

## EECS 700: Homework 3

Due: Tuesday, December 9, 2014 (In Lecture)

**Directions for the visualization assignment:** Please work on this assignment with your project team and submit only one copy of the assignment for your team. Be sure to put each team member's name on the assignment. Please submit your material both electronically and in hard copy.

### Questions:

1. Write an OpenGL code using shaders that does all of the following operations:
  - (a) Renders the following geometric objects: (1) a cube, (2) a triangular prism, and (3) a dodecahedron.
  - (b) Renders each of the three geometric objects a different color using the RGB color scheme.
  - (c) Performs translation, rotation, and scaling of the geometric objects.
  - (d) Demonstrates use of lighting.
  - (e) Demonstrates use of material properties.

**Submit your visualization code as well as screenshots which demonstrate what each feature does.**

2. Modify your code from Question 1 so that each face of the dodecahedron is colored a different color. Run your OpenGL code with various types of translation, rotation, and scaling motions of the dodecahedron. Create an animated gif which shows the dodecahedron moving according to these motions.

**Submit your visualization code as well as screenshots which demonstrate what the dodecahedron looks like when undergoing various motions. In addition, submit your animated gif.**