CSYE 7270

Building Virtual Environments

Shader

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Shader

Counts towards assignment score

### Shaders

### Write a Shader using cgFX/Shaderlab and ShaderGraph

Shader using cgFX/Shaderlab and ShaderGraph. This assignment will provide practice with shader construction & cgfx. You will adapt any shader in the NVIDIA Shader Library (http://developer.download.nvidia.com/shaderlibrary/webpages/shader\_library.html). The NVIDIA Shader Library has many shaders including skin, natural effects, metals, organic materials, post processing effects, and lots more. All the shaders in the NVIDIA library are provided free of charge for use in derivative works, whether academic, commercial, or personal.

You may choose a shader outside of the NVIDIA Shader Library but it must be non-trivial. You must get pre-approval by the TA for a shader outside of the NVIDIA Shader library.

You must use/apply the shader in a game.

**Scoring Rubric**

100 points possible

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| --- | --- |
| **Requirement** | **Points** |
| cgfx code | 30 |
| Shaderlab shader | 20 |
| Shadergraph shader | 20 |
| Apply the shader in a game | 30 |

**Submission**

You will submit your assignment via BlackBoard. Upload to the week that you do the assignment. If you submit this in week 4 upload to assignment 4, if you submit this in week 5 upload to assignment 5, etc.

Click the title of assignment (blackboard -> assignment -> <Title of Assignment>), to go to the submission page.

### NVIDIA Shader Library

### NVIDIA Shader Library <http://developer.download.nvidia.com/shaderlibrary/webpages/shader_library.html>

### References and Links:

### <https://docs.unity3d.com/Manual/ShaderTut1.html>

### <https://unity.com/shader-graph>

### <https://answers.unity.com/questions/435081/unity-shaders-and-maya-cgfx.html>

### <https://docs.unity3d.com/Manual/SL-ShadingLanguage.html>

### <https://github.com/steaklive/CgFX-Shader-Compilation>

### <https://docs.unity3d.com/Packages/com.unity.shadergraph@6.9/manual/Getting-Started.html>

### <https://www.raywenderlich.com/3744978-shader-graph-in-unity-for-beginners>