
AI-Enabled Learning and Competence Assurance for Workforce Leaders Training Course

28 December 2026 – 1 January 2027
Cape town





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Programme Summary

AI-enabled learning and competence assurance is the subject of this five-day training course for workforce, learning and operations leaders at advanced level, culminating in an AI learning and competence plan for one critical workforce group. In operational roles, a gap between recorded training and real competence is a safety and performance risk. The approach moves from competence evidence and human performance, through adaptive learning and AI assessment, to governance and evaluation. Mars Training Centre UK delivers this programme in AI-enabled learning.

The Business Case

Many organisations can prove that staff attended training but cannot prove they are competent. AI can personalise learning and simulate rare events, yet poorly governed tools add bias and false assurance. Leaders who connect these tools to a defensible competence system shorten the path to proficiency and direct training budgets to the gaps that matter.

- Time to Competence: Shortens as adaptive learning paths and simulation replace generic courses.
- Human Error in Critical Tasks: Falls as competence gaps are detected before an incident.
- Training Spend Effectiveness: Improves as learning analytics show which interventions change behaviour.

Principles and Evidence Base

- ISO 10015: Its guidelines for competence management and people development structure the competence cycle reviewed in Session 1.
- ISO 30422: Its learning and development process frames the design of AI-supported learning in Session 2.
- ISO/IEC 42001: Its requirements shape the governance of AI learning decisions in Session 4.
- Kirkpatrick Evaluation Model: Its four levels structure the measurement of learning transfer in Session 4.

Intended Participants

- Leaders accountable for workforce capability and competence assurance in operational or regulated roles.
- Heads of learning deciding which AI learning technologies to adopt and fund.
- Operations leaders who rely on competent crews for safe and reliable performance.
- Senior HR leaders responsible for skills strategy and workforce data.



The programme serves learning, technical training, operations and HR functions in energy, utilities, healthcare, aviation and manufacturing.

Learning Outcomes

1. Participants will be able to diagnose gaps between recorded training and demonstrated competence in a workforce group.
2. Participants will be able to evaluate adaptive learning, AI tutors and simulation against defined learning needs.
3. Participants will be able to design competence assessments that combine AI-generated and human evidence.
4. Participants will be able to apply human factors principles to the design of training for critical tasks.
5. Participants will be able to construct governance controls for AI used in learning and assessment decisions.
6. Participants will be able to justify an AI learning and competence plan with transfer measures to a sponsor.

Programme Structure

Day 1: Competence, Human Performance and AI

Where does the gap between training records and real competence create risk?

- ISO 10015 Competence Management and Development Cycle
- Competency Frameworks for Critical and Technical Roles
- Human Factors and Error Types in Operational Tasks
- Training Record Versus Competence Evidence Audit
- AI Opportunity Map Across the Learning Value Chain

Day 2: Designing AI-Enabled Learning

Which AI learning methods suit which needs, and how are they designed in?

- ISO 30422 Learning Needs Analysis and Design Process
- Adaptive Learning Paths and Personalisation Rules
- AI Tutors and Generative Content: Quality and Accuracy Checks
- Simulation and Virtual Scenarios for Rare and Hazardous Events
- Learning Technology Selection Criteria and Integration

Day 3: AI in Competence Assessment and Skills Inference

How can AI strengthen, not weaken, the evidence that a person is competent?



- Assessment Evidence Types: Observation, Simulation and Work Data
- Skills Inference From Work Records and Performance Data
- Validity, Reliability and Bias in AI-Scored Assessments
- Assessor Roles and Human Sign-Off Points
- Competence Dashboards and Reassessment Triggers

Day 4: Governance and Measuring Transfer

How are AI learning decisions controlled, and how is impact on the job proven?

- ISO/IEC 42001 Controls for AI in Learning and Assessment
- Learner Data Privacy, Consent and Transparency
- Kirkpatrick Levels Applied to AI-Enabled Programmes
- Learning Analytics for Behaviour and Performance Change
- Vendor Due Diligence for Learning AI Platforms

Day 5: Applying AI-Enabled Learning and Competence Assurance

Is the plan ready for sponsor approval and a first deployment?

- Prioritising Day 1 Competence Gaps for Intervention
- Matching Day 2 Learning Methods to Priority Gaps
- Embedding Day 3 Assessment Design in the Competence System
- Change and Adoption Plan for Learners, Assessors and Line Managers
- Completing the AI Learning and Competence Plan

Methodology

The programme combines case analysis with structured exercises. Participants audit competence evidence for a real role, test AI tutors and simulation against learning needs, and draft assessment rules. Cases come from energy operations, clinical teams and aircraft maintenance.

- Suggested activity: Comparing training records with competence evidence for one critical role.
- Suggested activity: Reviewing AI-generated training content for accuracy and bias.
- Suggested activity: Setting human sign-off points in an AI-supported assessment.

Capstone Output

Each participant completes an AI learning and competence plan for one workforce group. It contains a competence gap analysis, selected learning methods, an assessment design, governance controls and a transfer measurement plan. It is presented to the sponsor as the basis for a first deployment.



Frequently Asked Questions

Is AI-enabled learning and competence assurance training suitable for senior leaders?

Yes. It is set at advanced level for leaders who own workforce capability and assumes no technical AI background.

Which standards does the AI-enabled learning programme rest on?

It rests on ISO 10015, ISO 30422, ISO/IEC 42001 and the Kirkpatrick evaluation model.

How is the plan from AI-enabled learning and competence assurance training used at work?

You can use it to secure funding for a first deployment and agree assessment and governance rules with operations and HR.

How does AI-enabled learning differ from a general HR analytics programme?

It focuses on learning design and competence evidence in critical roles, while HR analytics programmes address wider people decisions.