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COURSE BROCHURE

Advanced AI for Internal Audit and Assurance Training Course

7 – 18 December 2026
Amsterdam

Advanced AI for Internal Audit and Assurance Training Course

Ref: 10_270 **Date:** 7 – 18 December 2026 **Location:** Amsterdam **Fees:** 11100 GBP

Advanced AI for Internal Audit and Assurance is a 2-week training course for chief audit executives, internal auditors and risk and assurance professionals, and it ends with an AI-enabled audit methodology each participant takes back to the audit function. Transaction volumes, automated controls and algorithmic decisions have outgrown sample-based testing, so audit committees now expect wider coverage and faster insight. Jupiter Prime Training runs this course on AI for internal audit and assurance.

Why AI for Internal Audit and Assurance Matters Now

Three forces shape AI in internal audit today: audit committees asking for continuous assurance instead of annual snapshots, management deploying algorithms whose decisions must themselves be audited, and fraud schemes that hide in volumes no sample can catch. A hospital group that tests every payroll and procurement record finds duplicate payments early; a lender that never audits its credit models may discover bias only after a complaint. The course rests on the IIA Global Internal Audit Standards, the COSO Internal Control Integrated Framework, the Three Lines Model, ISO/IEC 42001 for AI management systems and the NIST AI Risk Management Framework AI RMF.

Who Gains Most from AI for Internal Audit and Assurance

- Those who lead the audit function and report assurance results to the audit committee
- Those who plan risk-based audit programmes and allocate audit resources
- Those who run audit analytics, data extraction and continuous monitoring routines
- Those who investigate fraud, misconduct and control failures
- Those who give assurance over IT, data and algorithmic systems

Audit departments gain most when an audit leader, a data analytics specialist and an IT auditor attend together and redesign one audit approach around shared data.

AI for Internal Audit and Assurance Capabilities

Audit leaders and senior auditors leave able to move from sampling and hindsight towards full-population testing and forward-looking assurance:

- Design continuous auditing and monitoring routines over high-risk processes — for audit committee assurance
- Apply full-population analytics and anomaly detection to transactions — for fraud and error findings
- Build process mining views that reveal control bypasses and rework — for process owners and management
- Specify audit programmes for AI models covering data, bias, explainability and drift — for model owners and risk committees
- Assess AI-related risks and controls against ISO/IEC 42001 and the NIST AI RMF — for second-line risk functions
- Communicate AI-assisted findings with clear evidence trails — for audit committees and external auditors

Key AI for Internal Audit and Assurance Terms

- Continuous auditing — automated, frequent testing of controls and transactions that gives near real-time assurance instead of periodic reviews.
- Full-population testing — examining every transaction in a data set rather than a sample, using analytics to flag exceptions.
- Process mining — reconstructing actual process flows from system event logs to show deviations, delays and control bypasses.
- Model risk — the risk of loss or harm from a model that is wrongly designed, poorly fed or misused.
- Three Lines Model — a framework defining roles of management, risk and compliance functions and internal audit in governance.
- Audit trail — a traceable record showing how evidence was obtained, analysed and linked to each finding.

AI for Internal Audit and Assurance Day by Day

Day 1: The Changing Assurance Landscape

- IIA Global Internal Audit Standards — Expectations for Technology Use
- Three Lines Model — Audit Role Alongside Risk Functions
- Audit Committee Expectations — Coverage, Speed and Insight
- AI Techniques for Auditors — Machine Learning, Language Models and Automation
- Audit Function Maturity Review — Data, Tools and Skills Baseline

Day 2: Data Foundations for Audit Analytics

- Audit Data Extraction — ERP Tables, Logs and Access Rights
- Data Quality Testing — Completeness and Accuracy Before Analysis
- Data Lineage for Evidence — Reproducible Audit Work Papers
- Analytics Platforms for Auditors — Scripted and No-Code Options
- Confidentiality Safeguards — Handling Sensitive Audit Data

Day 3: Full-Population Testing and Anomaly Detection

- Rule-Based Exception Tests — Duplicates, Gaps and Threshold Breaches
- Benford's Law Analysis — Spotting Manipulated Figures
- Unsupervised Anomaly Detection — Outliers in Payments and Journals
- Fraud Risk Scoring Models — Prioritising Investigations
- False Positive Management — Tuning Alerts for Audit Efficiency

