COURSE DETAIL

SUSTAINABLE BUILDINGS: PRINCIPLES AND MODELING
Country Germany
Host Institution Technical University Berlin
Program(s) Technical University Summer
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Civil Engineering Architecture
UCEAP Course Number 102
UCEAP Course Suffix
UCEAP Official Title SUSTAINABLE BUILDINGS: PRINCIPLES AND MODELING
UCEAP Transcript Title SUSTAINBLE BUILDNGS
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

In contemporary building design, sustainability has emerged as a fundamental element. With the growing urgency of climate change and limited resources, the imperative to create buildings that prioritize minimal environmental impact and maximize human comfort has also intensified. Sustainable building can make a crucial contribution in this regard. But what defines a sustainable building and how can a building be designed in a sustainable way? The course provides both theoretical and practical learning materials to address this question. Participants will acquire general knowledge and skills in the fields of sustainable building and building performance simulations. They will be able to gain a deeper understanding of the interactions between various factors when designing or conducting evidence-based analyses of a building's sustainability. Key topics will include: principles of sustainable buildings, future trends, chances, and aims of sustainability by buildings, functional and aesthetical quality of buildings, systems for environment friendly energy supply, thermal comfort and indoor air quality, fundamentals of building performance simulations, and simulative analysis of buildings. The first two weeks cover the theoretical segment and the subsequent two weeks consist of collaborative work on small-scale projects with supervision from lecturers. Furthermore, there will be three excursions in Berlin, where attendees will experience real-life examples of sustainable buildings and plants.

Language(s) of Instruction
English

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Host Institution Campus
TUBS

Host Institution Faculty

Host Institution Degree
Host Institution Department

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