ATEC 3365.001 Virtual Environments
Timothy Lewis
Term: Fall 2016
Meeting Time: Wed. 4:00PM - 6:45PM
Room: ATEC 3.910

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Office Hours: By appointment
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Course Description
An examination of the world building principles and design concepts for developing 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. Students will learn how to create and evaluate virtual environments in ways that are relevant to their own interests and disciplines.

Course Pre-requisites, Co-requisites, and/or Other Restrictions:
3D Modeling and Texturing, ATEC3317

Student Learning Objectives/Outcomes
This course will exercise students' skills in using real-time gaming engines, including lighting, texturing, modeling, and basic interactivity. There will be several assignments that include analysis and virtual environment development. Critiques of work are dependent on student participation and involvement.

- Students who proceed through this course successfully will have the ability to professionally critique virtual and interactive environments for themselves and their peers.

- Students will understand the principles of design and development for interactive environments among various career fields and game genres.

- Students will produce their own interactive environments through the use of Unity as well as maintain foundational knowledge that can be transferred into other game engines in the future.

Required Texts and Materials
None.

Assignments & Academic Calendar
Week 1, August 24
Lecture: Storytelling and leading through design. Introduction to concepts and Unity.
Assigned: Analyze a virtual environment; create a User Account at the Unity Forums

Week 2, August 31

Due: Analysis
Lecture: Surfacing, color theory, organization, publishing for real time environments.
Assigned: Project 1 – Build your first environment

Week 3, September 7

Due: Project 1
Lecture: Lighting, post processing, and concept development. Setting the mood.
Assigned: Project 2 Pitch – Develop a concept and pitch it

Week 4, September 14

Due: Project 2 Pitch
Lecture: Creating and Importing Assets, Terrain, and basic optimization.
Assigned: Project 2 – Build it

Week 5, September 21

Due: Project 2
Critique

Week 6, September 28

Lecture: Sound design, audio creation, and particles. Giving life to your environment.
Assigned: Project 3 Pitch– Develop a concept and pitch it

Week 7, October 5

Due: Project 3 Pitch
Lecture: Animation and interaction.
Assigned: Project 3 – Build it

Week 8, October 12

Due: Project 3
Critique

Week 9, October 18

Lecture: Optimization (Collision), Modular Building, and Advanced asset creation and techniques.
Assigned: Final Project Pitch - Develop a concept and pitch it

Week 10, October 26

Due: Final Project Pitch
Critique – Individual critiques
Assigned: Final Project Pitch Refined – Refine your concept

Week 11, November 2

Due: Final Project Pitch Refined
In-class work day: Final Project
Assigned: Final Project – Build it

Week 12, November 9

In-class work day: Final Project

Week 13, November 16

In-class work day: Final Project

Week 14, November 23

Fall Break – No class.

Week 15, November 30

In-class work day: Final Project

Week 16, December 7

Due: Final Project
Critique

Grading:

Virtual Environment Analysis:	5%
Project 1:	5%
Project 2 Pitch:	5%
Project 2:	10%
Project 3 Pitch:	5%
Project 3:	10%
Final Project Pitch:	10%
Final Project Pitch Refined:	10%
Final Project:	40%
Total:	**100%**

Grading Policy

Late work will not be accepted. Students who miss more than three classes are encouraged to drop the course. No extra credit is available. I only grade finished work. Students who choose to use "at-home" equipment for development are expected to have their files available for viewing at the beginning of class. Issues with home equipment and/or incompatibility will not be an acceptable excuse for missed goals. Technical difficulties will happen frequently during the semester and students will have trouble accessing the labs during "prime-time" hours. Students must make their own arrangements for overcoming these difficulties and submitting their work on time. Students should plan their time and work so as to anticipate the technical hurdles that are a part of this profession.

Get started on your assignments early because you will face potential issues. I cannot help you the night before class.

Pitches

Pitches are graded on 'completeness'. They should provide insight into the concept and scope of your project, artistic vision, and any technical achievements you intend to make. Please include all references and any concept art that you expect to use. When I read them, I should have a reasonable understanding of what you plan to deliver. That said, these pitches are meant to serve you and your projects. There is no production without pre-production. Focus, and make the most of them.

Projects will be graded on:

1. How well you followed and/or deviated from your pitch in a coherent manner.
2. Sophistication of concept. 'Your apartment' is not a sophisticated concept. 'Coming back home to your apartment at night, hungry and alone, and wet from the rain' is.
3. Artistry and continuity. Not only does your art need to support the concept, it must also be consistent in look and feel across your environment.
4. Technical prowess. Your map should be bug-free, run at a reasonable frame rate, and not break.
5. Innovation and improvement

Class Policies
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.

Attendance
All students are required to be in attendance for each and every class. Two absences will lower a final grade by half a letter, three absences will lower a final grade by one letter and **four absences will result in failure of the course.**

Comet Creed
This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

"As a Comet, I pledge honesty, integrity, and service in all that I do."

University Policies and Procedures
The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to http://go.utdallas.edu/syllabus-policies for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.