



Course title and number	VIST 372: Creating Digital Environments
Term	Spring 2016
Meeting times and location	11:10 – 12:50 TR Room 107B Langford Building A

Course Description and Prerequisites

Introduction to the terminology, principles and practices used in the creation of 3D models; mathematical principles of geometric modeling; theory and application of modeling techniques, including, Boolean operations, parametric modeling, particle systems, nurbs and grammar based Techniques; lighting setup and control.

Prerequisites: Junior standing or permission of instructor

Introduction

In this course we explore the creation of Digital Environments for Live Action shooting, CG Animated Features, Games, Architecture and Historical Reconstruction. Through the use of practical application students will develop projects in each area and become familiar with all aspects of 3D modeling for environment creation.

The course will introduce the different aspects and problems associated with each area of 3D model creation and make heavy use of the Houdini Graphics System in conjunction with Maya.

VIST 372 is a course for Visualization Majors. In some cases, laboratories and/or projects will be different to accommodate non-majors.

Learning Outcomes or Course Objectives

1. Describe modeling terminology
2. Describe modeling techniques
3. Summarize the theoretical basis for modeling the physical environment
4. Implement effective modeling techniques
5. Differentiate between levels of model efficiency
6. Generate tools and interfaces using the Python programming language

Instructor Information

Name	André Thomas
Telephone number	979-845-3465
Email address	manink@arch.tamu.edu
Office hours	13:00 – 13:30 TR (by appointment only)
Office location	Langford A 330

Textbook and/or Resource Material

Handouts as provided

Grading Policies

Students enrolled in this course will be evaluated according to the following criteria:

Project assignments (4):	80%
Class presentation:	10%
Class participation:	<u>10%</u>
	100%

Grading Scale

A / 100 - 90; B / 89 - 80 C; / 79 - 70.0; D / 69 - 60.0; F / 60 and below

The instructor's qualitative judgment of the student's exercises, projects, and research will include such factors as preparation, conceptualization, technical application, documentation, and aesthetic effectiveness.

The instructor's qualitative judgment of the student's in-class participation will include such factors as attendance, preparation, engagement, professional demeanor, and informed contribution to discussions and critique sessions.

Project 1 – Live Action set extension (20%)

- Technical execution of assignment: 40%
- Artistic execution of assignment: 40%
- Presentation/website: 10%
- Peer evaluation: 10%

Project 2 – CG Feature Environment (20%)

- Technical execution of assignment: 40%
- Artistic execution of assignment: 40%
- Presentation/website: 10%
- Peer evaluation: 10%

Project 3 – Game Environment (20%)

- Technical execution of assignment: 40%
- Artistic execution of assignment: 40%
- Presentation/website: 10%
- Peer evaluation: 10%

Project 4 – Architectural Environment (20%)

- Technical execution of assignment: 40%
- Artistic execution of assignment: 40%
- Presentation/website: 10%
- Peer evaluation: 10%

Project 5 – Historical Environment (20%)

- Technical execution of assignment: 40%
- Artistic execution of assignment: 40%
- Presentation/website: 10%
- Peer evaluation: 10%

Assignment Grading Practice

As an aide to understanding the method by which your assignments are evaluated, read the following carefully.

The actual grading criteria will be related to these categories but will be more specific to the given assignment.

The scores noted below are relative to a 100 point assignment.

F: 60 and below: The student work is unresolved; the intentions are unclear and major criteria or goals lack resolution; Presentation is incomplete and/or of poor quality; There is a complete lack of problem solving intent, artistic content and/or visual merit.

D: 60 - 69: The work has problems in two or more major areas; Skill and problem development is marginal or incomplete; The project lacks imagination and/or design/artistic potential.

C: 70 – 79: The student has completed the basic assignment, but the work lacks depth of understanding; Some aspects are not completely satisfied and the work contains little promise even though most issues have been addressed.

B: 80 – 89: The student work shows imagination and potential; Presentation and visual content is good; The assignment requirements are fulfilled but in need of more refinement or development; There are no major issues that would require a total redesign of the project.

A: 90 – 100: The student work has imagination and the response to the assignment show understanding and thought; The work is highly developed and well presented; The entire project shows depth and breadth and is well coordinated; The project potential has been achieved.

Class Participation Grading Practice

As an aide to understanding the method by which your class **participation** is evaluated, read the following carefully. The actual grading criteria will be related to these categories but will be more specific to the given topic. The scores noted below are relative to a 100 point total.

F: 60 and below: The student is consistently absent or significantly late to class; is rarely prepared for class; is rarely a willing participant or responsive to questions; consistently exhibits unprofessional and/or disruptive behavior; offers virtually no considered opinions, researched information, or constructive criticism.

D: 60 - 69: The student is frequently absent or significantly late to class; is only occasionally prepared for class; is only occasionally a willing participant or responsive to questions; frequently exhibits unprofessional and/or disruptive behavior; only infrequently offers considered opinions, researched information, and constructive criticism.

C: 70 – 79: The student is occasionally absent or significantly late to class; is inconsistently prepared for class; is sometimes a willing participant and responsive to questions; infrequently exhibits unprofessional and/or disruptive behavior; inconsistently offers considered opinions, researched information, and constructive criticism.

B: 80 – 89: The student is rarely absent or significantly late to class; is consistently prepared for class; is frequently a willing participant and responsive to questions; almost never exhibits unprofessional and/or disruptive behavior; usually offers considered opinions, researched information, and constructive criticism.

A: 90 – 100: The student is never absent without excuse or significantly late to class; is always very well prepared for class; is always a willing participant and responsive to questions; never exhibits unprofessional and/or disruptive behavior; always offers considered opinions, researched information, and constructive criticism.

Attendance Policy

The University views class attendance as the responsibility of an individual student. Attendance is essential to complete the course successfully. University rules related to excused and unexcused absences are located on-line at <http://student-rules.tamu.edu>.

Course Topics, Calendar of Activities, Major Assignment Dates

Week	Topic	Required Reading	Due Dates
1	Introduction to the course & Live Action Set modeling		
2	Texturing and Shading Live Action set extensions		
3	Lighting and Finaling Live Action set extension		Project 1
4	Introduction to CG Feature environment modeling		
5	Texturing and Shading CG Feat. Environments		
6	Lighting and Finaling CG Feat. Environments		Project 2
7	Introduction to Game Environment modeling		
8	Texturing and Shading Game Environments		
9	Lighting and Finaling Game Environments		
10	Introduction to Virtual Architecture modeling		Project 3
11	Texturing and Shading CG Architecture		
12	Lighting and Finaling CG Architecture		
13	Introduction to Historical Environment modeling		
14	Texturing and Shading Historical Environments		
15	Lighting and Finaling Historical Environments		Project 4 or 5

Americans with Disabilities Act (ADA)

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information, visit <http://disability.tamu.edu>.

Academic Integrity

For additional information please visit: <http://aggiehonor.tamu.edu>

"An Aggie does not lie, cheat, or steal, or tolerate those who do."

Statement of Responsibility

"It is unlawful for any person to damage or deface any of the buildings, statues, monuments, trees, shrubs, grasses, or flowers on the grounds of any state institutions of higher education (Texas Education Code Section 51.204)"

The words damage or deface refer specifically to any and all actions, whether direct or indirect, that either diminish the value or mar the appearance of the physical environment.