## **Final Project**

Due May 6<sup>th</sup> at 9:00 am in the RH 2055.

Build a game engine that has the following abilities

- 1. Startup and Shutdown of components
- 2. Camera Control
- 3. Graphics primitives
  - a. Sphere
  - b. Quad
  - c. Rectangle
  - d. Pyramid
- 4. Ability to texture primitives using an image format
- 5. Rotate, scale, translate objects using your math Library
- 6. Memory Management (pool or stack allocator)
- 7. Import models and textures
- 8. Perform basic character animation
- 9. Have basic physic engine capabilities by integrating a physics engine
- 10. Have lights and produce shading.
- 11. Primitive representation of a level in a file that is read in

Demonstrate its basic capabilities by producing a map that you can drive the camera through. The map must include an animated character of some type.