

Virtual Environments, ATEC 3365.001, Spring 2013

Course: Virtual Environments, ATEC 3365.501

Meeting: Thursday, 1:00 PM - 3:45 PM, ATEC 1.202

Contact Information

Instructor: Phill Johnson, phill@utdallas.edu

Office Hours: JO3.506, Thursdays & Fridays 4:00 PM - 5:00 PM, or by appointment

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

3D Modeling and Texturing, ATEC3317

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.

Class Resources

Course assets and assignment drop box can be found at:

\\atec01.campus.ad.utdallas.edu\phill\johnson\

or

\\atec01\phill\johnson\

Week 1, January 17

Introduction to key concepts, Unreal Development Kit, and basic geometry.

Week 2, January 24

Texturing for games, basic materials, color theory for virtual environments and proper package/file management. Assignment 1 due.

Week 3, January 31

Lighting and types of lights. Setting the mood, Assignment 2 due.

Week 4, February 7

Static Meshes, Groups, Prefabs. Assignment 3 due, and Project 1 assigned.

Week 5, February 14

Preproduction, Level Streaming, Volumes, and Post Processing. Project 1 write-ups due.

Week 6, February 21

Terrain, Landscapes, Layers, Foliage Tool, Clutter, and Procedural Art. P1 Milestone 1 due.

Week 7, February 28

Sound Design & Audio Creation P1 Milestone 2 due.

Week 8, March 7

Work Week. P1 Milestone 3 due.

Week 9, March 14

Spring Break, No Class

Week 10, March 21

Project 1 presentations.

Week 11, March 28

Unreal Cascade — particle systems, Sparks, Smoke, Flames, etc. Project 2 assigned.

Week 12, April 4

Basic interactivity and in-game cinematics. Project 2 write-up due.

Week 13, April 11

Render-to-texture uses, intermediate environment effects and practices. Project 2 Milestone 1 due.

Week 14, April 18

Environment presentation materials, pictures, video output, shot framing. Project 2 Milestone 2 due.

Week 15, April 25

Work Week, Project 2 Milestone 3 due.

Week 16, May 2

Project 2 presentations.

Grading:

In-Class Assignments:	15 pts.
Project Write-ups:	5 pts.
Project 1:	30 pts.
Project 2:	40 pts.
Participation:	10 pts.
Total:	100 pts.

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.