MSc DATA MANAGEMENT & ARTIFICIAL INTELLIGENCE

GRADUATE PROGRAMME

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

MSc MASTER OF SCIENCE

In-depth understanding and ethical awareness in data and AI

Established in Paris in
1919

4,000
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 soft- ware development, network architecture, cyber-secu- rity, 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 convey data analysis findings. By providing this multifaceted training, the programme aims to empower students in making informed decisions. Ultimately, this approach ensures students are well-equipped to navigate the dynamic landscape of data management and AI.

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 certificate Microsoft Power BI Data Analyst (PL-300).

THE OBJECTIVES OF THE PROGRAMME

Our graduates will be able to:
> Understand the issues and challenges of data management and AI.
> 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.

ece.fr

ECE
ÉCOLE D'INGÉNIEURS
ENGINEERING SCHOOL

MSc DATA MANAGEMENT & ARTIFICIAL INTELLIGENCE

Programme structure

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

Microsoft CERTIFIED POWER BI DATA ANALYST ASSOCIATE

YEAR 1

Semester 1 – 30 credits

- Advanced Databases
- Data Visualization
- Initial Python
- Data Science with Python
- Operating Systems
- Introduction to Machine Learning
- Big Data Framework
- Master Class, Team Management, Budget Management, Sustainable Development, French courses FLE, Multidisciplinary Team Project

Semester 2 – 30 credits

- Mathematics for Data Science
- Information Systems Management
- NoSQL Databases
- Advanced Machine Learning
- Cloud Computing
- Functional Programming
- Data Integration
- Individual Relationship Management, Corporate Management, Marketing in a Digital World, Manager Ethic's
- French courses FLE
- Multidisciplinary Team Project

4-month internship (optional)

YEAR 2

Semester 3 – 30 credits

- Big Data Ecosystem
- Data Engineering with Spark
- Business Intelligence
- Data Analytics
- Real Time Big Data Search
- Machine Learning III
- Deep Learning
- Ethics of AI
- Cybersecurity
- Change Management, Workplace Health, Safety and Security, Job Interview Simulation
- French courses FLE
- Research Writing, Final Project

Dissertation – 20 credits

6-month internship – 10 credits

TUITION FEES

> 10,700 €/academic year[1] or 11,190 €/academic year[2].
> An application fee is payable at the time of the application submission: 90 €[1] or 50 €[2].

1. For French or international students residing in France
2. For international students residing outside France

ENTRY REQUIREMENTS

> A first-class undergraduate degree with honors in mathematics (covering calculus, linear algebra and statistics) and computer science (covering programming, data structures and algorithms), with some exposure to databases or information systems preferred.
> English proficiency: the minimum score required is the upper intermediate B2 level, 4th level of English in the Common European Framework of Reference (CEFR).

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.

OMNES EDUCATION

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.