ARCH 8803 AB  Advanced topics in Building Performance Assessment

MON Time TBD, HINMAN 228
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This course is primarily aimed at 2nd year MS-HPB students and PhD-HPB students with an interest in practical applications. It builds on two courses that should be take the year before:
- ARCH 6226 AG: Green Construction (Fall)
- ARCH 6242 Building Physics Modeling (Fall)
- ARCH 6241: Building Simulation in Design Practice (Spring)

These courses are prerequisites for this course.

The goal of the course is to deepen the students’ knowledge and skills in building (energy) performance assessment via real life projects studied in a project based learning setting. One or two projects may originate from a firm that will actively contribute as problem owner in the course. The projects will differ every year.

Depending on size of the projects the class will deal with 3-4 projects.

Course Structure
The class is conducted in a PBL style. The problem is introduced and targets are assigned. The class works as one or more (sub)teams that study different aspects and combine their findings in a final report. The teams report and get guidance in weekly sessions, and organize working sessions as needed.

Grading
Grading will be based on the team project reports (one per module) and the identified contributions by each team member. The main criterion is the efficient application of modeling in real life projects, with emphasis on how the HPB discipline integrates with other disciplines.

Tentative Projects in 2017:

1. Uncertainty Analysis “light”
2. Deep auditing and calibration
3. Urban energy models
4. Co-Simulation approaches or Grasshopper design exploration