

Virtual Environments, ATEC 6354.501, Fall 2012

Course: Virtual Environments, ATEC 6354.501

Meeting: Tuesday, 7:00 PM - 9:45 PM, ATEC 1.202

Contact Information

Instructor: Phill Johnson, phill@utdallas.edu

Office hours: by appointment

Course Pre-requisites, Co-requisites, and/or Other Restrictions:

None.

Course Description

This course covers an array of topics involving virtual environments. Focus is placed on developing skills using spatial relationships and environmental aesthetics. This course will create spaces for real-time settings in projects throughout the semester. Techniques in texturing, lighting, sound, and interactivity will be discussed.

Student Learning Objectives/Outcomes

This course will exercise the student's skills in using real-time gaming engines, including lighting, texturing, modeling, and basic interactivity. There will be weekly assignments in addition to long-term projects. Critiques of work are dependent on student participation and involvement.

Required Texts and Materials

None.

However, these texts are recommended as enrichment material:

Kremers, Rudolf. *Level Design: Concept, Theory, & Practice*

Ching, Francis D.K. *Architecture: Form, Space, and Order*

Topics

- Environment design principles. Using line, form, and volume to define a space. Introduction to key concepts, Unreal Development Kit, and basic geometry.
- Texturing for games, basic materials, color theory for virtual environments and proper package and file management from scratch and using photographic sources.
- Lighting and types of lights. Setting the mood.
- Static mesh design and optimization, terrain and landscapes.
- Atmosphere, volumes, fog, post process effects and introduction to level streaming.
- Sound Design and audio creation. Giving life to your environment.
- Foliage tool, clutter and procedural art practices.
- Unreal Cascade - particles systems.
- Basic interactivity and in game cinematics.
- Optimizing your work flow, groups and prefabs
- Render to Texture, intermediate environment effects and practices.

Grading:

Participation:	10%
Mastery Assignments:	10%
Project Proposals:	10%
Project 1:	30%
Project 2:	40%

Class Policies

Late work will not be accepted. Students who miss more than three (3) classes are encouraged to drop the course. No extra credit is available.

Please be courteous with use of cell phones and web browsing during class. Please do not work on other courses during class. The class is expected to turn off monitors and give their peers their full attention during presentations.

University Policies and Procedures may be reviewed at:

<http://go.utdallas.edu/syllabus-policies>

These descriptions and time lines are subject to change at the discretion of the Instructor.