EXECUTIVE EDUCATION
EXECUTIVE CERTIFICATE

DATA SCIENCE & MANAGEMENT

TRANSFORMATION TOWARDS THE DATA-DRIVEN ENTERPRISE

ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE

UNIL | Université de Lausanne
HEC Lausanne
TARGET AUDIENCE
Key stakeholders driving the transformation towards a data-driven enterprise, e.g.
- (Future) Chief Data Officers and drivers of big data initiatives
- Data champions in business lines (HR, Marketing, Operations, …)
- BI/Data managers, data engineers and data architects

PROGRAMME STRUCTURE

BLOCK 1: THE DATA-DRIVEN ENTERPRISE
Driving business value with data
- Datafication and the data economy
- Transformation towards the data-driven enterprise
- Strategic, cultural and technological challenges
Data value chain
- Data-driven approaches in the analysis of business problems
- Data science methodologies in the creation of business value
- Real-world use cases and business application

BLOCK 2: FROM DATA TO INSIGHTS
From disconnected data sources to a data lake
- Big Data architectures
- Data integration
- Scaling out and industrialization
Using the data lake to extract actionable insights
- Business intelligence to foster trust in data-driven approaches
- From descriptions to predictions to actions

BLOCK 3: MANAGING DATA AS A STRATEGIC ASSET
Data transparency, quality and data valuation
- The data landscape – traditional enterprise data and new data sources (IoT, social media, …)
- Data quality - definition, assessment and controlling
- Data valuation: market prices, reproduction costs and value in use
Data governance and organization
- Roles: Data scientists, data engineers, data managers and data citizens
- Standards, methods and processes for managing data life-cycle and data value chains
- Mindset change – towards a data sharing culture

BLOCK 4: DATA PRIVACY, ETHICS AND INNOVATION
Data ownership, privacy and data ethics
- Data ownership and data sovereignty
- Data privacy and regulations (GDPR, …)
- Ethical issues of data science for business leaders
Data-driven innovation
- Data-driven business models
- Crowdsourcing and citizen science

KEY INFORMATION
Certificate of Advanced Studies (CAS)
jointly delivered by HEC Lausanne-UNIL & EPFL
Location: UNIL-EPFL campus
Academic Direction
@ HEC Lausanne - UNIL:
Prof. Christine Legner
Academic Direction
@ EPFL/Swiss Data Science Center:
Dr. Olivier Verscheure
Language: English
4 blocks of 4 days each
+ the Individual Data Project over 9 months
15 ECTS credits
Starts: June 2018
Registration Deadline: May 25th
CAS: CHF 17’000.-
or CHF 5’000.-/block
PROGRAMME AT A GLANCE

LEARNING OBJECTIVES

Develop the required skills to master the transformation towards the data-driven enterprise:

- Drive business value with data;
- Design data value chains from data to information and insights;
- Create a data culture and organization;
- Respect ethical principles and privacy concerns.

IDP - INDIVIDUAL DATA PROJECT

The capstone project of the Data Science and Management Executive Certificate is the “Individual Data Project”. Participants are encouraged to start the programme with a concrete “data transformation” ambition in mind (usually for their employer). They will develop their project throughout the programme with the support of HEC Lausanne - UNIL & EPFL Faculty and Experts.
ADMISSION CRITERIA

• Hold a university/HES degree or experience considered equivalent by the programme management;
• A minimum of 5 years of professional experience;
• Fluency in English.

FOR FURTHER INFORMATION & ONLINE REGISTRATION
execeD.unil.ch/certificate-data