



**Internationales
Joint-Venture
Seminar**

Mit
**Integrated Sustainable
Urban Design
Masters**
-
IUSD, Univ. Stuttgart

**Lectures
Tutorials
Workshops**

Prof. Matthias Rudolph
LBA Christian Degenhardt (IUSD)

Master of Arts
in Architecture
Fundamentals of
**Climate
Responsive
Design**
Seminar

24/25

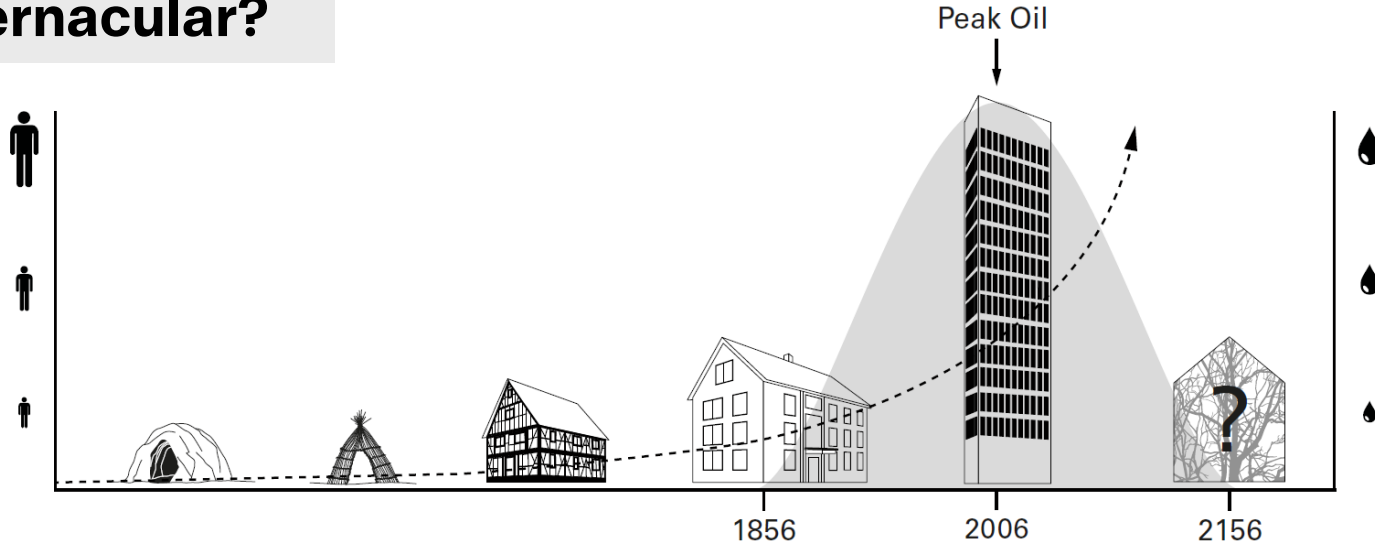


Toronto, Kanada



Shanghai, China

New Vernacular?



Investigation on the **interplay** between
location, ecology, material, space and form.

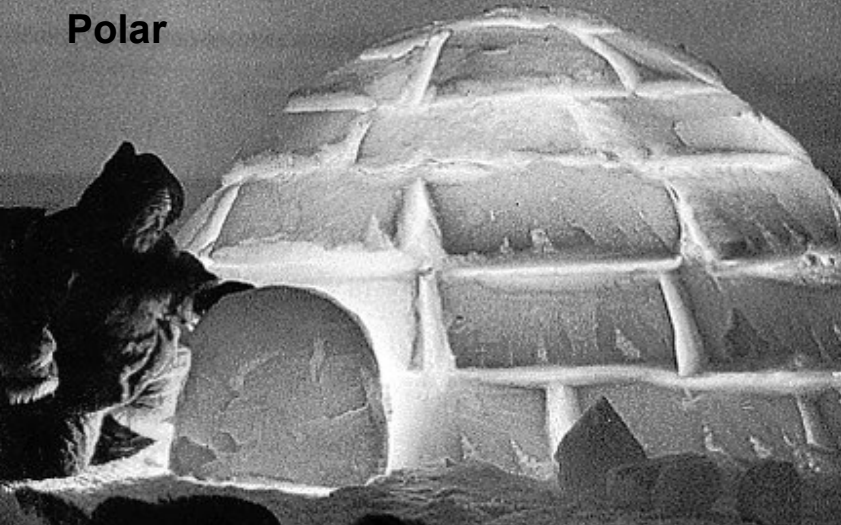
Applying climate responsive design principles
leads to buildings that **inherently**
contribute to the local architecture and cultural identity.