Day 4: Continuous Auditing and Monitoring

- Continuous Auditing Design — Scope, Frequency and Triggers
- Key Risk Indicator Monitoring — Thresholds and Escalation Paths
- COSO Control Testing Automation — Segregation of Duties and Access Reviews
- Management Self-Monitoring Hand-Off — Line Ownership of Routines
- Assurance Dashboards — Real-Time Status for Audit Committees

Day 5: Process Mining for Audit

- Event Log Preparation — Case IDs, Activities and Timestamps
- Process Discovery Maps — Actual Versus Designed Flows
- Conformance Checking — Detecting Control Bypasses and Rework
- Procure-to-Pay and Order-to-Cash Analysis — Common Audit Findings
- Root Cause Evidence — Linking Deviations to Control Weaknesses

Day 6: Generative AI in Audit Planning and Reporting

- Risk Assessment Support — Summarising Policies, Minutes and Incidents
- Audit Programme Drafting — Test Steps From Risk and Control Matrices
- Interview and Walkthrough Notes — Structured Capture and Summaries
- Report Writing Assistance — Findings, Root Causes and Recommendations
- Generative AI Usage Rules — Accuracy Checks and Confidentiality Limits

Day 7: Auditing AI Systems and Models

- AI System Inventory — Identifying Models in Scope
- Training Data Review — Representativeness, Quality and Consent
- Bias and Fairness Testing — Comparing Outcomes Across Groups
- Explainability Assessment — Can Decisions Be Justified to Customers
- Model Drift and Performance Monitoring — Reviewing Ongoing Validation

Day 8: AI Risk, Controls and Accountability

- ISO/IEC 42001 Requirements — Policies, Roles and Impact Assessments
- NIST AI RMF Functions — Govern, Map, Measure and Manage
- AI Control Matrices — Design and Operating Effectiveness Tests
- Third-Party AI Assurance — Vendor Models and Contract Clauses
- AI Incident Review — Lessons From Model Failures

Day 9: Quality, Ethics and Skills in an AI-Enabled Audit Function

- Quality Assurance and Improvement Programme — Reviewing AI-Assisted Work
- Professional Scepticism With Algorithms — Challenging Machine Outputs
- Auditor Independence and Objectivity — When Audit Builds Monitoring Tools
- Audit Skills Matrix — Analytics, Data and Technology Competencies
- Sourcing Models — In-House, Co-Source and Specialist Partners

Day 10: Building the AI-Enabled Audit Methodology

- Audit Universe Refresh — Applying Day One Expectations to Coverage
- Analytics Library — Applying Day Three and Five Tests to Core Processes
- Continuous Assurance Plan — Applying Day Four Routines to Priority Risks
- AI Assurance Programme — Applying Day Seven and Eight Audit Steps
- Methodology Assembly — Standards, Tools, Roles and Reporting Cycle

Applying AI for Internal Audit and Assurance After the Course

- Run a full-population duplicate payment and Benford's Law test on the last year's vendor payments and report exceptions to the finance director.
- Draft an audit programme for one deployed AI model covering training data, bias testing, explainability and drift monitoring.

AI for Internal Audit and Assurance Questions FAQ

What is AI for internal audit and assurance, and why does it matter now?

AI for internal audit and assurance is the use of analytics, machine learning and generative tools to test controls and transactions, and the audit of AI systems themselves. It matters now because audit committees expect wider coverage and algorithms increasingly drive business decisions.

Which roles gain most from advanced AI for internal audit and assurance training?

Chief audit executives, audit managers, analytics specialists, fraud investigators and IT auditors gain most from advanced AI for internal audit and assurance training. They plan coverage, run tests and report assurance to the audit committee.

How is an AI for internal audit course different from a general audit data analytics course?

An AI for internal audit course adds machine learning, process mining, generative AI and the audit of AI models to analytics work. A general audit data analytics course focuses on extracting data and running standard tests without AI assurance or model risk coverage.

What do participants bring back from AI for internal audit and assurance training?

Participants bring back an analytics test library, continuous auditing routines, a process mining approach, an AI model audit programme and a refreshed audit universe. You can use them straight away in the next audit plan.

AI for Internal Audit and Assurance: The Way Forward

The AI-enabled audit methodology sets out standards, analytics routines, AI assurance steps, roles and reporting cycles for the audit function. The first decision it informs is which high-risk process moves to continuous auditing first. Audit leaders, analytics specialists and IT auditors use it together, and the alert thresholds are worth revisiting after the first quarter of monitoring results.