Scandinavian Academy

for Training and Development AB

Course: Executive Advanced AI Powered Risk Analysis, Classification and Treatment Strategies

Code	City	Hotel	Start	End	Price	Language - Hours
DAI-935	Manama (Bahrain)	Hotel Meeting Room	2027-01-03	2027-01-14	5450 €	En - 50

Course Introduction

In today's volatile, uncertain, complex, and ambiguous (VUCA) environment, traditional risk management models no longer provide sufficient predictive accuracy or strategic resilience. Organizations must transition from static risk registers toward intelligent, adaptive, AI-enabled risk ecosystems.

This advanced executive program equips participants with cutting-edge methodologies for risk identification, classification, prediction, treatment optimization, and governance using Artificial Intelligence (AI), Machine Learning (ML), predictive analytics, digital twins, and intelligent automation frameworks.

The course integrates leading international standards and frameworks including ISO 31000, ISO 23894 (AI Risk Management), COSO ERM, Basel risk frameworks, NIST AI RMF, and the EU AI Act, while providing practical exposure to enterprise-level AI risk modeling tools and governance structures.

Course Objective

To enable participants to design, implement, and manage AI-driven enterprise risk management frameworks that enhance predictive intelligence, strategic decision-making, operational resilience, regulatory compliance, and long-term risk optimization across complex business environments.

Learning Objectives

- Design AI-powered risk identification and classification architectures
- Apply machine learning models for predictive risk forecasting
- Develop intelligent risk heatmaps and early-warning systems
- Build AI-driven risk response optimization engines
- Implement scenario modeling and digital twin simulations
- Integrate AI across financial, cyber, ESG, compliance, and operational risks
- Establish AI risk governance and regulatory alignment frameworks
- Evaluate model robustness, bias, fairness, and explainability
- Design executive dashboards for AI-supported risk leadership
- Develop a comprehensive enterprise AI risk transformation roadmap

Target Audience

- Chief Risk Officers and Risk Directors
- Enterprise Risk & Compliance Leaders
- Strategy, Governance & Internal Audit Executives
- Financial, Credit & Market Risk Specialists
- Cybersecurity & Technology Risk Leaders
- Data Scientists in Risk & Governance Functions
- Regulators, Policy Analysts & Senior Consultants

Course Outline

Strategic Risk Intelligence & AI Foundations

Module 1: The Evolution of Risk in the Age of AI

- Risk landscape transformation in digital economies
- Predictive vs. reactive risk paradigms
- AI-driven risk intelligence ecosystems

- Strategic risk complexity modeling in hyperconnected systems
- Board-level AI risk intelligence architecture

Module 2: Advanced Risk Taxonomies & Classification Architectures

- Dynamic risk ontologies
- Multi-layer risk classification models
- Risk interdependency and systemic mapping
- Knowledge graph-based risk ontology engineering
- Cross-domain risk aggregation architectures

Module 3: AI & Machine Learning for Risk Analytics

- Supervised, unsupervised & reinforcement learning
- NLP for risk signal extraction
- Graph analytics for risk propagation
- Deep learning for high-dimensional risk data
- Hybrid AI models in enterprise risk systems
- workshop : Designing AI-enabled risk classification framework
- workshop : Building dynamic taxonomies using clustering models

Predictive Risk Modeling & Early-Warning Systems

Module 4: Risk Prediction Engines

- Predictive scoring & probability-impact forecasting
- Time-series forecasting & anomaly detection
- Behavioral risk pattern recognition
- Ensemble modeling & model stacking
- Causal inference & counterfactual modeling

Module 5: AI-Driven Risk Heatmaps & Dashboards

- Real-time risk visualization
- Adaptive heatmaps

- Executive risk cockpit design
- Risk streaming architectures
- AI-based threshold calibration

