IMY 211 - 3ds Max

Assignment 2 – Texturing, lighting and rendering

Overview

For this assignment, you will be required to use the robot that you created in assignment 1. You must add texture to the robot, add lights to the scene and render two high-quality images of it.

Tasks

Imagine that your robot is going to be used for an advertisement on futuristic technology. You need to style the robot so that the advertisement looks professional and realistic.

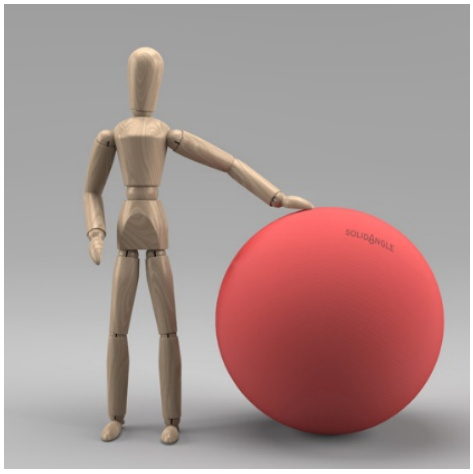
This means that the lighting, textures and rendering all needs to work together to create a good final image.

Before you start this assignment, remove your reference images and the front/left planes from the scene. You will no longer need them.

Part 1: Lighting

Add any number of Arnold lights to your 3d scene to ensure that you character is well-lit. You must tweak the lights to ensure that the result is the best possible display of your character and its textures.

The lighting effect you should aim for is **high-quality studio lighting** as shown in the examples below:



Requirements

- There must be a curved backdrop behind the and below the character and it should be positioned in such a way to show the character standing directly on top of it. The

character should not be floating above it. Find out how to create a curved backdrop here: https://www.youtube.com/watch?time_continue=20&v=l0qqJvV5l7w

- There must also be a plane on either side of the character in case your camera angle will show that space (i.e. in the final render, there should be no black empty space visible – see the examples above).
- Apply a standard surface shader to the backdrops. The colour of this shader can be anything that is subtle enough for the character to stand out in front of it. It may not be black or white.
- The lighting should show all the parts of the character, but it should not remove all shadows (see the examples above) as this will make the character look washed-out and unrealistic.
- Find help on studio lighting here: https://docs.arnoldrenderer.com/display/A5AF3DSUG/Studio+Lighting

Part 2: Textures

Apply textures to all parts of your model so that it looks realistic.

The following specifications apply:

1. Anywhere where a bitmap is used as texture, those parts of the model must be unwrapped.
2. Use at least **1 standard surface Arnold material**
3. Use at least 1 **texture map**
4. Use at least 1 **bump map**
5. Use at least 1 **displacement map**

Note: when adding the maps to 3ds Max, make sure that they are in the same folder as your .max file. You will lose marks if you have not done this as it causes linking issues when the file is opened on another computer.

Since everyone has a different model, there are no other specifications on the texturing. The character should simply look realistic.

It is best to add textures **after** finalizing your lighting so that you can ensure the textures display properly when they are rendered.

Part 3: Rendering

After applying the textures and adding the lights, create two high-quality renders of your model, each from a different angle. You do not have to move your model at all, the renders will be judged according to the quality of the image, the quality of the lights and the quality of the textures.

Requirements

- Add two cameras to the scene, each showing the robot from a different, logical angle.
- Use rendering settings to remove as much noise from the images as possible.
- The final images must be **1280x720 pixels** in resolution (take note that rendering will take quite a while so do not leave this to the last moment).

Submission Instructions

1. Save your 3ds Max file as **uXXXXXXXX_a2.max** (where XXXXXXXX is your student number).

2. Place the following files in a ZIP folder called **IMY211_a2.zip**:
    a. Your .max file
    b. Your texture images (bump maps, displacement maps, texture maps) in the same folder as the .max file, Make sure the file paths inside 3ds Max reference these images correctly. **Note: if you do not complete this step properly, none of your textures will display and you cannot receive marks. You should double check your file before uploading it.**
    c. The two rendered images

3. Upload your ZIP folder to ClickUP before the deadline.

4. Download the folder again and open the .max file to ensure that the texture images display properly (they will not display if the file path is absolute instead of relative)

Marking

Your assignment will be marked according to the following criteria.

Criterion	Marks
Part 1 - Lighting	
Backdrops look professional and there is no black visible (marks will be subtracted if not present)	0
Lighting shows that student understands how to use lights effectively (1: little/no evidence; 2: some evidence; 3: average; 4: good understanding; 5: excellent understanding)	5
Part 2 - Textures	
Model is properly unwrapped (1: little/no evidence; 2: some evidence; 3: average; 4: good understanding; 5: excellent understanding)	5
Textures show that student understands how use shaders and maps effectively (1: little/no evidence; 2: some evidence; 3: average; 4: good understanding; 5: excellent understanding)	5
Displacement map, bump map, texture map and standard surface shader are present (marks will be subtracted if not present)	0
Part 3 - Rendering	
Overall impression of final renders (quality, lack of noise, lighting, textures) (1-2: bad; 3-4: below average; 5-6: average; 7-8: good; 9-10: excellent)	10

Total	**25**