Virtual Environments, ATEC 3365.002
Professor: Phill Johnson, phill@utdallas.edu
Office hours: ATC 4.903, Tuesdays 1:00 PM - 2:00 PM, or by appointment.
Meeting times: Tuesdays, 10:00 AM - 12:45 PM, ATC 2.605

Course Description
This course covers an array of topics involving virtual environments. Focus is placed on developing skills using spacial relationships and environmental aesthetics. This course will creates 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 students' 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.

Course Requisites
3D Modeling & Texturing, ATEC-3317

Required Textbooks and Materials
None, many materials will be available through the server space.

Class Resources
Course assets and the assignment drop box can be found at:
\\atec01.campus.ad.utdallas.edu\phill johnson\
or
\\atec01\phill johnson\

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.

Course Schedule

August 27
Introduction to key concepts, Unreal Development Kit, and basic geometry.

September 3
Texturing for games, basic materials, color theory for virtual environments, and proper package/file management. **Assignment 1 due.**

September 10
Lighting and types of lights. Setting the mood. **Assignment 2 due.**

September 17
Static meshes, groups, prefabs. **Assignment 3 due & Project 1 assigned.**

September 24
Preproduction, level streaming, volumes, and post-processing. **Project 1 write-ups due.**

October 1
Terrain, landscapes, layers, foliage tool, clutter, and procedural art. **P1 Milestone 1 due.**

October 8
Sound design & Audio creation. **P1 Milestone 2 due.**

October 15
Work Week. **P1 Milestone 3 due.**

October 22
Project 1 Presentations.

October 29
Unreal Cascade — particle systems. Sparks, smoke, flames, etc. **Project 2 assigned.**

November 5
Basic interactivity and in-game cinematics. **Project 2 write-up due.**

November 12
Render-to-texture, intermediate environment effects and practices. **P2 Milestone 1 due.**

November 19
Environmental presentation materials, pictures, video output, shot framing. **P2 Milestone 2 due.**

November 26
Advanced interaction techniques

December 3
Work week. **P2 Milestone 3 due.**

December 10
Project 2 presentations.

Grading Criteria

Participation & Attendance:	10 pts.
Assignments 1-3:	15 pts.
Project 1:	35 pts.
Project 2:	40 pts.
Total:	**100 pts.**

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.