

# Master's degree in Technologies for Distributed Energy Systems The master's degree in Technologies for Distributed Energy Systems complements previous undergraduate training by

The **master's degree in Technologies for Distributed Energy Systems** complements previous undergraduate training by converging towards knowledge of future needs, in which decentralised electricity generation plants, with radically different power levels (from kW and MW to hundreds of MW), will play an increasingly leading role. This will occur in the context of systematically growing demand for decarbonised electricity and the decoupling of electricity generation and demand. The main objectives of the master's degree are aligned with the Sustainable Development Goals (SDGs) and the EU's 2030 Agenda: energy transition, accessible and affordable green energy, engineering in the design of innovative applications, energy-sustainable communities, responsible and efficient use of energy, climate action in microgrids and electric mobility, and design and management of distributed energy systems.

#### GENERAL DETAILS

# Duration and start date

1 academic year, 60 ECTS credits. Starting September

# Timetable and delivery

Face-to-face

# Fees and grants

Approximate fees for the master's degree, **excluding other costs** (does not include non-teaching academic fees and issuing of the degree certificate):

€1,660 (€6,331 for non-EU residents). More information about fees and payment options More information about grants and loans

# Language of instruction

Check the language of instruction for each subject in the course guide in the curriculum.

Information on language use in the classroom and students' language rights.

# Location

Barcelona East School of engineering (EEBE)

# Official degree

Recorded in the Ministry of Education's degree register

# ADMISSION

# **General requirements**

Academic requirements for admission to master's degrees

# Places

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# Pre-enrolment

Pre-enrolment period open. Expected deadline: 23/06/2025. How to pre-enrol

#### Enrolment

How to enrol

# Legalisation of foreign documents

All documents issued in non-EU countries must be legalised and bear the corresponding apostille.

#### **Professional opportunities**

- Design, implementation and management of electrical energy distribution projects.
- Design, implementation and management of projects in electrical energy generation plants.
- Design, implementation and management of strategies in companies that sell electrical energy.
- Electric mobility.
- Design, implementation and management of projects in companies that install domestic, industrial or community-oriented renewable energy systems.
- Technological development in companies that design and sell electrical systems and equipment and industrial electronics.
- Technical expertise in the energy and environmental transition for government bodies.
- Energy efficiency analysis and energy audits.
- Design, implementation and management of solutions in the field of energy saving and consumption optimisation.
- Consulting in energy consumption modelling companies.
- Active research in research centres and universities.

#### Competencies

#### **Generic competencies**

Generic competencies are the skills that graduates acquire regardless of the specific course or field of study. The generic competencies established by the UPC are capacity for innovation and entrepreneurship, sustainability and social commitment, knowledge of a foreign language (preferably English), teamwork and proper use of information resources.

#### Specific competencies

- Integrate the values of sustainability and understand the complexity of systems, with the aim of undertaking or promoting actions that restore and maintain the health of ecosystems and improve justice, thereby generating visions of sustainable futures.
- Identify and analyse problems that require making autonomous, informed and reasoned decisions in order to act with social responsibility following ethical values and principles.
- Develop the ability to evaluate inequalities based on sex and gender to design solutions that resolve them.
- Apply the knowledge acquired and appropriate methodologies to analysis and design in the field of decentralised electrical systems with renewable sources.
- Efficiently communicate and present an original and rigorous engineering project in the field of distributed energy generation from renewables using appropriate language and technical documentation.

#### ORGANISATION: ACADEMIC CALENDAR AND REGULATIONS

#### UPC school

Barcelona East School of Engineering (EEBE)

#### Academic coordinator

Herminio Martinez Garcia

#### Academic calendar

General academic calendar for bachelor's, master's and doctoral degrees courses

#### Academic regulations

Academic regulations for master's degree courses at the UPC

#### CURRICULUM