## **GRADUATE PROGRAMME**

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



## Excellence, impact and innovation in sustainability

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.

Given the critical demand for skilled professionals to address the challenges of climate change and energy transition, the MSc Sustainable Energy Futures programme provides comprehensive training. It equips students to take on pivotal roles in sustainable energy and environmental preservation.

This programme not only imparts technical skills but also deepens understanding of sustainable energy's social, economic and policy dimensions. Through diverse coursework, students engage in cuttingedge research and gain practical experience in renewable energy, efficiency strategies and sustainable development.

### **CAREER OPPORTUNITIES**

Upon completion of this programme, students will be professionals capable of meeting the needs of businesses, organizations and the public sector. They will be prepared for future careers as renewable energy project managers, consultants in Energy Efficiency and Sustainable Development, Managers of Smart Energy Networks, Energy Modeling and Applied AI Engineer, Energy Specialized Data Scientist or Embedded Energy Engineers.

### WHY CHOOSE THIS PROGRAMME

> This master programme addresses the basics of home automation, building thermal dynamics, energy transformation and storage, prevention and management of industrial risks, smart grids and smart cities or waste management and water treatment. It also covers the energy markets, sustainable digital transformation and environmental and energy law.

- > Through conferences, site visits and projects, students meet with energy 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 sustainable energy, 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 of sustainability knowledge TASK™ (The Assessment of Sustainability Knowledge) and the international Certification CAPM (Certified Associate in Project Management) by PMI.

## THE OBJECTIVES OF THE PROGRAMME

Our graduates will be able to:

- > Understand the challenges of climate change and energy transition.
- > Master energy technologies and systems.
- > Analyze the environmental impacts of human activities.
- > Develop sustainable solutions for energy production, distribution and consumption.
- Manage complex energy and environmental projects.

### SUSTAINABILITY CAMPUS LABEL DD&RS



The training programmes of the ECE Engineering School are certified by the "Sustainable Development & Social Re-

sponsibility" label awarded by the Ministries of Sustainable Development and Higher Education, the Conference of Grandes Écoles and the Conference of University Presidents, as well as being ranked first in France in the "UI Green Metric World University Rankings", a global benchmark in terms of commitment towards universities and major schools.



ece.fr



# MSc SUSTAINABLE ENERGY FUTURES

January 2025

## **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







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.

## r rogramme structure

|   | ECT: |
|---|------|
| YEAR 1  | 60   |
| IT Transformation   |      |
| Digital Transformation and Business Models                      | 3    |
| Digital Ecosystem and Regulation                                |      |
| Information Systems Design                                      |      |
| 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    |
| Energy Technologies   |      |
| Sustainable Development and Environmental Transition            | 4    |
| Energy Systems for Sustainable Development                      | 4    |
| Introduction to Energy Technologies                             | 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 Transformation              | ns   |
| Green IT and Digital Sustainability                             | 4    |
| Ethical Issues and Societal Impacts of Emerging<br>Technologies | 3    |
| Foreign Language  | _    |
| French courses FLE  | 4    |
| 4-month internship (optional)                                   |      |

|  | ECTS  |
|--|-------|
| YEAR 2   | 90    |
| Strategy for Sustainable Energy Transition     |       |
| Energy Systems Performance Analysis            | 3     |
| Energy Resource Management and Optimization    | 3     |
| Sustainable Energy Transition Strategies       | 3     |
| Decision Support for Energy Integration        | 3     |
| Circular Economy and Energy System             | 1     |
| Smart Energy Systems and Data                  |       |
| Intelligent Energy Systems (Smart Grids)       | 3     |
| loT and Captors for Energy                     | 3     |
| Big Data and Energy Data Analysis              | 3     |
| Energy Traceability Technologies               | 1     |
| Today's Challenges and Future World Transforma | tions |
| Ethics of Digital Technologies                 | 1     |
| Energy Transition and Sustainable Policies     | 2     |
| Climate Change and Risk Management             | 2     |
| Energy Infrastructure and Security             |       |
| Simulation and modelling of energy systems     | 5     |
| Nuclear Energy Technology                      | 4     |
| Cybersecurity for energy infrastructures       | 5     |
| Managerial Innovation Serving Leadership       |       |
| Intercultural Leadership and Team Management   | 3     |
| Communication and Innovation Management        | 3     |
| Job Interview Simulation                       | 1     |
| Energy 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    |

#### **ENTRY REQUIREMENTS**

- > A first-class undergraduate degree with basic understanding of energy systems, awareness of environmental issues, willingness to contribute to the energy transition, and proficiency in an object-oriented programming language (Java or Python).
- > 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  $\ensuremath{\varepsilon}.$

## International students residing outside France

- > 12,540 €/academic year.
- > An application fee is payable at the time of the application submission: 50 €.

















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