



Fee

50,00 €

Final exam only

Course technical sheet

Python for Data Science, Artificial Intelligence and Development – Exam

Course code

PY_DS_AI_DEV_LA

Test duration

60 min

Passing score

70%

Issued

27/05/2026

Executive summary

The course "Python for Data Science, Artificial Intelligence and Development – Exam" provides an advanced mastery of Python focused on applications in data science, AI, and software development. It covers foundational Python language features, environment management, code quality, and testing, as well as advanced data analysis with libraries like NumPy and pandas, and data visualization tools such as Matplotlib and Seaborn. Core topics include exploratory data analysis, preprocessing, and machine learning with scikit-learn, along with an introduction to neural networks and deep learning frameworks like PyTorch and TensorFlow. The course also addresses practical development skills such as scripting, API management, integrating data from various sources, version control with Git, and deployment and packaging techniques, including an overview of Docker containerization. Designed for learners with prior Python experience aiming to build skills for technical roles in data and AI fields, the course concludes with a 60-minute exam requiring a minimum score of 70% to pass.

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

Python fundamentals (syntax, types, data structures, functions, OOP) + environment and dependency management (venv/conda, pip) + code quality (PEP8, testing, logging) + data analysis with NumPy and pandas + data visualization (Matplotlib/Seaborn) + data science: EDA, preprocessing, feature engineering + Machine Learning with scikit-learn (pipelines, training/validation, metrics) + introduction to Deep Learning (PyTorch/TensorFlow, core concepts) + application development and automation (scripts, CLI, APIs) + data integration (files, databases, REST APIs) + version control and collaboration (Git) + deployment and packaging (wheels, Docker overview)

Certification Bodies Management systems

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Python for Data Science, Artificial Intelligence and Development – Exam

Learning Objectives

Provide advanced skills in Python for data science, AI, and software development, from fundamentals to the use of advanced libraries and machine/deep learning techniques.

Skills Acquired

- Effective Python use and environment management
- Data analysis and visualization with NumPy, pandas, Matplotlib, Seaborn
- Machine Learning with scikit-learn
- Introduction to Deep Learning with PyTorch and TensorFlow
- Development of scripts, CLI tools, and APIs
- Data integration from files, databases, and REST APIs
- Version control with Git
- Deployment and packaging, basic Docker knowledge

Target Audience

Professionals and students with basic Python knowledge seeking specialization in data science and AI development.

Prerequisites

Fundamental Python programming skills.

Program

- Python fundamentals and OOP
- Environment and dependency management
- Code quality: PEP8, testing, logging
- Data analysis and visualization
- EDA, preprocessing, feature engineering
- Machine Learning with scikit-learn
- Introduction to Deep Learning
- Application development and automation
- Data integration
- Git and collaboration
- Deployment and packaging

Teaching Methodology

Theoretical lessons mixed with exercises and project work.

Assessment Method

Written exam lasting 60 minutes; minimum passing score 70%.

Duration

60 minutes exam.

Certification

Certificate of exam passing (with possible associated fee).

Expected Outcomes

Ability to utilize Python in real-world data science, AI, and software development projects, ensuring quality and implementing complex solutions.