

MASTER'S DEGREE IN SUSTAINABLE INTERVENTION IN THE BUILT ENVIRONMENT

A programme focused on a cutting-edge area of specialisation for disciplines dealing with the built environment in order to strategically transform the vision of professionals and guide future researchers in transforming our society towards sustainability.

Sustainability is an imperative social demand and the city plays a fundamental role in the strategy for its needed progressive transformation.



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BARCELONATECH

Escola Tècnica Superior d'Arquitectura
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UPC VALLÈS

ETSAV - Vallès School of Architecture



UNIVERSITAT POLITÈCNICA
DE CATALUNYA
BARCELONATECH

Campus d'Excel·lència Internacional

MASTER'S DEGREE IN SUSTAINABLE INTERVENTION IN THE BUILT ENVIRONMENT

Aimed towards advanced conceptual and technological knowledge of the urban environment to improve sustainability and manage projects of intervention in the fields of architecture, building construction, urban design and infrastructure.

The city plays a fundamental role in a strategy of progressive transformation of the social metabolism towards a carbon-neutral model to maintain or restore the productive capacity and ecosystem services of the territory and natural systems. It is also a place of strong social perception to express public mechanisms of political participation.

The one-year MSc programme focuses on the city in order to identify, criticise and diagnose its metabolism and to propose sustainable transformative interventions. This process involves recognising material flows, spaces on which they act and conditions in which they operate to generate a critical discourse. The aim is to develop the capacity to intervene strategically in the city, to propose new socially suitable models through responsible intervention on its spaces.

Students develop strategies aimed at improving habitability, addressing carbon independence, reducing the use of resources and the generation of waste, reconstructing the relationships with the territory and designing a more sustainable urban model based on the transformation of the existing city. The programme is practice-oriented and addresses real projects in urban contexts, through processes of diagnosis of social metabolism and carbon-neutral interventions for climate change.

60 ECTS

¿Who is this MSc aimed at?

The contents of the master's degree are primarily aimed at graduates in Architecture, Building Engineering, Civil Engineering, Urban Planning and Urban Design. For graduates in other professions with an interest in the research and professional practice of sustainability in the city and architecture or related to the built environment may also be of interest and could also be considered for admission.

90% of faculty with a PhD and expertise in their field.

75% of international students, reflecting the global interest in sustainability.

+20 Over 20 years of experience in the field of sustainability, since 1999 with the *Mies Report*.

Programme structure

The programme is conceived as a Master of Science that focuses on a cutting-edge area of expertise in disciplines dealing with the built environment. It takes place over twelve months, structured into two semesters between mid-September and mid-June and the final dissertation.

The six courses of the first semester provide theoretical content and discussion. They offer a vision and knowledge of the topic along with conceptual application tools. Parallel to this part, a transversal Laboratory of practice-oriented work allows for practical-knowledge on real cases the vision provided by each course. This hands-on work is developed autonomously by small teams of students and is regularly debated. The tutoring period initiated in spring culminates with the submission and presentation of a Final Dissertation in early September, after a month of autonomous work.

Approach

To this end, the master's degree offers a comprehensive and transversal approach that cannot be limited to the resolution of technical issues but must incorporate them into a broader learning process. Such an approach allows the city to be addressed from the logic of the reuse of its buildings and spaces, from the revitalisation of its fabric and from its social repercussions.

The improvement of the built environment is the main instrument for the sustainable transformation of our society. This means reconsidering and reorienting the activity of professionals who, until now, have been devoted to urban growth. It is therefore essential to develop a training profile that ensures an integrated knowledge of all the aspects that converge in this field as well as the strategic approach needed to implement them in practice or to continue developing the theoretical and operational problems that intervention demands.

Career prospects

The programme focuses on the sustainable reorientation of the working areas of architecture, building, and the city, either from professional practice, research or public service. We are committed in enabling new professionals for the future development of architecture and the built environment in these terms and in preparing researchers to develop doctoral theses oriented to the operational needs of the field. Students are encouraged and trained to become entrepreneurs and agents of change towards the sustainability of the built environment.

The master also provides access to doctoral studies at the UPC, aimed at the elaboration and defence of a PhD thesis. If eligible, graduates will be directed by faculty from the master's in the possible programmes of Sustainability, Architectural design or Urbanism.

¿What will you learn?

The master's degree is a one-year programme divided in two semesters:

1st term

M1. Urban Metabolic Flows	
City and Society	5
City and Water	5
City and Energy	5
M2. Strategies of Action	
Regenerate	5
Reinhabit	5
Refurbish	5

2nd term

M3. Design Studio	15
Weekly progress on a joint group project. Contribution to the group discussion with tasks of personal interest.	
M4. Final Dissertation	15
Individual research on a specific topic of the participants interests. Tutoring sessions with faculty working on similar research subjects.	