
AI-Enabled Internal Audit: Analytics, Automation and Auditing AI Systems Training Course

21 – 25 December 2026
Cape town





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Programme Summary

AI-enabled internal audit is a five-day training course for chief audit executives and audit directors at strategic level, culminating in an AI adoption and assurance roadmap for their own audit function. Boards expect wider risk coverage from the same resources, while the organisation deploys AI models few auditors have reviewed. The approach addresses both sides: using analytics, automation and generative AI in audit work, and giving independent assurance over AI systems. Mars Training Centre UK delivers this programme in AI-enabled internal audit.

The Business Case

Sample-based testing leaves most transactions unexamined, and manual planning lags fast-moving risks. At the same time, AI systems that price, approve, screen and forecast create new exposures that management may not fully see. An audit function that uses AI responsibly and can audit it credibly widens coverage and raises earlier warnings.

- Audit Coverage and Cycle Time: Improve as full-population analytics and automation replace manual sampling and repetitive testing.
- Early Detection of Control Failures: Strengthens as continuous monitoring and anomaly detection flag exceptions between audits.
- Assurance Over AI Risk: Grows as models, data and AI governance are brought into the risk-based audit plan.

Principles and Evidence Base

- Global Internal Audit Standards: Set the expectations for planning, performing and communicating audit work that AI tools must support in Sessions 1 and 3.
- IIA Artificial Intelligence Auditing Framework: Structures the review of AI governance, management and controls in Session 4.
- ISO/IEC 42001:2023 Artificial Intelligence Management System: Provides the management-system benchmark used to assess an organisation's AI controls in Session 4.

Intended Participants

- Leaders accountable for the strategy, methodology and resourcing of an internal audit function.
- Directors who report audit results and emerging risks to audit committees and boards.
- Senior assurance managers responsible for data analytics, technology audit or quality assurance.
- Heads of risk who coordinate assurance over automated decisions.



The programme serves banks and insurers, government entities, energy and industrial companies, and telecommunications providers.

Learning Outcomes

1. Participants will be able to evaluate the readiness of their audit function for AI against the Global Internal Audit Standards.
2. Participants will be able to construct an AI-assisted risk assessment that feeds the annual audit plan.
3. Participants will be able to design continuous auditing routines that use anomaly detection on full data populations.
4. Participants will be able to justify controls over the use of generative AI in audit fieldwork and reporting.
5. Participants will be able to diagnose governance, data and model risks in an organisation's AI systems.
6. Participants will be able to prioritise AI investments, skills and assurance activities in a multi-year roadmap.

Programme Structure

Day 1: Foundations of AI-Enabled Internal Audit

What can AI change in internal audit, and how ready is the function?

- AI, Machine Learning and Generative AI Concepts for Auditors
- Global Internal Audit Standards Expectations for Technology Use
- Audit Function Data and Analytics Maturity Assessment
- AI Use Cases Across the Audit Lifecycle
- Ethics, Independence and Professional Scepticism With AI

Day 2: AI-Assisted Risk Assessment and Audit Planning

How can data and AI sharpen where audit effort is directed?

- Data Sourcing, Access and Quality for Audit Analytics
- Risk Scoring Models for the Audit Universe
- Text Analytics of Policies, Minutes and Incident Logs
- Dynamic Audit Planning and Resource Allocation
- Audit Committee Reporting on Risk Coverage

Day 3: Continuous Auditing, Anomaly Detection and Generative AI

How are analytics and generative tools used safely in fieldwork and reporting?



- Continuous Auditing and Continuous Monitoring Design
- Anomaly Detection and Full-Population Testing
- Process Mining for Control Walkthroughs
- Generative AI for Work Papers, Summaries and Reports
- Validation, Documentation and Evidence Standards for AI Outputs

Day 4: Auditing the Organisation's AI Systems

How does internal audit give assurance over models the organisation relies on?

- IIA AI Auditing Framework Components
- AI Governance, Inventory and Accountability Review
- Model Risk, Bias, Explainability and Drift Testing
- Data Lineage, Privacy and Third-Party AI Controls
- ISO/IEC 42001 Controls as an Assurance Benchmark

Day 5: Applying AI-Enabled Internal Audit

How are tools, skills and assurance plans combined into one roadmap?

- Readiness Review of a Participant Audit Function
- Use-Case and Investment Prioritisation
- Audit Team Skills and Sourcing Plan
- Peer Challenge of AI Audit Roadmaps
- AI Adoption and Assurance Roadmap Presentation

Methodology

The programme combines case analysis with short data exercises. Participants examine how audit functions in banking, government and industry have applied analytics and audited AI models and run anomaly tests on sample datasets before applying each method to their own function.

- Suggested activity: Building a risk-scored audit universe from sample entity data.
- Suggested activity: Running anomaly tests on a full payments population.
- Suggested activity: Scoping an audit of a credit-scoring or recruitment screening model.

Capstone Output

Each participant completes an AI adoption and assurance roadmap for their audit function. It sets out readiness gaps, prioritised use cases, data and tool requirements, generative AI usage rules, a plan for auditing the organisation's AI systems and the skills to build, ready to present to the audit committee.



Frequently Asked Questions

Is AI-enabled internal audit suitable for audit leaders without data science skills?

Yes. It suits chief audit executives, audit directors and senior managers. It assumes audit leadership experience but no programming or statistical modelling background.

Which standards underpin AI-enabled internal audit?

It draws on the Global Internal Audit Standards, the IIA Artificial Intelligence Auditing Framework and ISO/IEC 42001:2023 for AI management systems.

How is the AI-enabled internal audit roadmap used at work?

You take back a roadmap the audit committee can approve, setting priorities for tools, skills and AI assurance over the coming audit cycles.

How does AI-enabled internal audit differ from general audit data analytics programmes?

It adds generative AI in audit work and assurance over the organisation's own AI systems, which general data analytics programmes do not cover.