How can Design respond to Climate?

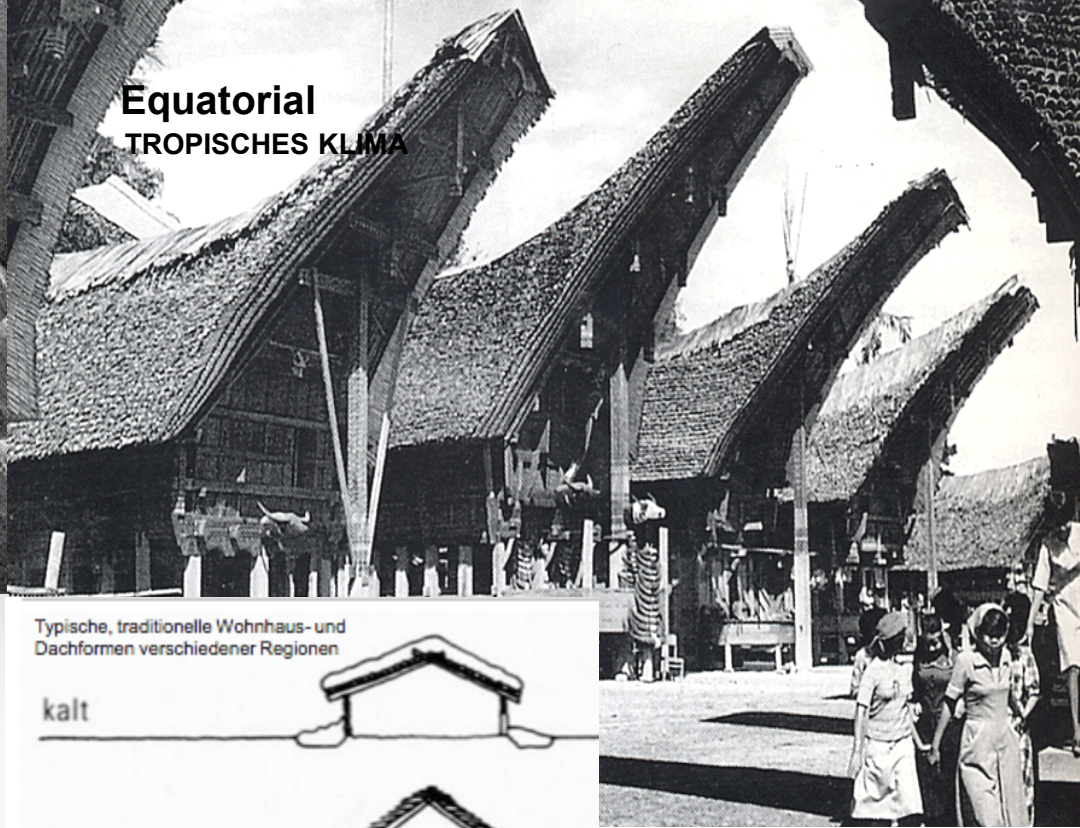


French School, Damascus Syria
Architect: Ateliers Lion - France, Paris

Polar



Equatorial
TROPISCHES KLIMA



Arid
WÜSTENKLIMA



Typische, traditionelle Wohnhaus- und Dachformen verschiedener Regionen

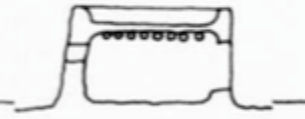
kalt



gemäßigt



trocken



tropisch



Klimagerechte
Architektur

Köppen-Geiger Climate Classification

Af Am As Aw equatorial

BSh BSk BWh BWk arid

Cfa Cfb Cfc

Csa Csb Csc warm temperate

Cwa Cwb Cwc

Dfa Dfb Dfc Dfd

Dsa Dsb Dsc Dsd boreal

Dwa Dwb Dwc Dwd

EF ET polar

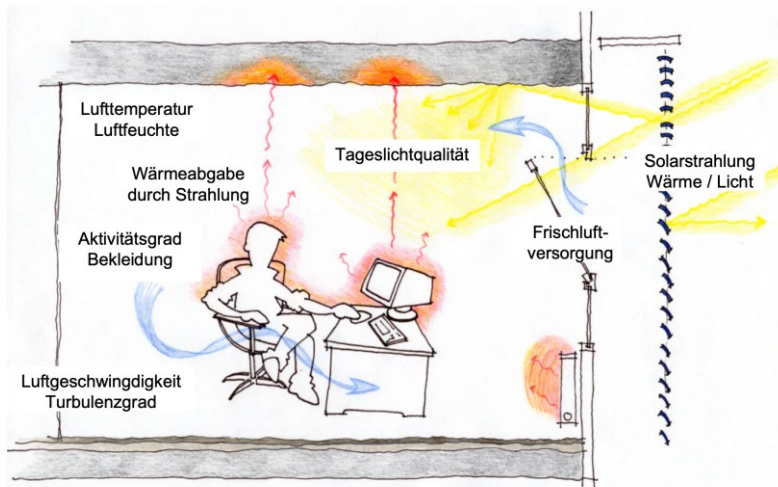
Source: koeppen-geiger.vu-wien.ac.at
(c) Kottek et al. (2006), Rubel et al. (2017)



Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image Landsat / Copernicus
Image IBCAO

Climate as design parameter for Sustainable Architecture

How can we take advantage of local climate and site conditions



**maximize user comfort
but minimize the environmental impact ?**

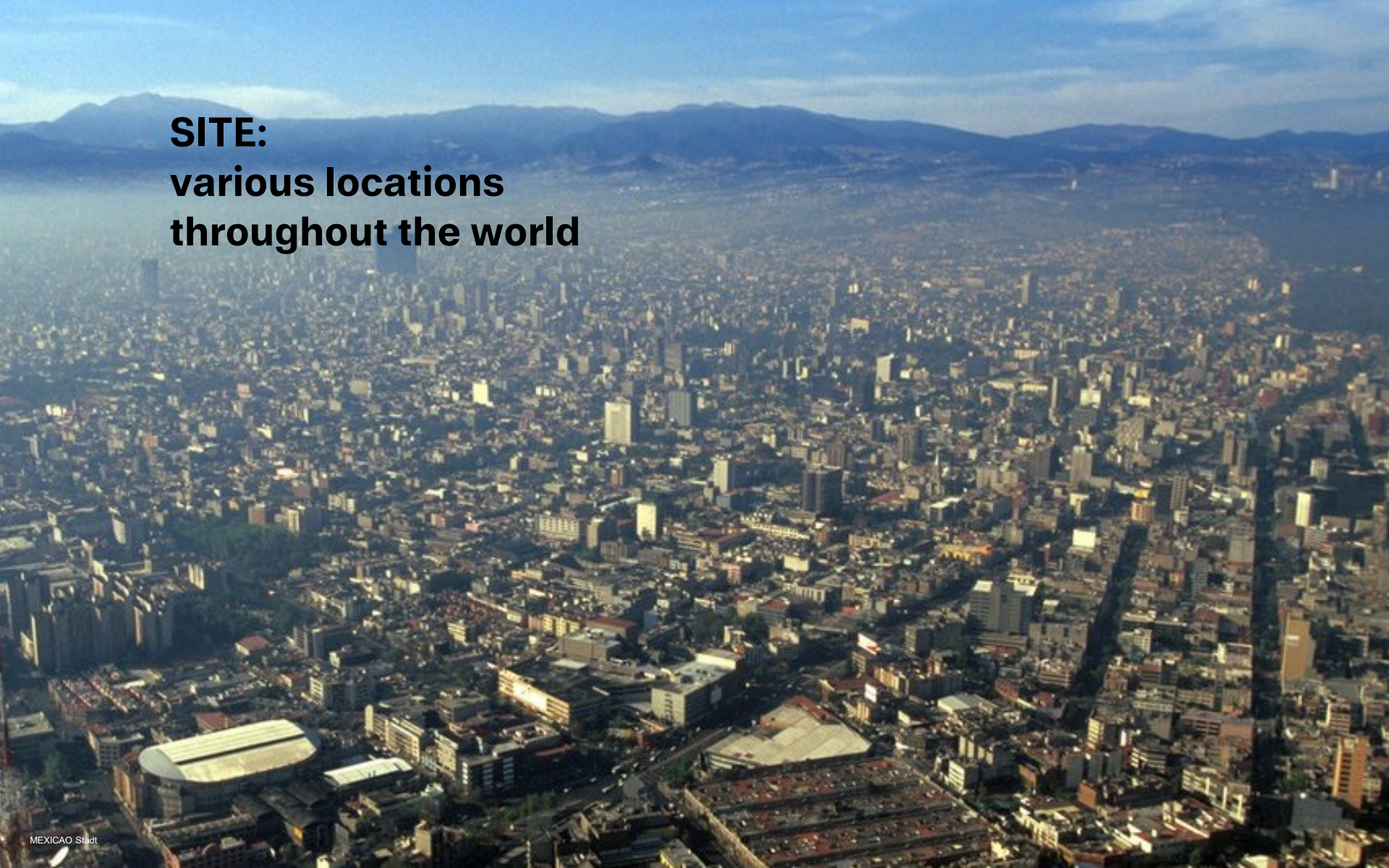
International & Interdisciplinary Teams



Workshops



SITE:
various locations
throughout the world



Prozess

CONCEPT

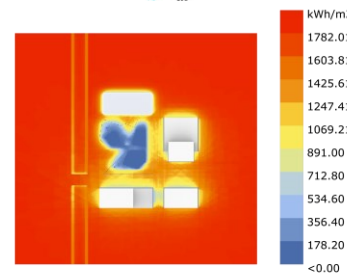
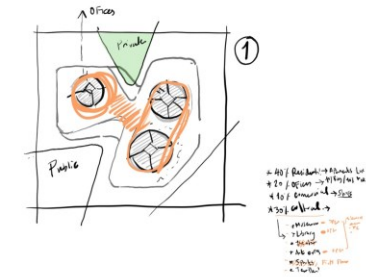
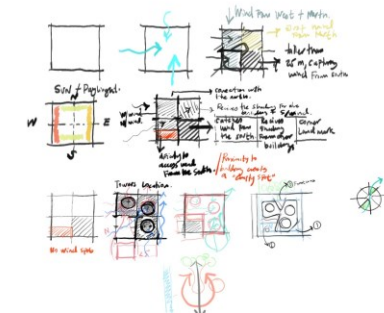
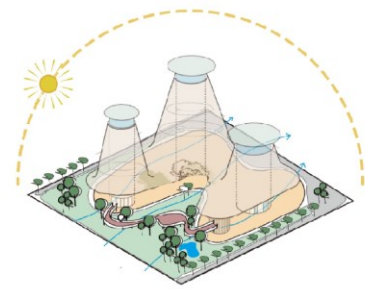
