ULTRAREAL

A4534x TECHNIQUES OF THE ULTRAREAL
A4542x IMAGINING THE ULTRAREAL

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Spring 2014
Monday 8-10PM
Ware Lounge
Office Hours: Alternating Saturdays and Mondays

Description

The use of perspective and rendering is often an afterthought. With the abundance of 3D modeling software and the ability to see every angle of a project instantaneously, renderings are often a last minute tool for representation. This class challenges the participants to not only think of rendering as a method of presentation, but also a tool for design. We encourage the use of perspective and rendering early and often in the process. In addition to learning techniques for creating ultrarealistic renderings, we will teach a workflow that encourages early exploration. We will focus on color, light, material, context, reflection, and opacity throughout the course of the entire design. Will will look for inspiration in many places, including photography and cinematography.

The class will use V-Ray for 3D Studio Max as the main engine for exploration, but will also encourage the use of other modeling applications, post processing software, and 3rd party plug-ins. No knowledge of V-Ray is required, but students should be able to model in an application of their choice (Rhino, Maya, etc.)

Class Structure

At the beginning of each class, we will show and discuss examples of student work. After this, each class will consist of an occasional lecture, followed by a software demo. Other instructional video tutorials will be found online at digitalconceptsnyc.com. There will be additional required working sessions and desk crits with critics and assistants.

Session A will start to explore the basic aspects of the rendering process, including but not limited to modeling, cameras, lights, and material. Session B will expand on these ideas and delve deeper into each aspect, as well as introduce additional techniques. Students who take session B are **highly encouraged** to take session A.

Project

Students will be encouraged to work alone or in small groups for the semester. The project will consist of a small scale pavilion or other architectural object that will be developed and presented through rendering. Images will be uploaded to a team website each week, and critics and assistants will provide feedback.
In addition to the semester long project, there will be small assignments assigned 2-3 times a month. Each group must create a Tumblr blog and upload assignments and progress images every week.

Schedule

January 27th

Introduction to the Class - Review Syllabus
Website Explanation
Session A and/or B Explanation
Drawing demo and review of first assignment
Questions
Due Next Week: Sketches and 3D massing of project, site and proposed perspectives

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February 3rd - ULTRAREAL BOOTCAMP

DEMONSTRATION: RHINO

Modeling techniques, specifically for adding detail and managing large models

DEMONSTRATION: 3DS Max / V-Ray

Setting up scene for test rendering and Optimal V-Ray settings
Basic materials - White 200 and Glass
Basic lighting - daylight systems
Basic cameras

REVIEW: First Weeks Assignment

Due Next Week: Rendered views of model with basic materials and lighting

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February 10th

LECTURE

Composition and site context

DEMONSTRATION

Advanced camera settings
Model management, scene states, batch rendering
Adjusting Lighting
Refining views
Due Next Week: Rendered views of using new techniques

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February 15th SATURDAY DESK CRITS with Critics

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February 17th

LECTURE

Material quality- reflectivity, transparency, refractivity, texture

DEMONSTRATION

Advanced materials
Procedural maps vs bitmaps
Bitmap selection
Environment maps
Due Next Week: Rendered views of model with at least 1 refined material

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February 24th

DEMONSTRATION

Procedural Materials

DEMONSTRATION

Post processing
Material IDs

Using V-Ray render elements
Masking and selection sets
Due Next Week: Final midterm images
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----------March 3rd - MIDTERM REVIEW, END OF SESSION A----------
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March 10th
LECTURE
Detailed Materials
Environment Materials
High-Def Images
DEMONSTRATION
Advanced materials
Using Crazy Bump
Using Photoshop to create custom bitmaps
Due Next Week: Rendered views with updated materials
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March 17th - NO CLASS, SPRING BREAK
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March 24st
LECTURE
Environments and Context
DEMONSTRATION
Advanced context modeling
Forest Pack Pro plug-in
V-Ray environment fog, containers
Due Next Week: Rendered views with updated context
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March 31th
LECTURE
Lighting and Atmosphere
DEMONSTRATION
Advanced lighting
Interior lighting
IES profiles
Using V-Ray RT to evaluate lighting
Due Next Week: Nighttime views of model
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April 5th SATURDAY DESK CRITS with Critics
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April 7th
DEMONSTRATION
Advanced post processing
Using After Effects / Magic Bullet
Due Next Week: First draft renders of final images
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April 14th
DEMONSTRATION
Final composition techniques
Color management
Print management in Photoshop
Questions and Troubleshooting
Due Next Week: First Draft of Final Images
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April 21th
DESK CRITS
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April 28th - NO CLASS, FINAL STUDIO REVIEWS
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May 5th
DESK CRITS
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Friday, May 9th (TENTATIVE)
FINAL REVIEW