Fairfax Collegiate

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Game Design and Modding 7-9 Syllabus

Course Goals

1 Modding
Students learn how to customize computer games and add material to them.

2 In-Game Physics
Students learn how objects should interact realistically in a video game and employ these techniques in their customizations.

Course Topics

1 Introduction to Modding
Students learn what modding is and learn about the game they will customize (Civilization IV).

2 Create a Leader
Students learn how to create a leader in the Civilization IV game.

3 Create a Civilization
Students learn how to create a new civilization in Civilizaion IV.

4 World Builder
Students use the in-game world builder to create new areas in Civilization IV.

5 Game Mechanics
Students learn how to modify various aspects of Civilization IV.

6 Physics
Students learn how to use physics tools in the game, Garry's Mod, to modify the environment of the game.

7 Ragdolls
Students learn the role of a ragdoll in Garry's Mod and how they can be modified.

8 Objects
Students develop the skills to place and manipulate objects in Garry's Mod.

9 Vehicles
Students learn how to make vehicles and other physics objects in Garry's Mod.

10 Rube Goldberg Machines
Students use the knowledge they have gained to create a Rube Goldberg machine in Garry's Mod.

Course Schedule

Day 1

Introduction to Modding
Students learn what modding is and how it can be used.

XML Basics
Students learn about XML, the language they will use to create mods for Civilization IV.

Civilization IV
Students briefly play Civilization IV to gather ideas about what they would like to modify within the game.

Day 2

Game Speed
Students learn how to adjust the speed of Civilization IV to progress through the game more quickly.

Make a Leader
Students create a leader for Civilization IV based on themselves.

Day 3

Create a Civilization
Students create their own civilization with a leader using custom settings.

Day 4

Building a World
Students use the in-game world builder to play a game with their newly created leader and civilization.

Day 5

Game Mechanics
Students learn how to modify particular aspects of Civilization IV.

Testing the Game
Students play each other's versions of Civilization IV which they have modified in unique ways.

Day 6

Game Engine
Students learn what a game engine is to develop a better understanding of Garry's Mod, which is the second game they will explore.

Introduction to Garry's Mod
Students learn about Garry's Mod, the game they will use in projects throughout the week.

Experimentation with Garry's Mod

Students practice the various features in Garry's Mod to be better prepared for upcoming projects.

Day 7

Gravity, Physics, and Tools
Students learn about the role that gravity and physics plays in Garry's Mod, and they learn about other tools in the game.

Ragdolls
Students learn what ragdolls are and how to manipulate them in Garry's Mod.

Ragdoll Activity
Students participate in a group activity involving ragdoll creation.

Day 8

Tools
Students learn more about the various tools offered in Garry's Mod for the environments they create.

Creating a Room
Students use the tools they have learned about to create a room in Garry's Mod.

Day 9

Physics in Games
Students learn to manipulate the physics in Garry's Mod to create realistic vehicles and weaponry.

Physics Activities
Students practice building cars and catapults in Garry's Mod using the lessons they learned that day.

Day 10

Houses and Rube Goldberg Machines
Students learn about some final items they can build in Garry's Mod.

Final Project
Students create something more major than what they have done throughout the week based on their skill level.

Updated on 2/1/2016