Master's degree in Sustainability Science and Technology

The **master's degree in Sustainability Science and Technology** aims to provide advanced and interdisciplinary education that facilitates the understanding of interactions between society, the economy and the natural environment, as well as the scientific and technical options and trends that enable the major challenges of sustainable development in current socio-environmental systems to be addressed.

The master's programme will train entrepreneurs and agents of change who are committed to sustainable development. Depending on whether they specialise in biodiversity and the natural environment, the built environment and services, or the productive system and information management, they will be equipped to design, implement and evaluate sustainable solutions in various fields of engineering and technology. Their education will allow them to take a transdisciplinary approach and apply scientific and technical rigour to work in diverse cultural and professional contexts.

GENERAL DETAILS

Duration and start date

2 academics years, 120 ECTS credits. Starting September

Timetable and delivery

Mornings. 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):
€3,320 (€12,662 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.

Official degree

Recorded in the Ministry of Education's degree register

ADMISSION

General requirements

Academic requirements for admission to master's degrees

Places

40

Pre-enrolment

Pre-enrolment period open.
Expected deadline: 01/07/2025.
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.

DOUBLE-DEGREE AGREEMENTS

Double-degree pathways at the UPC

- Master's degree in Sustainability Science and Technology + Master's degree in Sustainable Intervention in the Built Environment (MISMeC)

PROFESSIONAL OPPORTUNITIES

Professional opportunities

The course prepares graduates to take up positions related to the design and management of sustainable processes and projects; socio-environmental management, consulting and engineering; and the formulation and evaluation of sustainability policies and strategies developed in public and private research centres, non-governmental organisations, and companies and public organisations (national and international) related to spatial planning, the environment and sustainable development. The course also provides students with the skills required to undertake academic research in sustainability science and technology.

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

- **Evaluate sustainability policies and strategies**, considering environmental, social and economic impacts.
- **Manage socio-environmental conflicts** and plan sustainable urban territories.
- **Analyse climate change** and its causes, impacts and governance, and design strategies for fair decarbonisation.
- **Apply mathematical modelling, GIS and ICT** in the sustainable management of resources.
- **Optimise infrastructure, energy and transport** by minimising their environmental impact.
- **Design and implement sustainable projects** that are aligned with international regulations and strategies.

ORGANISATION: ACADEMIC CALENDAR AND REGULATIONS

UPC school
University Research Institute for Sustainability Science and Technology (ISUPC)

Academic coordinator
Olga Alcaraz Sendra

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

Subjects	ECTS credits	Type

Subjects	ECTS credits	Type
FIRST SEMESTER		
Fundamentals of Applied Statistics and Sustainability and Development Measurement	5	Compulsory
Fundamentals of Economics, Environmental Economics and Ecological Economics	5	Compulsory
Fundamentals of Engineering, Sustainability and Development	5	Compulsory
Fundamentals of Geosciences and Geographic Information Systems	5	Compulsory
Fundamentals of Mathematical and Systemic Sustainability Modelling	5	Compulsory
Fundamentals of Social Sciences and Approaches to Socio-Environmental Conflicts	5	Compulsory
SECOND SEMESTER		
Biodiversity and Socio-Ecological Systems	5	Optional
Climate Change Mitigation Policies	5	Optional
Fundamentals of Ethics, Business and Innovation	5	Compulsory
Fundamentals of Sustainable Management and Environmental Management Systems	5	Compulsory
Integral Management of Urban and Ecological Water Cycles	5	Optional
Social and Transdisciplinar Research	5	Compulsory
Socio-Environmental Data Processing	5	Optional
Sustainable Design of Products and Services	5	Optional
Sustainable Management of Energy Resources and Need for a New Energy Model	5	Optional
Urban Metabolism and Ecological Urbanism	5	Optional
THIRD SEMESTER		
Complex and Socio-Environmental Networks	5	Optional
Construction and Building Construction Engineering and Technologies	5	Optional
Decarbonisation and Climate Resilience Strategies	5	Optional
Energy Economics and Sustainable Energy Systems	5	Optional
Industrial Ecology	5	Optional
Information and Communication Technologies	5	Optional
International Cooperation and Development	5	Optional
Regional and Transport Infrastructure Metabolism	5	Optional
Research-Action Workshop on Sustainability Science and Technologies	5	Optional
Urban and Regional Development	5	Optional
FOURTH SEMESTER		
Master's Thesis	30	Project