COURSE NO., HOURS, AND TITLE:  ARC 571-3
Architectural Visualization

COURSE DESCRIPTION:

This course is designed to give the student a fundamental understanding of the practices of 3D architectural modeling and visualization. Themes emphasized are: 3D modeling; still frame rendering; animation production; image editing and post production. Prerequisite: Enrollment in M. Arch. program.

PREREQUISITE TO: None

COURSE OBJECTIVES:

1. Demonstrate the ability to create a 3D architectural model and site model of moderate complexity.
2. Demonstrate the ability to develop and apply realistic textures to a 3D model.
3. Demonstrate the ability to light a 3D model at an advanced level using both natural and artificial lighting techniques.
4. Demonstrate a working understanding of the virtual camera tools in the 3D application to compose a realistic image.
5. Demonstrate the ability to produce still and animated photo-realistic renderings from a 3D model.
6. Demonstrate a working understanding of image editing and post production tools used in the architectural visualization industry.
7. Discuss various computer applications in architecture and interior design.
8. Demonstrate an intermediate level of skill in the use of 3D modeling, rendering, animation and post production applications to complete a design visualization project.

TOPICAL OUTLINE

<table>
<thead>
<tr>
<th>Topics</th>
<th>Percentages of Time (Estimated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. 3D Modeling</td>
<td>30%</td>
</tr>
<tr>
<td>II. Lighting</td>
<td>20%</td>
</tr>
<tr>
<td>III. Shaders / Texturing</td>
<td>20%</td>
</tr>
<tr>
<td>IV. Rendering</td>
<td>20%</td>
</tr>
<tr>
<td>V. Post Production</td>
<td>10%</td>
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TEXTBOOKS

Required:

Title: Achieving Invisibility: The Art of Architectural Visualization and Rendering
Author: Adam Crespi
Publisher: Fairchild Books
ISBN: 978-1563675416

Title: 3ds Max 2008 – Architectural Visualization – Beginner to Intermediate
Author: Brian L. Smith
Publisher: 3DATS (December 2007)

**Recommended:**
Title: Photoshop for Architectural Rendering
Author: Horst Sondermann
Publisher: Springer
ISBN: 978-3-211-71591-8

Title: Digital Lighting and Rendering – 2nd Edition
Author: Jeremy Birn
Publisher: New Riders Press
ISBN: 978-0321316318

**SOFTWARE**
MicroStation by Bentley Corporation www.bentley.com – This will be the primary modeling package for this course. A fully licensed copy of this software will be provided to each student at no charge.

vRay version 1.50 SP2 or higher by Chaos Group www.chaosgroup.com – This will be the primary rendering engine for this course.

Photoshop version CS3 or higher by Adobe Corp. www.adobe.com – This will be the primary image editing for the course.

3D Studio VIZ version 2008 or higher by Autodesk www.autodesk.com – This will be the primary production software for this course.