BACKGROUND:
In late Fall of 2015 construction of a new, large exhibition hall on the grounds of the International Fair in Frankfurt/Germany will begin; it will be the realization of the winning entry of an invited architecture competition among twenty firms and six finalists. The site is located between the Fair’s Cargo Center and the so-called Hall 11, a recently completed large exhibition space designed by the firm HASCHER JEHLE Architektur, Berlin. In immediate proximity are several iconic buildings of the fairground complex, among them the so-called ‘Torhaus’ by Berlin firm Unger’s, the Messeturm high-rise by the Chicago firm of Murphy-Helmut Jahn, and arguably Europe’s most beautiful large span exhibition hall, the 38,000m² Hall 03 by the British firm of Nicolas Grimshaw.

PROJECT:
Students in this studio will have the opportunity to design a modern, large-span, multi-level exhibition hall utilizing the complete, and original design brief documents of the invited architecture competition of summer of 2014.

STUDIO FOCUS:
The focus of the studio will be on the design of a two-level 40,000 m², column-free exhibition hall, incorporating the fair’s monorail people-mover system; detailed attention of the studio will be twofold:

a) Design of an intelligent long-span roof structure, including systems of daylighting, shading, glare-protection, advanced thermal control, and smoke evacuation;

b) Concept and design integration of an advanced low-energy, interior comfort climatic and ventilation system for large spaces and its intelligent air delivery strategy, based on the German energy saving code EnEV 2013.

- Extensive studies of space qualities, suitable structural systems, studies of primary-structural materials for lower and upper level exhibition hall, and daylighting are required.
- The construction of physical models at various scales will be an integral part of the studio requirement.
- Climate studies and energy simulation of parts of the facility using e-Quest, Vasari (Autodesk), Energy 10, Therm® and ClimateConsultant are required.
- The first two weeks of the studio will focus on case studies of long-span structural systems and large space environmental systems, analyzing Hall 26ii of Germany’s Hannover Fair, the world’s largest exhibition compoundii. (Architect: Thomas Herzog, Munich.)

This is a group project of two students working on one design.
Site model construction will be an all-class project.
All project documentation for this studio project will be required in metric scales.

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i [http://www.fnp.de/lokales/frankfurt/Baubeginn-2016-Messe-bekommt-eine-neue-Halle;art675,1028284](http://www.fnp.de/lokales/frankfurt/Baubeginn-2016-Messe-bekommt-eine-neue-Halle;art675,1028284)


iii [http://www.hfusa.com/fairgrounds](http://www.hfusa.com/fairgrounds)