Energy Analysis with Revit and Green Building Studio

Course Length: 1 day

Energy efficiency, a key topic in recent years, continues to grow and gain considerable popularity. Our understanding regarding energy consumption and its effects on the environment has broadened. We can also see how energy efficiency brings savings to building owners and operators, costing them less to operate their buildings. Using building performance analyses, we can explore architectural ideas and options for buildings, and have an idea of how each will perform from an energy consumption perspective. Starting at the outset of a design, using as little as a building shape and a location, we can work towards a building that meets client requirements and demands less energy to operate. Our architectural design decisions can be simulated to see their effect on energy performance, and used to create more energy-conscious design targets.

Attendees of the Energy Analysis with Revit and Green Building Studio training course will use the Energy Analysis tools of Revit and Green Building Studio to help explore the impact of architectural design decisions, such as those affecting shell construction, form, and orientation, as well as the potential energy performance of a project and optimization of designs. Working with both conceptual and developed models, attendees explore how to harness the Revit Building Information Model to make architectural design decisions that have a positive impact on the energy performance of a building.

Students will learn how to:

- Run an energy analysis on a conceptual mass and interpret the results.
- Convert a conceptual mass into building elements and run an energy analysis in Building Element Analysis Mode that takes thermal properties of project materials into consideration.

Course description shown for Autodesk Revit 2015. Topics, curriculum, and/or prerequisites may change depending on software version.
• Define rooms, spaces, and HVAC zones in preparation for exporting data to a gbXML file format for further analysis in other engineering analysis software.
• Create and manage analysis projects in Green Building Studio.

**Prerequisites:**
Students should be comfortable with the fundamentals of the Autodesk® Revit® software as taught in the Autodesk Revit Architecture Fundamentals training course or equivalent. Knowledge of basic techniques is assumed, such as creating standard element, copying and moving elements, creating and working with views, etc.
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