

Master's degree in Renewable Energy Engineering

The objective of the **master's degree in Renewable Energy Engineering** is the study of renewable energy engineering, which also includes smart grids, energy efficiency, environmental and social impacts and the gender perspective. The main objective is to produce professionals who are capable of becoming drivers of change in the context of the energy transition in the coming decades.

GENERAL DETAILS

Duration and start date

2 academic years, 120 ECTS credits. Starting September

Timetable and delivery

Afternoons. 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):

€2,215 (€12,662 for non-EU residents).

[More information about fees and payment options](#)

[More information about grants and loans](#)

Language of instruction

English

Information on [language use in the classroom and students' language rights](#).

Location

[Barcelona School of Industrial Engineering \(ETSEIB\)](#)

Official degree

[Recorded in the Ministry of Education's degree register](#)

ADMISSION

General requirements

[Academic requirements for admission to master's degrees](#)

Specific requirements

English language level equivalent to B2 in the Common European Framework of Reference for Languages.

Places

60

Pre-enrolment

Pre-enrolment for this master's degree is currently **closed**. Use the "Request information" form to ask for information on **upcoming pre-enrolment periods**.

[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

The **master's degree in Renewable Energy Engineering** opens doors in various areas of work related to the energy transition and sustainability. Some of the main sectors in which graduates can practise professionally are:

- Wind energy: design, operation and maintenance of onshore and offshore wind farms.
- Solar power: projects related to photovoltaic and solar thermal energy, from the planning and installation of solar systems to the maintenance and efficient operation of these systems.
- Bioenergy: development of systems that use biomass to generate energy for the production of electricity, heat or biofuels.
- Hydroelectric energy: design and operation of hydroelectric plants, both in large installations and on a small scale (microhydraulics).
- Geothermal energy: development of projects for generating energy from sources that take advantage of subsoil heat.
- Energy storage: implementation and improvement of storage systems, such as lithium batteries, to manage the intermittency of renewable energies.
- Smart grids: design of electrical networks that integrate renewable energies, which improve the efficient management and distribution of energy.
- Energy consulting and auditing: assessment of the energy efficiency of systems and recommendations for optimising energy consumption in buildings and industrial processes.
- Energy policy and regulation: work in regulatory bodies or consultancies to advise on regulations and strategies for implementing renewable energies at a regional, national or international level.
- Research and development (R&D): innovation in energy technologies, which will improve the efficiency of renewable energy systems, and development of new materials and processes.

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

- Work as a member of an interdisciplinary team who can contribute to projects pragmatically and with a sense of responsibility and make commitments that take into account the resources that are available.
- Apply appropriate methodologies for project design and implementation in the field of production and management of energy from renewable sources.
- Manage the acquisition, organisation, analysis and visualisation of data and information in the energy field and critically assess the results.
- Propose advanced scientific and technological solutions that address complex industrial challenges in energy engineering.
- Identify and overcome gaps in one's knowledge by thinking critically and choosing the best approach to extending one's knowledge.
- Express the results of one's learning, thought and decision-making processes to other people orally and in writing, and take part in debates on topics in the area of specialisation.
- 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.

ORGANISATION: ACADEMIC CALENDAR AND REGULATIONS

UPC school

Barcelona School of Industrial Engineering (ETSEIB)

Academic calendar

Academic regulations

[Academic regulations for master's degree courses at the UPC](#)