Module 6: Early-Warning & Signal Detection Systems

- Weak signal detection
- Horizon scanning analytics
- Alternative & unstructured data integration
- AI-triggered escalation frameworks
- Automated early-warning protocols
- workshop : Building predictive risk pipelines
- workshop : Developing automated alert systems

Risk Treatment Optimization & Intelligent Response Systems

Module 7: AI-Based Risk Response Strategy Design

- Avoidance, reduction, transfer & exploitation strategies
- AI-driven cost-benefit optimization
- Multi-objective response optimization
- Dynamic risk appetite calibration
- Strategic response alignment with corporate objectives

Module 8: Prescriptive Analytics & Automated Decision Engines

- Optimization algorithms
- Reinforcement learning agents
- Decision tree automation
- Simulation-based cost-impact modeling
- Real-time automated decision frameworks

Module 9: Scenario Modeling, Stress Testing & Digital Twins

- AI-powered stress testing

- Digital twins for systemic simulation
- Monte Carlo AI-enhanced simulations
- Systemic contagion modeling
- Forward-looking macro-risk planning
- workshop : Designing AI-optimized response playbooks
- workshop : Running digital twin simulations

Specialized Risk Domains & Intelligent Controls

Module 10: Financial, Credit, Market & Liquidity Risk AI

- AI credit scoring models
- Fraud detection analytics
- Market volatility forecasting
- AI-based Value-at-Risk & Expected Shortfall
- Explainable credit decision validation

Module 11: Cyber, Technology & Operational Risk Intelligence

- AI cyber threat modeling
- Behavioral anomaly detection
- Autonomous cyber defense systems
- Process mining for control testing
- Intelligent operational risk monitoring

Module 12: ESG, Compliance & Reputational Risk Analytics

- AI-based ESG risk scoring
- Regulatory intelligence automation
- Reputation risk sentiment analysis
- Narrative risk modeling
- Compliance risk analytics platforms
- workshop : Developing domain-specific AI risk use cases
- workshop : Building integrated multi-risk dashboards

AI Risk Governance, Ethics & Enterprise Deployment

Module 13: AI Risk Governance & Regulatory Compliance

- ISO 23894, ISO 31000, NIST AI RMF, EU AI Act
- AI model validation frameworks
- Model risk governance committees
- Three lines of defense alignment
- Regulatory impact mapping & SupTech

Module 14: Explainable AI (XAI) & Ethical Risk Management

- Model transparency techniques
- Bias detection & fairness metrics
- Accountability & auditability structures
- Responsible AI lifecycle governance
- Ethical AI risk oversight models

Module 15: Enterprise AI Risk Architecture & Transformation Roadmap

- End-to-end AI risk operating model
- Enterprise data architecture readiness
- Talent & infrastructure enablement
- AI risk maturity assessment
- Enterprise transformation roadmap design

The Scandinavian Academy for Training and Development adopts the latest scientific and professional methodologies in training and human resource development, aiming to enhance the efficiency of individuals and organizations. Training programs are delivered through a comprehensive approach that includes:

- Theoretical lectures supported by PowerPoint presentations and visual materials (videos and short films).
- Scientific evaluation of participants before and after the program to measure progress and knowledge acquisition.
- Brainstorming sessions and practical role-playing to simulate real-life scenarios.
- Case studies tailored to align with the training content and participants work nature.
- Assessment tests conducted at the end of the program to evaluate the achievement of training objectives.

Each participant receives the training material (both theoretical and practical) in printed form and saved on a CD or flash drive. Detailed reports, including attendance records, final results, and overall program evaluations, are also provided.

Training materials are prepared professionally by a team of experts and specialists in various fields. At the end of the program, participants are awarded a professional attendance certificate, signed and accredited by the Scandinavian Academy for Training and Development.

Program Timings:

- 9:00 AM to 2:00 PM in Arab cities.
- 10:00 AM to 3:00 PM in European and Asian cities.

The program includes:

- A daily buffet provided during the sessions to ensure participants comfort.