

ETGG2801 — Graphics 1
Test 1 Review
Fall 2015

Test 1 will be given on 11/24/2015.

Topics

- Understand vertices, edges, indices, and UVs.
- The difference between `glDrawArrays` and `glDrawElements`, and how to use both.
- Object vs World vs View (Camera) Space
 - How to transform a vertex from one space to another
- Vertex Buffer Objects (VBO) and how to use them
 - How to create/modify/delete VBOs
- Vertex Array Objects (VAO)
- Shaders
 - Vertex Shader and Fragment Shader
 - When is the vertex shader executed?
 - When is the fragment shader executed?
 - What is the input/output of these two shaders?
 - Uniforms vs vertex attributes
 - How to pass data to the shaders
- Projections
 - Perspective
 - Orthogonal
- The depth buffer and its purpose
- Lighting
 - Understand Lambert and Phong shading models
- Texture Mapping
 - How to texture map a mesh in OpenGL
 - Texture Objects
 - Pixel vs Texel
 - `GL_LINEAR` vs `GL_NEAREST` filtering when sampling a texture
 - The purpose of MIPMAPPING