

Due: Monday November 1st at 6:00am

## Assignment 7—Shadow Mapping

### *In a nutshell*

Extend your interactive 3-D graphics application with the ability to render shadows.

### *Details*

1. Shadow mapping
  - One point light source.
  - Shadow map resolution: 512x512.
  - Use an epsilon for the depth comparison to correctly rule surfaces seen by the light as not in shadow.
2. Example
  - Demonstrate shadow mapping on a 3-D scene with at least one object that casts a shadow on a second object and on a ground plane.
  - Make a 30s 30fps video showing your shadow mapping.
    - i. First 10s segment the camera moves and nothing else.
    - ii. Second 10s segment the point light source moves and nothing else.
    - iii. Third 10s segment the object casting the shadow moves and nothing else.
3. Extra credit
  - Two or more light sources (2%)
  - Swinging projector displaying letters “CS 334” on the 3-D scene (4%)
  - Projective texture mapping or real world scene with at least 20 triangles (5%)

### *Turn in*

- Code.
- Movie file.
- A README.txt description of your GUI.