Lighting Analysts
illumination engineering software
from revalize

Basic ElumTools for Interior and Exterior Lighting

This hands-on training is designed for lighting designers seeking to leverage **ElumTools** within **Autodesk Revit** for comprehensive lighting analysis. Participants will explore ElumTools's integration of **AGi32's industry-standard calculation engine** to perform point-by-point illuminance and emergency lighting calculations. The course also covers exterior lighting design, including **light trespass** and **color temperature studies**, with a special feature on evaluating lighting for vertical surfaces like art walls. Through real-world examples and workflows, attendees will gain practical skills for interpreting and presenting lighting calculations effectively.

Prerequisite: While no ElumTools experience is required, attendees should have basic Revit knowledge or have taken our Introduction to Revit and ElumTools for Lighting Designers course.

Topics Covered:

1. Interior Lighting Design
    a. Fundamentals
        i. Luminaire Validation
        ii. Room Validation
        iii. Material Properties
        iv. Calculation Points
        v. Performing Calculations
    b. Types of Calculations
        i. Point-by-point Illuminance
        ii. Emergency Lighting
        iii. Point-in-time Daylight Analysis
        iv. Art Wall (Vertical Planar Surface) – Comparing Calculated Results with Product Data Sheets
        v. Stairwell Lighting
        vi. Layout Assistance (Automatic Luminaire Placement)
    c. Interpreting Results
        i. View and interpret results (points/special maps) Viewing and Interpreting Calculation Results (Point Values and Special Maps)
        ii. Generating Revit Schedules
        iii. Using the ElumTools Calculation Viewer
2. Exterior Lighting Design
    a. Setup and Validation
        i. Luminaire Validation
        ii. Site Plan Views
        iii. Calculation Point Boundaries
        iv. Calc Points on Lines
        v. Volume-Based Calculations
        vi. Projected Points on Topography

    b. Real-world Examples
        i. Light Trespass Assessment at Property Lines
        ii. Multi-head Pole-mounted Fixture

3. Advanced Topics & Best Practices
    a. Surface Validation in the ElumTools Calculation Viewer (e.g., Ceilings, Curtainwalls)
    b. Alternate Calculation Methods:
        i. By Revit Room/Space
        ii. By Selected Elements
        iii. By View
    c. Calculating Single vs. Multiple Spaces (Pros & Cons)
    d. Calculations With vs. Without Furniture (Pros & Cons)
    e. Surface Property Configuration:
        i. By Revit Material (Advanced)
        ii. By Category Overrides (e.g., IES 20/50/80 Rule)
    f. Calc Points Revit Family – Placement Requirements and Visibility Controls for Host and Consultant Models
    g. Manufacturer Content and Photometric Data Management
        i. Selecting and Using Manufacturer IES Files
    h. Introduction to ElumTools Lighting Fixture Familie