

Data Analytics using Caseware IDEA & CAAT Tools – 8 Days Training Program (TOC)

Day 1 – Foundations of Data Analytics & CAAT Tools

Module 1: Introduction to Data Analytics in Auditing

- Role of data analytics in audits & investigations
- Benefits & limitations of CAATs
- Types of audit tests (substantive, compliance, fraud detection)

Module 2: Overview of Caseware IDEA & CAAT Tools

- Features of Caseware IDEA software
- CAAT tools overview (ACL, Excel-based tools, AI-driven analytics)
- Caseware IDEA interface walkthrough

Activity: Setting up Caseware IDEA & loading sample datasets

Day 2 – Data Management & Preparation in IDEA

Module 3: Importing & Managing Data

- Importing data from Excel, CSV, ERP, databases
- Understanding metadata & data validation
- File management in IDEA

Module 4: Data Cleansing & Transformation

- Identifying data inconsistencies & missing values
- Using IDEA functions to clean & transform data
- Creating virtual fields & restructured tables

Case Study: Preparing sales data for audit analysis



Day 3 – Audit Analytics Basics

Module 5: Exploratory Data Analysis in IDEA

- Summarization, stratification, gap detection
- Identifying duplicates, missing entries
- Benford's Law analysis for fraud detection

Module 6: Sampling & Audit Testing

- Random sampling vs monetary unit sampling
- Extracting samples in IDEA
- Linking sampling results with audit objectives

Case Study: Sampling vendor payments for testing compliance

Day 4 – Advanced Functions in IDEA

Module 7: Data Mining & Pattern Recognition

- Joins & relations in datasets
- Comparing multi-year data
- Trend analysis & exception reporting

Module 8: Advanced Audit Analytics in IDEA

- Aging analysis
- Ratio analysis using IDEA
- Identifying unusual transactions & fraud red flags

Case Study: Analyzing payroll records for ghost employees

Day 5 – CAAT Tools Beyond IDEA

Module 9: Excel & Power Query as CAAT Tools

- Using Excel functions (VLOOKUP, Pivot, Conditional Formatting) for audit tests
- Power Query for data transformation
- Linking IDEA with Excel outputs

Module 10: ACL (Audit Command Language) Overview

- Comparison: IDEA vs ACL
- Key ACL functions for audit analytics
- Integration of ACL & IDEA in audit workflows

Activity: Fraud risk test with Excel + IDEA combined approach

Day 6 – Fraud Detection & Forensic Analytics

Module 11: Fraud Analytics with CAATs

- Detecting round-dollar transactions, split payments, duplicate vendors
- Suspicious trends in procurement & sales data
- Identifying override of internal controls

Module 12: Forensic Auditing with IDEA

- Linking IDEA to forensic investigations
- Digital evidence handling
- Visualization of fraud findings

Case Study: Procurement fraud – detecting bid rigging using IDEA



Day 7 – Automation & AI-Enabled Analytics

Module 13: Automating Audit Tests in IDEA

- Macros & scripting in IDEA
- Scheduling routine audit tasks
- Using IDEA SmartAnalyzer templates

Module 14: AI, Machine Learning & Emerging CAAT Tools

- AI-assisted anomaly detection
- Integration with R / Python for advanced analytics
- Cloud-based audit analytics platforms

Activity: Automating a fraud detection test in IDEA

Day 8 – Capstone Projects & Best Practices

Module 15: End-to-End Audit Analytics Workflow

- Planning data analytics in audit engagements
- Documentation & working papers in IDEA
- Communicating results to stakeholders

Module 16: Capstone Case Studies

- Banking sector: Loan account testing
- Retail sector: Sales & inventory fraud detection
- Government audit: Grants & subsidies analysis

Group Activity:

- Participants perform a live project using IDEA on a given dataset
- Present findings, analytics, and recommendations