



Data Engineering

UE OBLIGATOIRES - 4^E ANNÉE

Computer science 101	69 h	5 ECTS
· Infrastructure (OS & Virtualization)		
· Development (Web programming & Collaborative development)		
Data architecture	69 h	5 ECTS
· Data models (Relational & Non-relational)		
· Data Processing Development		
Exploratory Data Analysis	75 h	5 ECTS
· Basics of probability & Statistics		
· Data Manipulation & Visualisation		
Basics of Machine learning	69 h	5 ECTS
· Maths for Machine learning		
· Data cleaning		
· Introduction to machine learning		
Support Digital Transformation	64 h	5 ECTS
· Digital transformation		
· Change management		
· Professional english		
Major's project	150 h	5 ECTS
· Project management		
· Learning-by-doing semester's project		

UE OBLIGATOIRES - 5^E ANNÉE

Data diversity	63 h	5 ECTS
· Data sources		
· Geographical data		
Machine learning : theory & practice	72 h	5 ECTS
· Predictive modeling & clustering		
· Natural language processing		
· From PoC to production		
Responsible Data Science	66 h	5 ECTS
· Data Ethics		
· Data law		
· Ecological impact of IT		
Data strategy	69 h	5 ECTS
· Data for Business Intelligence		
· Data Governance		
· Data Protection		
· Data science challenge		
Major's project	150 h	5 ECTS
· Project management		
· Professionalization		
· Project monitoring & final presentation		

UE ÉLECTIVES - 5^E ANNÉE

Deeper into Data Science	66 h	5 ECTS
· Foundation of Machine Learning		
· Dimensionality Reduction		
· Times Series		
· Computer Vision with ML		
Deeper into Data Engineering	66 h	5 ECTS
· Pipelines & Data flow		
· Big Data		
· Cloud based production		