MSc DATA MANAGEMENT

January 2025

GRADUATE PROGRAMME

INTAKE: **September**
CAMPUS: **Paris**
LANGUAGE: **English / French**

MSc MASTER OF SCIENCE

In-depth understanding and ethical awareness in data and AI

Established in Paris in
1919

4,300
students

+160
international academic partners

350
teachers and professional lecturers

15,000
graduates

+800
corporate partners and public organizations

+40
students associations

Established in 1919, ECE Engineering School in Paris excels in tech and digital education. Specializing in software development, network architecture, cybersecurity, data and AI, our educators use project-based pedagogy to enhance learning. As part of the OMNES Education Group, a top private institution in France, ECE leads in innovation and academic excellence.

In an era of escalating data volumes and rapid advancements in AI technology, businesses and organizations seek professionals adept at collecting, storing, analyzing and leveraging data, along with artificial intelligence, for valuable insights.

In response to the rising demand for skilled professionals, this programme offers comprehensive training to students. It equips them with essential skills in understanding the complexities of both fields, mastering key tools for data handling and creating advanced AI models.

Moreover, the programme focuses on enhancing students' communication skills to effectively present data analysis findings. By providing this multifaceted training, the programme empowers students to make informed decisions. Ultimately, this approach ensures graduates are well-prepared to navigate the dynamic fields of data management.

CAREER OPPORTUNITIES

After finishing this program, students will be skilled professionals ready to fulfill the requirements of businesses, organizations and the public sector. They'll be equipped for various career paths such as data engineer, data architect, AI data analyst, deep learning scientist, machine vision engineer, chief data officer, data protection officer, research scientist or IT consultant.

WHY CHOOSE THIS PROGRAMME

> This programme addresses the basics of databases, information systems, machine and deep learning, data engineering and analytics, mathematics for data science and business intelligence. It also addresses the ethics of AI.
> Through conferences, site visits and projects, students meet with data and AI professionals, thus building their networks.
> Courses are held on ECE's campus, centrally situated in Paris, near iconic landmarks such as the Eiffel Tower and the Seine River.
> Students dive into data and AI, applying theoretical knowledge and discussing analyses with industry leaders.
> Upon culmination of the programme, students may be conferred with a Bac+5 level diploma adorned with the prestigious MSc – Master of Science label accredited by the Conference of Grandes Écoles.
> Students can obtain the international Certification CAPM (Certified Associate in Project Management) by PMI.

THE OBJECTIVES OF THE PROGRAMME

Our graduates will be able to:
> Understand the issues and challenges of data management.
> Master the tools and techniques of data management.
> Develop AI models.
> Communicate data analysis results to stakeholders.

LyRIDS RESEARCH CENTER

LyRIDS Laboratory of Research in Interdisciplinary Digital Engineering & Sciences ECE RESEARCH CENTER

The ECE research center is pioneering an innovative strategy to enrich its pedagogy, providing students with insights into scientific, societal and environmental issues, particularly in AI-related fields such as health, energy, transportation, finance and the environment. This approach aligns with the School's majors and encompasses a broad spectrum of scientific disciplines, focusing on three key areas: Intelligent Communicating Systems, Mathematical Methods and Nanosciences and Artificial Intelligence.

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Programme structure

YEAR 1	ECTS 60
IT Transformation	
Digital Transformation and Business Models	3
Digital Ecosystem and Regulation	2
Information Systems Design	3
Digital Innovation	
Exploration of Disruptive Technologies	3
DevOps Practices and Continuous Integration	3
Information Systems Architecture and Performance	3
Internet of Things and Connected Systems	3
Blockchain and Crypto Economy	2
IT Project Management and Innovation	
Project Management Basics	3
Data Science Project Management with Python	3
Smart Data	
Introduction to Data Analytics	4
Data bases and Data Quality	4
Introduction to Deep Learning	4
Managerial Innovation Serving Leadership	
Innovation and Digital Entrepreneurship	3
Management of Multicultural and Distributed Teams	3
Strategic Communication	3
Today's Challenges and Future World Transformations	
Green IT and Digital Sustainability	4
Ethical Issues and Societal Impacts of Emerging Technologies	3
Foreign Language	
French courses FLE	4
4-month internship (optional)	

YEAR 2	ECTS 90
Data Science Fundamentals	
Mathematics for Data Science	2
Advanced Machine Learning	3
Deep Learning	3
Data Analytics Pipeline	3
Data Engineering	
Big Data Infrastructures	3
Secure Data Architectures	3
Generative AI for Data Engineering	3
Cloud Computing Platforms	3
Today's Challenges and Future World Transformations	
Ethics of Digital Technologies	1
Data Geopolitics and Digital Sovereignty	2
Emerging Data Architectures and Quantum Data Management	2
Model Deployment and Production	
Deployment of Machine Learning models	5
Mastering Data Life Cycle	5
MLOps Platforms	4
Managerial Innovation Serving Leadership	
Intercultural Leadership and Team Management in AI	3
Communication and Innovation Management	3
Job Interview Simulation	1
Data Project Management and Innovation	
Applied Agile and Risk Management	4
Project Management Certification - CAPM by PMI	2
Master Thesis Methodology	1
Foreign Language	
French courses FLE	4
Dissertation	**20**
6-months internship	**10**

ENROLL OUR PROGRAMME

Applications from French or international students residing in France

Applications from international students residing outside France

The international admission procedure only applies to you if you are not a French national and live outside France.

CERTIFICATION

PMI CAPM

ENTRY REQUIREMENTS

> A first-class undergraduate degree with solid foundations in applied mathematics, basic knowledge of databases (SQL), introductory skills in data science or machine learning, and elementary programming in Python, R or an object-oriented language like Java.

> English proficiency: the minimum score required is the upper intermediate B2 level, 4th level of English in the Common European Framework of Reference (CEFR).

TUITION FEES

French or international students residing in France

> 11,750 €/academic year.

> An application fee is payable at the time of the application submission: 90 €.

International students residing outside France

> 12,540 €/academic year.

> An application fee is payable at the time of the application submission: 50 €.

TIME TO ACT
THE CSR INITIATIVE BY OMNES EDUCATION

A Corporate Social Responsibility Policy to embody the commitments of OMNES Education

The societal challenges of the contemporary world require new skills, new responsibilities and new professions, which OMNES Education aims to provide to its student audience. With a resolutely humanistic and universalist approach, OMNES Education seeks to unlock the abilities and aspirations of each individual through an innovative and multidisciplinary study programme.

ECE is a school within the engineering sciences cluster of OMNES Education, a private multidisciplinary higher education and research institution. ECE is a member of CTI (Commission des Titres d'Ingénieur), Conférence des Grandes Écoles, UGEI, UN Global Compact, EFMD, Campus France and Innovation Makers Alliance