Exterior Architectural 3D Visualization in Unreal Engine 5

Summary

3D visualization in architecture is one of the methods used by architects, engineers and designers to communicate their ideas to clients, developers and investors. The term used for this type of visualization amongst architectural visualization professionals is "Archviz." There are many tools used by Archviz professionals to achieve the final result; like V-Ray, Lumion, D5-render and Twinmotion.

However we won't be focusing on any of these tools in this course. Our main focus will be on how to use Unreal Engine to achieve the best looking 3D visualization possible. Before we move further, I'd like to establish a naming convention that may be used interchangeably throughout this document and course. From time to time I will use the acronym "UE5" as a replacement for Unreal Engine 5. Now that that has been established? Let's move on to more pressing matters.

So why use UE5 over other rendering engines? The short answer is real-time rendering, versatility and flexibility. Unreal Engine 5 is not just a rendering tool, but it can also be used for simulation and other graphical visualization. The beauty of using UE5 is that your 3D assets can be used in many ways. All the other aforementioned software like Lumion do not offer the same flexibility you get from Unreal Engine 5.

By the end of this course you will gain a good understanding of how to take your 3D models from Revit to 3DS MAX and then into UE5 where we will create the final 3D visualization. The rest of this document will give you the outline and breakdown of the course material.

Course Breakdown

Learning Context

Disclaimer: To sign up for this class you must have some understanding of 3D modeling software and 3D modeling conventions. 3D modeling outside of Unreal Engine 5 will not be covered in this course. Project files used and shown in the course will not be provided to students. Project files will only be provided to students at an additional cost.

CAD DATA EXPORT PREP

We will briefly discuss CAD data formats and how they impact your Unreal Engine 5 projects

- **AUTODESK REVIT**
  We will discuss how to export our CAD data from **REVIT** for use inside UE5, and some useful tips to consider before exporting your CAD data from **REVIT**

DATASMITH PLUGIN

- **QUICK GUIDE**

  We will go over what Datasmith is, and why you may want to use it on your Unreal Engine projects. We'll also discuss the Pros and Cons of using the Datasmith Plugin

- I**NSTALLATION for 3DS MAX**

  We'll go over a quick guide on how to install the **Datasmith** exporter plugin for **3DS MAX** and other 3D packages.

CAD DATA PREP

- **3DS MAX**

  We will go over how to import our **REVIT** CAD data into **3DS MAX,** and then touch on how to prepare and organize the data for export

- **DATASMITH EXPORT**

  We will touch on how to export **DATASMITH** files from **3DS MAX**, and what options are available in the plugin.

UNREAL ENGINE 5

- **INTRODUCTION**

  Discussion on what Unreal Engine is, and use cases in architectural visualization

- **INSTALLATION**

  Quick guide on how to install UE5

- **PROJECT SETUP**

  We will go over how to set up the UE5 project for maximum visualization quality.

- **DATASMITH FILE IMPORT**

  A brief demonstration on how to import **DATASMITH** files inside Unreal Engine 5, and what plugins you need to enable inside UE5 for easy imports.

- **STATIC MESH ADJUSTMENT**

  We'll touch on how to make minor adjustments to your CAD data once imported into Unreal Engine 5.

- **MATERIALS**

  How to set up basic materials, and some complex methods for achieving better details in materials

- **INITIAL LIGHTING SETUP**

  We'll touch on how to set up exterior lighting with multiple methods

SPEEDTREE 9

- **INTRODUCTION**

  A brief introduction to **SpeedTree** and why you may want to add it to your Unreal Engine workflow.

- **MODELS**

  We'll touch on basic tree modeling and the **SpeedTree** library

- **EXPORT**

  Demonstration on how to export tree models from SpeedTree for use in UE5, and some pitfalls you may want to avoid.

UNREAL ENGINE 5

- **VEGETATION/FOLIAGE**

  Demonstration on how to use the foliage tool/mode in Unreal Engine 5

- **SPEEDTREE IMPORT**

  How to import your **SpeedTree** models into Unreal Engine 5

- **WIND SETUP**

  We will touch on how to use the WIND tool in Unreal Engine on our vegetation to bring more life to UE5 the scene.

- **FINAL LIGHTING SETUP**

  We'll go over the final lighting setup, and some useful tip that will help you achieve better results.

- **RENDERING**

  We'll go over things we need to consider before choosing the final rendering method and output

- **SEQUENCER**

  We'll briefly go over what the **Sequencer** is, and how

- **MOVIE RENDER QUEUE AND SETTINGS**

  Finally we'll finish out the course with an introduction to the **Movie Render Queue**, settings and how to save our final output.

COURSE PRICING

The breakdown for the pricing of course is listed below.

- Full pre-recorded Video-On-Demand lessons (**$149.99**)
- Full pre-recorded Video-On-Demand lessons + 1 full hour of 1-on-1 Q&A session (**$199**)
- Full pre-recorded Video-On-Demand lessons + full project UE5 project file (**$399**)

If you have further questions about the course please reach out to me at info@t-dap.com