



POLITECNICO
MILANO 1863

DIPARTIMENTO DI ARCHITETTURA,
INGEGNERIA DELLE COSTRUZIONI
E AMBIENTE COSTRUITO

MATERIALBALANCE



RESEARCH

I EDITION 2023/24

MATERIAL BALANCE DESIGN

DIGITAL TECHNIQUES AND CIRCULAR INNOVATIONS IN ARCHITECTURE

Main topics:

What is Material Balance

Algorithmic Design

Performance Based Design

Digital Fabrication

*Soft Skills: Project
Communication*

Circular Material Scouting

Executive Design (DfAM)

*Public Space Experimental
Demonstrator*

Future Scenarios / Metaverse

Material Balance Protocol

Master I - II level

The master's course aims to train new **professionals** capable of approaching and managing today's **complex projects** by combining knowledge of **digital tools** with **emerging bio-based materials**, focusing on **circularity**.

The theoretical lessons aim to acquire cultural and technical-scientific knowledge which will be used for the experimental sessions with the most advanced and sustainable methodologies for the design, manufacture and prototyping of architectural systems.

Our students will become **unique** and **competitive figures** in the **national and international construction market**

The master is held in **blended** mode, with theoretical online and practical sessions in presence at the **MaBa.SAPERLab** of the ABC Department. Participants will be given an opportunity to do an internship at international companies and architectural studios which look at design experimentation and future scenarios.

March 2023 - February 2024 - 60 CFU

mad architects

Snøhetta



(A)MDL CIRCLE

BOLLINGER+GROHMANN

RIMOND



MATEREA
Automate the non-standard



Versy