

Applying Computer Graphics concepts through Blender

Short course – Prof. Nuno Cid Martins (ncmartin@isec.pt)

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Final assignment

With this practical work it is intended that the students use the software *Blender* to create a short **film**. The creation of the film should meet the requirements listed below:

- **Modelling:**
 - Create one (1) 3D model with meshes or NURBs surfaces;
 - Model one (1) logo with curves and text, using a reference image;
- **Shading:**
 - Apply into the created models, at least, the following:
 - two (2) materials with different values for the brightness;
 - one (1) material with transparency;
 - one (1) material with reflectivity;
 - one (1) material with a procedural texture;
 - two (2) materials with texture based on images.
 - In the application of image-based textures it must be used the UV unwrapping technique;
 - In the application of textures, it must be used the bump mapping technique.
- **Animation:**
 - Must have one of the different ways of using animation, necessarily, one of the following techniques:
 - Keyframing in the camera movement;
 - Armatures composed of a minimum of two (2) bones, each bone being responsible for a movement distinct from the others;
 - Combination of Shapekeys (implies the existence of two (2) different Shapekeys, used together, in the same model);
 - Physics or particle system.
- **Rendering:**
 - The film should have a minimum duration of 20 seconds, where all the above content is presented;
 - Generate a film with the right size and codec for a good visualization;
 - It should be incorporated in the movie, at least, one (1) sound file.