



Fee

99,00 €

Final exam only

Course technical sheet

Artificial Intelligence and Machine Learning – Building AI Agents and ML Applications (MLOps & Governance)

Course code

AI_ML_AGENTS_LA

Test duration

60 min

Passing score

70%

Issued

27/05/2026

Executive summary

The course "Artificial Intelligence and Machine Learning – Building AI Agents and ML Applications (MLOps & Governance)" provides comprehensive training for designing, developing and managing AI and machine learning solutions with an advanced focus on intelligent agents. Participants will gain technical skills in using cutting-edge frameworks and technologies for fine-tuning large language models (LLMs), integrating ML pipelines, and implementing complex agentic systems. The curriculum covers best MLOps practices including data preparation, validation, deployment, monitoring with drift management, and retraining. Critical topics such as security, explainability, fairness and compliance with international standards like ISO/IEC 42001, 23894, and the EU AI Act regulation are deeply explored. Practical exercises and case studies, such as supply chain optimization using LLMs and Python systems, enable hands-on application of techniques ensuring performance and responsible governance. The course prepares professionals to build AI systems ready for production environments, addressing challenges of scalability, reliability, and compliance with privacy and security regulations.

Certification process

- Registration or login to the Academy platform.
- Completion of the final course examination only. Any training or preparation may be completed externally or through other channels.
- The test questions refer to the objectives, skills and topics described in this technical sheet.
- Assessment of the result, possible validation and certificate issuance according to the rules applicable to the course.

Important note

On Academy, candidates take only the final course examination. Any training or preparation activity may be delivered externally or through other channels. The test questions refer to the topics described in this technical sheet and in the course syllabus summary.

Syllabus summary

ISO/IEC 42001:2023 (AI Management System) + ISO/IEC 23894:2023 (AI risk management) + ISO/IEC 22989 (AI concepts and terminology) + ISO/IEC 23053 (framework for AI/ML) + Regulation (EU) 2024/1689 (AI Act) + GDPR (EU Reg. 2016/679) + NIST AI RMF 1.0 + best practices: data preparation, training/validation, deployment, MLOps (monitoring, drift, retraining), security controls, explainability, bias/fairness, AI agents (tool-use, orchestration, RAG) and model lifecycle management

Learning Objectives

Certification Bodies Management systems

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Artificial Intelligence and Machine Learning – Building AI Agents and ML Applications (MLOps & Governance)

- Design and develop AI agents and integrated ML applications
- Apply advanced MLOps practices for production model management
- Ensure compliance with AI governance regulations and best practices

Skills Acquired

- Fine-tuning and deploying LLMs
- Implementing ML pipelines and agent orchestration
- Model monitoring, drift handling, retraining
- Security management, explainability, and fairness
- Understanding ISO/IEC 42001, 23894, 22989, 23053, AI Act, GDPR

Target Audience

- Data Scientists, ML Engineers, AI Developers
- IT professionals interested in advanced AI systems
- Researchers and managers responsible for AI projects

Prerequisites

- Basic knowledge of machine learning and Python programming
- Familiarity with language models and ML pipelines concepts

Program

- Introduction to AI agents and advanced ML
- Architectures and technologies for ML agents
- Fine-tuning and evaluation of LLMs
- MLOps: deployment, monitoring, retraining
- Security, bias, explainability, compliance
- Case studies on supply chain, medical assistants, KPI reporting

Teaching Methodology

- Theoretical lessons and seminars
- Practical exercises and case study analysis
- Discussions on regulations and best practices

Evaluation Methods

- Theoretical tests and practical case studies
- Passing threshold at 70% with formative assessments

Duration

60 minutes

Certification

Completion certificate available for additional fee

Expected Outcomes

- Ability to develop and manage AI agents in production
- Skills in model lifecycle management and regulatory compliance
- Critical analysis and responsible technical decision-making