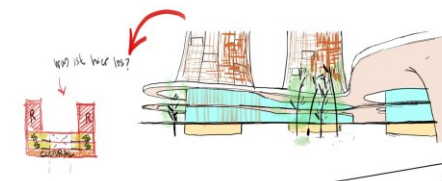
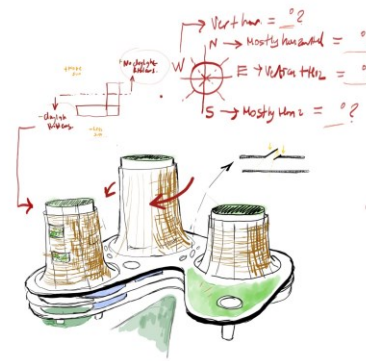
- Klima und Standort analysieren
- Grundlagen erlernen
- Nachhaltigkeitsziele definieren
- Konzept entwickeln

PLAY

- Strategien anwenden
- Varianten entwickeln
- Form Follows Climate

TEST+

- Daumenregeln anwenden
- Online und digitale Tools anwenden
- Entwurf weiterentwickeln

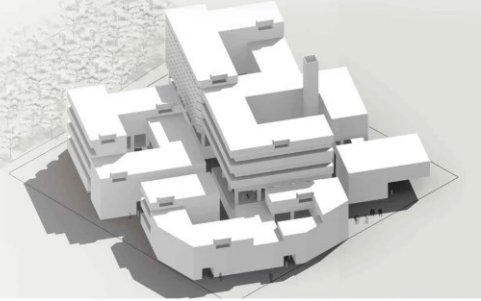


Radiation Analysis
BANGKOK_THA_1993
1 JAN 1:00 - 31 DEC 24:00



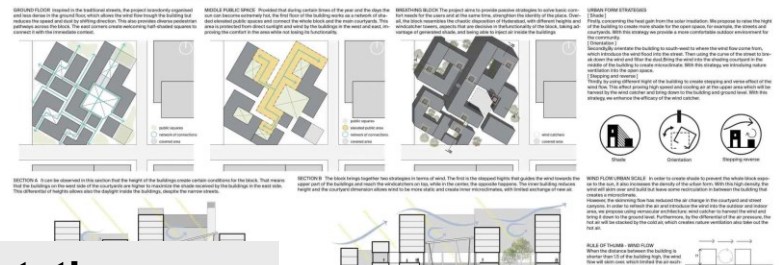
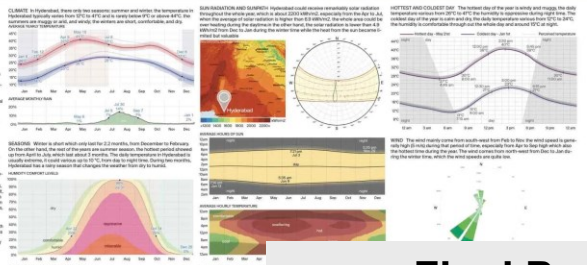
Hyderabad's Sunshade Cooling Blocks

