CS7GV03 - Assignment 1

Reflectance Models

24 January 2023

Goals

- Assessment Details:
  - This Lab is worth 15% of the mark for the module
  - You must demo the lab next week Tuesday**, 31st January 2023** and submit a YouTube video (with Voice-over)
- Compare 3 different reflectance models
  - One of these should be Phong / Blinn-Phong
  - At most one non-photorealistic technique (e.g., Gooch, Toon)
  - One or more: “realistic”* technique e.g. (minnaert, cook-torrance, oren-nayar) or elsewhere (see also reference on the next page)

* May be an approximation, see e.g. [Lossaso, reference last page]

More Goals

- Implement a demo using Vertex and Pixel Shaders in GLSL
- Implement a scene with several (at least 3) rotating objects to compare different shading models across varying reflectance parameters
  - e.g., phong exponent/shininess, k_s specular coefficient

Reference

- [Losasso] “Surface Reflectance Models”, Frank Losasso (nVidia)
  - http://web.cs.wpi.edu/~emmanuel/courses/cs563/S05/projects/surface_reflection_losasso.pdf