytics software.
- Hands-on statistical sampling and data analysis exercises.
- International case studies and real-world audit simulations.
- Group discussions and collaborative problem-solving.
- Practical fraud detection and anomaly identification exercises.
- Individual assignments and scenario-based assessments.
- Knowledge assessments, feedback, and experience-sharing sessions.

Register as a group from 3 participants for a Discount

Send us an email: info@datastatresearch.org or call +254724527104

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 DATASTAT CONSULTANCY LTD account, as indicated in the invoice so as to enable us prepare better for you.

Certification & Learning Methodology

- Hands-on practical delivery with real-world datasets, case studies, and lab exercises.
- Post-training mentorship, access to class resources, and customized follow-up support.
- Participants who successfully complete the course receive an accredited Datastat Certificate of Completion.

How to Enroll & Reserve Your Seat

1. Online Registration: Visit https://datastatresearch.org/courses/audit-data-analytics-and-intelligent-audit-sampling-training-course to register online.
2. Email Booking: Send participant details to training@datastatresearch.org for official invoice & reservation.
3. Support & Assistance: Inquire via phone +254 724 527 104 | +254 734 969 612.