**CSCI 3090: Computer Graphics and Visualization**

**Assignment 2**

**Due Date: March 15, 2018**

Modify the program from Assignment 1 (or develop a new one). Use Modern OpenGL, Shaders and C++. The program must meet the following criteria:

1. Include two 3D objects in the scene (replace two objects of the previous assignment).
2. Map the objects with two images as texture. Each image will create the effect of a different material on the surface of the objects.
3. Add three different light sources adding a Spotlight, a Point Light and a Directional Light. The light sources must clearly affect the objects.
4. When a key of your choice is pressed, the light sources should rotate around the objects, displaying the object’s textures and materials variances.

*Evaluation Criteria*

Please make sure that you have included your full name and student ID at the top of your code (all files) as a comment. Further explanation will be provided during the Labs.

The maximum grade for this Assignment is 100 and grading is based on the table below:

|  |  |
| --- | --- |
| Criteria | Grades |
| **Successful Compilation:** Your program compiled successfully, and runs without issues on another’s computer. | 20/100 |
| **Texturing:** Correct and smooth application of the textures on the objects’ surfaces. Clear indication of the different materials. | 30/100 |
| **Lighting:** The light sources are correctly developed and affect the objects with the proper intensity. | 50/100 |

The program is expected to be compiled and to be executed producing the proper results. Feel free to discuss about the Assignment with your fellow students but plagiarism or exchange of code are forbidden.

**Good Luck!**