Digital Urban Simulation

Mondays 14:00 - 18:00
063-1358-17G | 4 ECTS*

Digital Urban Simulation

In this course students analyze architectural and urban design using current computational methods. Based on these analyses the effects of planning can be simulated and understood. An important focus of this course is the interpretation of the analysis and simulation results and the application of these corresponding methods in early planning phases.

The students learn how the design and planning of cities can be evidence based by using scientific methods. The teaching unit conveys knowledge in state-of-the-art and emerging spatial analysis and simulation methods and equip students with skills in modern software systems. The course consists of lectures, associated exercises, workshops as well as of one integral project work.

20.02.2017	Introduction into Analysis and Simulation Ex> Tool: Rhino Grasshopper
27.02.2017	Connectivity, Accessibility, Path Detection, Urban Networks. Ex> Tool: Rhino Grasshopper + Cheetah ConfigUrbanist addon
06.03.2017	Visibility: Isovist Analysis, Urban Attractors Ex> Tool: Rhino Grasshopper + SmartSpaceAnalyzer (or DecodingSpaces)
13.03.2017	Guest lecture - Dr. Beatrix Emo
20.03.2017	Seminar Week
27.03.2017	Urban Climate I Ex>Tool: Rhino Grasshopper + LadyBug
03.04.2017	Urban Climate II Ex>Tool: Rhino Grasshopper + LadyBug
10.04.2017	Guest Lecture
08.05.2017	Final consultation
15.05.2017	Project Presentations, Final Critiques

Where
HIT H 31.4 (Video wall)

Supervision

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*Total 120 h = 4 ECTS
5 Exercises: 50% (documentations)
Presentation of final project: 25%
Written documentation of final project: 25%

The most recent outline will be found on www.ia.arch.ethz.ch

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