**School of Computing, Electronics and**

**Mathematics Coventry University**

Module Leader – James Tedder [jamestedder@nwhc.ac.u](mailto:jamestedder@nwhc.ac.u)k

**NWC601COM – 3D Modelling and Animation**

**Assignment 2 – NWC601COM Portfolio - 70%**

**Hand In date – TBC**

**Location – South Leicestershire College**

**Learning Outcomes to be assessed in this assignment**

* Create and design a well-crafted 3d scene containing rigged 3d characters and vehicles that can be used in a game engine using advance 3d modelling and animation techniques.

**Task 1 - Animated Vehicle – 35%**

Vehicle modelling is a task that 3d modelers will have on a regular basis. The reasons vary from games, movies or production animation. Vehicles are well suited to 3d Modelling and animation due to constrained shapes and mechanical movement being easy to replicate.

For this task you can choose to model any vehicle (subject to staff approval) this can be real or fictional. The only rules are that it must be created using poly modelling and blueprints. If you are creating a vehicle of your own creation you will have to create the blueprints.

**Task 1 –** Poly model and UVW map an approved vehicle with the ability to animate. **Task 2 –** Create a short animation showing the vehicle performing its animations.

**Task 3 -** Evaluate the work that you have done in five hundred words.

**To Hand In**

**A CD / DVD / USB with the following data**

* All files from the 3d editing package that you have created
* PDF document with five hundred word evaluation

**Online – Streaming video**

* 1280 x 720 animation .avi file format

**Task 2 – Rigged Character Model – 30%**

It is often seen as the holy grail of 3d animation to create and rig a character model. In this task you will asked to design and produce a fully rigged model ready for animation. The process will start with the creation of extremely accurate reference images for the character. These will be the template for the project, so be sure that you are happy with these before proceeding. The only criterion for character design is that it must have four limbs.

**Task 1 –** Create reference images in a digital format for production.

**Task 2 –** Create a detailed mesh for your character in a 3d modelling program. Remember to consider polygon count for use in a game engine

**Task 3 –** Create a bone structure with suitable constraints within the character mesh.

**Task 4 –** Position character in the T pose and create a short animation of the character rotating.

**Task 5 -** Evaluate the work that you have done in five hundred words.

**To Hand In**

**A CD / DVD / USB stick with the following data**

* All files from the 3d editing package that you have created
* All file relating to the creation of the reference images
* PDF document with five hundred word evaluation

**Online – Streaming video**

* 1280 x 720 animation .avi file format

**Task 3 – Short Animation – 35%**

3D animation is probably best known in the wider world due to the creation of animated films. Now is your chance to create your own Pixar style short film. Using the character model that you created in the previous task you should create a twenty second animation involving your character.

**Task 1 –** Create both a storyboard and a dope sheet for the proposed animation. **Task 2 –** Create a twenty second animation and render at 1280 x 720 or higher. **Task 3 -** Evaluate the work that you have done in five hundred words.

**To Hand In**

**A CD / DVD / USB stick with the following data**

* PDF containing storyboard and dope sheet
* All files from the 3d editing package that you have created
* PDF document with five hundred word evaluation

**Online – Streaming video**

* 1280 x 720 animation .avi file format

**NWC601COM Assignment 2 Marks Breakdown**

Student Name............................................ Student ID..............................................

|  |  |  |
| --- | --- | --- |
| **Vehicle** | **Animated character** | **Feature Animation** |
| Model Quality  /15 | Model and  Preparation Quality  /20 | Model and  Preparation Quality  /15 |
| Animation Quality  /15 | Animation Quality  /5 | Animation Quality  /15 |
| Report Quality  /5 | Report Quality  /5 | Report Quality  /5 |
| Total |  |  |
|  |  |  |
|  | Overall Grade | % |

Feedback