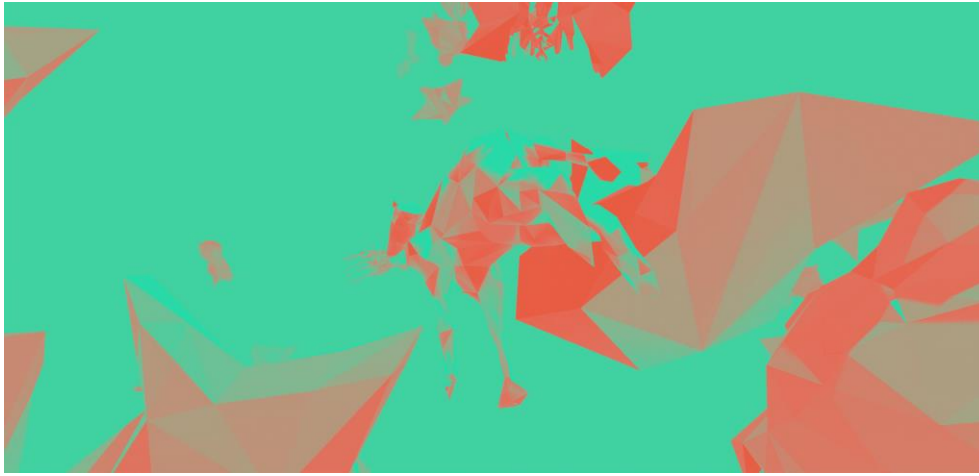


# Course Syllabus

[Jump to Today](#)



## Play

Fall 2017, Tuesday 5:00-7:00 pm, 200 Buell  
with Farzin Lotfi-Jam, fl2307@columbia.edu

## Course Description

This Visual Studies workshop borrows ideas and work-flows from the gaming industry, and tests their capacities as tools, mediums and perceptual devices for the production, representation and possible diffusion of architecture into a virtual reality.

Part design investigation, part technical workshop, students will connect standard 3D architectural packages with the Unity gaming development platform and the Oculus Rift Virtual Reality Headset. Through lectures, demos and workshops, students will be provided with the conceptual framing and technical knowledge required to assist them in the production of rich and interactive games that push the conceptual limits of virtual reality.

## Objectives

What new forms of activity can be envisioned for a virtual body, devoid of physical realities, or the burden of sensation? Where does the architectural object stop and its environment start, when one is tasked with the design of a world? What new forms of communication can be envisaged when publishing architectural projects through the medium of interactive games? And how does this all feel, if our exploration of this world is mediated by a Virtual Reality headset?

Students will acquire:

- A critical introduction to VR and gaming engines and their potential applications for architectural production.
- A basic understanding of scripting concepts and techniques in Unity C#.
- Experience creating complex environments in Unity.
- Ability to build and export games to Oculus Rift Virtual Reality headset, for immersive interactions.
- Ability to integrate new skills into existing architectural design work-flows.

## Output

The course will culminate in a jury review. Students will work in groups of two to three using the tools and techniques of the course to produce an immersive, interactive experience for the jury.

Respond to one of these five conceptual prompts:

### 1. An experience that explores Representation

Rethinking narrative, architecture represented as a series of interactive ‘episodes,’ i.e. Manhattan Transcripts.

### 2. An experience that explores Perception and the Body

You can almost fly, hopping high ever so gently. Gravity is at an all time low, you float and flutter effortlessly from lofty perch to perch. Or, what’s it like to be virtually affected: digitally drunk, anxious, sleepy, high, angry, blissful, or horny? Can a digital experience impact our physical being? Relive the same experience in different digital states.

### 3. An experience that explores Physical Laws (or How to be God)

You have a special super power, as soon as you approach anything, it implodes and collapses in on itself, very very slowly. Or, start with the design of physical laws, work backwards into the architectural object.

### 4. An experience that explores Disciplinary History

Take an unbuilt historical project, and build it. This could entail building an environment that synthesizes all available forms of representation, or just inhabiting one key piece of representation. A parametric No-Stop City?

### 5. An experience that explores Space plus Sound/Light

Sound mapping: adapt the conventions of reality TV sound design to produce a dramatic spatial experience. Or, light mapping: borrow perceptual devices from the visual arts and redraw iconic buildings for new impressions.

## Schedule

Weekly format.\*

17:00-17:15 Mini Presentation

17:15-18:00 Tech Demo 1

18:00-18:15 Questions/Queries

18:15-18:45 Tech Demo 2  
18:45-19:00 Questions/Queries

**Wk 0** Introduction

**Wk 1,2** Objects

**Wk 3,4** Environments

**Wk 5,6** Interaction

**Wk 7,8** Concepts

**Wk 9,10** Desk Crits/Debug

**Wk 11,12** Mediation/Present

\*Subject to change.

### **Assessment**

Given the nascent nature of this research within the field of architecture, there may quite literally be 'debugging' issues, unfortunately this is the nature of the course and will not serve as an excuse for incomplete submissions.

Students will be assessed based on the weekly development of their research ambitions and the quality of their final project.

### **Course**

20% Attendance and Participation

20% Weekly Assignments and Tasks

60% Final Project

### **Final Project**

Final projects will be evaluated based on:

- Response to conceptual prompt.
- Clarity and impact of experience.
- Quality of 3D objects/worlds.
- Quality of interactive behaviors.

### **Technical Resources**

Unity

<https://unity3d.com/learn/tutorials>

Unity C#

<http://catlikecoding.com/unity/tutorials/>

<http://wiki.unity3d.com/index.php/Scripts>

3ds Max

Video tutorials - <https://www.youtube.com/user/3dsMaxHowTos>

VR

<https://developers.google.com/cardboard/unity/> (Links to an external site.)  
[Links to an external site.](#)

### **Cool Projects**

<http://slimetech.org/> (Links to an external site.)  
[Links to an external site.](#)

<http://www.molleindustria.org/blog> (Links to an external site.)  
[Links to an external site.](#)