FH MÜNSTER
University of Applied Sciences

MSA FB Architektur
Münster School of Architecture

Bachelor

Winter 23/24

p.r.n. photo credits

## ba.m3.5 Building Energy and Services II

course

## Prof. Dipl.-Ing. Markus Pfeil

lecturer

## Gebäudeenergie II / TGA II

title

- Energy balance of a building
- Requirements and concepts for passive houses, zero-energy houses, and plus-energy houses
- Ventilation and air conditioning technology
- Cold production
- Biomass utilization
- Economic viability of sustainable measures
- Integrated planning
- Components of building services engineering and their integration into the building envelope
- Sustainable and holistic energy concepts

topic

Wärmen und Kühlen; Manfred Hegger, Joost Hartwig, Michael Keller
Birkhäuser, Verlag, 1. Auflage, 2012

Smart Bauen; Mike de Saldanha, Fraunhofer IRB Verlag, 1. Auflage 2021

recommended reading