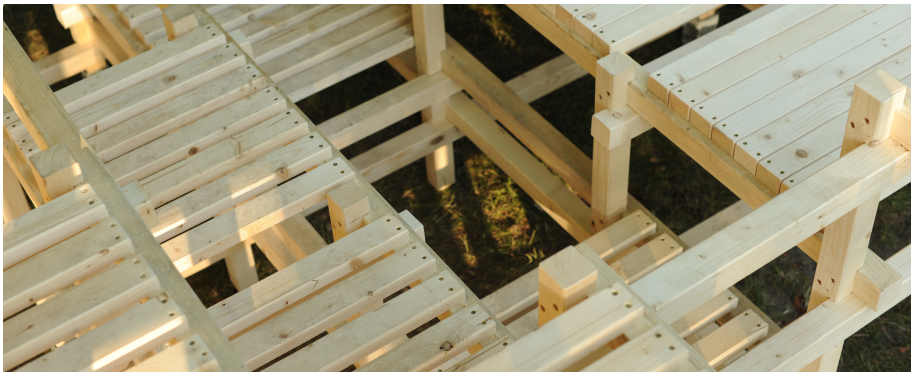
FH MÜNSTER
University of Applied Sciences

MSA FB Architektur
Münster School of Architecture



Bachelor

Winter 22/23

Augmented Construction 2022 - Design Technologies, Herzog & de Meuronp.r.n.

ba.m2.5 Design III

course

Dominik Nüssen MA. / Martin Schulte MA.

lecturer

Circular Digital Fabrication

title

The re-use of building materials to reduce a new building's carbon footprint is still not very present in architectural practice. This course aims to create a small scale hands-on example of circular construction, from mining parts to final assembly.

First, last semester's "Augmented Construction" pavilion is disassembled and it's parts harvested, sorted and stored to serve as a framework for a new design task. Since all parts are labeled and digitally filed, a data base will be set up to help coordinating the distribution among design teams. In small groups topics such as parametric modeling, wood joinery, CNC fabrication and wood preservation techniques are researched and presented.
The students will receive an introduction to the new handheld CNC router Shaper Origin, which combines CNC precision with the ease of an analogue handheld power tool. Through a series of manually and digitally produced prototypes the old parts will be transformed to a new outdoor furniture collection, which will be weather sealed to be used permanently on the MSA Campus.

topic

Bauteile wiederverwenden: Ein Kompendium zum zirkulären Bauen (IKE Institut Konstruktives Entwerfen)
Urban Mining und kreislaufgerechtes Bauen (Felix Heisel, Dirk Hebel)
Touch Wood: Material, Architektur, Zukunft (Ferrer, Carla, Hildebrand, ...)
https://hub.shapertools.com/
https://www.fabricate.org/

recommended reading