**1:1 Interactive Architecture Prototypes**

MSc 2 Robotic Building applied to 100 Years Bauhaus Pavilion

**Tutors**
Henriette Bier

**Code** AR0850
**Credits** 12 ECTS
**Location** Dessau
**Excursion** Yes
**Costs** 300 EUR

**Course description**

Focus of this studio is on the impact of physically built robotic environments and robotically supported building processes on architecture. The studio operates at the scale of architectural inserts situated within the urban context. This semester the insert is the 100 years Bauhaus pavilion that will be built on the Bauhaus site in Dessau. It employs Design-to-Robotic-Production and -Operation (D2RP&O) processes that link design to materialization by integrating all functionalities (from structural strength, to thermal insulation and climate control) in the design of building components. New materials are developed for the robotic production of multi-material building components and novel robotic production and assembly tools are deployed for testing the blueprint of future robotic building.

D2RP&O establishes the framework allowing successful implementation of robotic production and operation at building scale. The main consideration is that in architecture and building construction the factory of the future employs building materials and components that can be robotically processed and assembled. Furthermore, D2RP&O processes incorporate material properties in design, control all aspects of the processes numerically, and utilize parametric design principles that can be linked to the robotic production and operation.

**Related courses**
AR0851

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