Sustainable urban development to reduce the heat gain and improve the livability and comfort of spaces

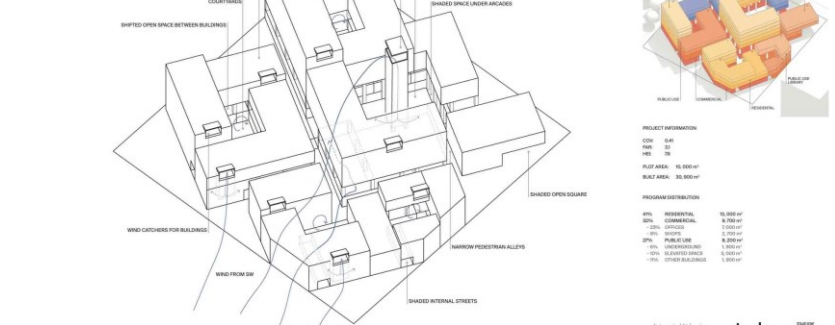
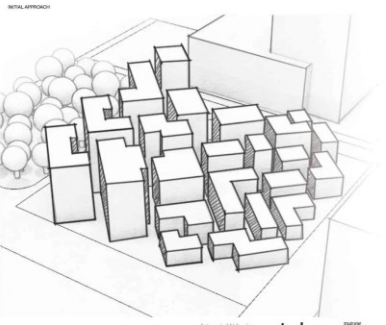
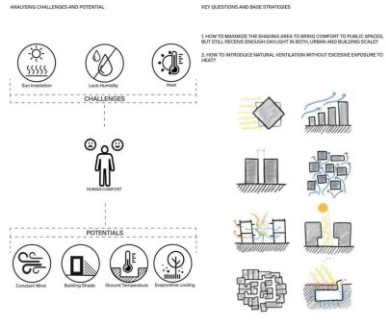
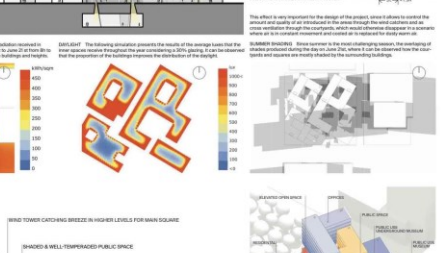
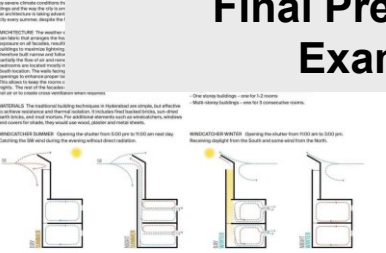
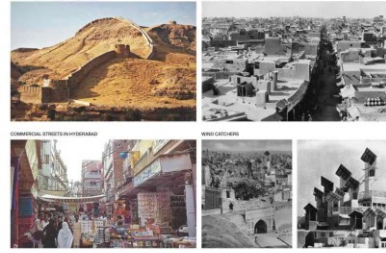


HYDRABAD PAVILION
 Location: Sec 10, Hyderabad, India
 Client: IIT Hyderabad
 Architect: g+t+ke
 Program: Pavilion
 Area: 10,000 sqm
 Status: Completed

DESIGN BRIEF
 The pavilion is to be a landmark building in the city of Hyderabad, India. It is to be a symbol of the city's growth and development. The pavilion is to be a landmark building in the city of Hyderabad, India. It is to be a symbol of the city's growth and development. The pavilion is to be a landmark building in the city of Hyderabad, India. It is to be a symbol of the city's growth and development.



Final Presentation Examples





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MA SEMINAR

gt+ke

Lehrende

Prof. Matthias Rudolph

LBA Christian Degenhardt

Termine: WS 24/25 - Fr. 14:00 Uhr – 17:00 Uhr

Kick-off: Fr.18.10.2023 – 15:00Uhr

HS 301, Neubau 1

Leistung: Vorlesung, Übung, Workshops
und Präsentation in Englisch

Phase 1: *Climate and Location*

Phase 2: *Site and Strategies*

Phase 3: *Building Design*

Phase 4: *Communication + Documentation*

Anmeldung: E-Mail bis Do. 17.10.2024

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Das Seminar ist ein Joint-Venture Programm für
MA-Studierende der ABK Stuttgart und
MSc-Studierende des IUSD-Programms der
Universität Stuttgart