

ARTIFICIAL INTELLIGENCE AND BIG DATA ARCHITECT IN THE CLOUD

in partnership with Google Cloud

DURATION: 6 MONTHS

PRICE: 800 € (without VAT)

ENROLMENT : ALL YEAR ROUND

CORRESPONDING TO : 6 ECTS & 2 GOOGLE CERTIFICATES*

LEARNING MODE: 100% ONLINE

The AI and Big Data architect must master 3 environments at the heart of this GRADEO :

1. **The management of DATA**, both structured with pre-definition of a fixed schema (SQL3, OQL), semi-structured with meta data (SparQL) and unstructured (NOSQL, New SQL) as well as the concepts of DATA WAREHOUSE and DATA LAKE.
2. **The analysis of DATA** with computer methods (Data Mining and OLAP), statistics (Machine learning in supervised or unsupervised mode) or based on AI with the fundamental approach of Deep Learning (multi-layer neural networks)
3. **The Cloud** which is the future of DATA management and analysis

Google Cloud Courses (Google Cloud Career Readiness Program)

INTERMEDIATE SPECIALIZATION COURSE

Data Analyst specialization 16 weeks

- > Mining and preparing your data with BigQuery
- > Creating new BigQuery datasets and viewing insights
- > Get advanced insights with BigQuery
- > Apply machine learning to your data with GCP

Associate Cloud Engineer Specialization 16 weeks (certificate included)

- > Google Cloud Platform Basics: Basic Infrastructure
- > Google Cloud Infrastructure Essentials: Foundation
- > Google Cloud Core Infrastructure: Core Services
- > Google Cloud Elastic Infrastructure: Scaling and automation
- > Google Cloud Reliable Infrastructure: Design and process

BEGINNER COURSE

Cloud Digital Leader (certificate included)

- > Introduction to digital transformation with Google Cloud
- > Innovating with data and Google Cloud
- > Modernising infrastructure and applications with Google Cloud
- > Understanding Google Cloud security and operations

COURSE OFFERED TO THOSE WHO DO NOT HAVE THE BASICS IN CLOUD

Academic courses from ESTIA's Master BIHAR/eBIHAR

BD2: from databases to Big Data 6 weeks

- > BIG DATA paradigms and Codd relational data model for structured data
- > Introduction to SQL2, relational SQL
- > ChrisDate's third manifesto for hybrid object-relational data models
- > Introduction to ODMG
- > Introduction to SQL3, object-relational SQL
- > NOSQL and NEW SQL for unstructured data

Artificial Intelligence : Machine Learning & Deep Learning 6 weeks

- > Mathematical tools for AI
- > The basics of Machine Learning
- > The basics of Deep Learning
- > Learning with Deep Learning
- > Computer vision, natural language
- > Software for Machine Learning

GRADEO :

CERTIFICATES LEADING TO JOBS



"GRADEO" (European name for "Micromaster" or "Specialization" in the USA) responds to market demand for short, high-level, professional training courses corresponding to jobs in short supply or to IT "skills".

GRADEO courses include at least two certified courses:

- ☒ An academic course at Master's level to answer the WHAT? (to understand the concepts in a rigorous way)
- ☒ A professional course by a recognised international leader to answer the HOW in terms of implementation (understanding an industry reference TOOL)

GRADEO therefore offers at least two certificates:

- ☒ An academic certificate (3 to 9 ECTS -European Credit Transfer System- from a European Master)
- ☒ A professional certificate

ESTIA's BIHAR Master GRADEOs in Artificial Intelligence correspond to the "AAA" learning approach:

Acquisition of concepts (WHAT?)

Application on a concrete use case (HOW?) using the OpenSource platform Tensorflow (and Colab) with an integrated tutorial

Adaptation to another environment by the distance learner

More GRADEO are being implemented to the BIHAR Master.