

CS 457/557 -- Winter Quarter 2021

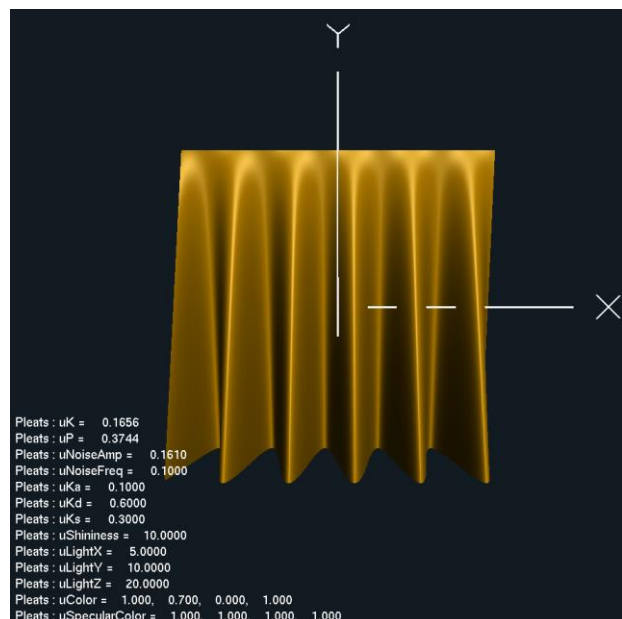
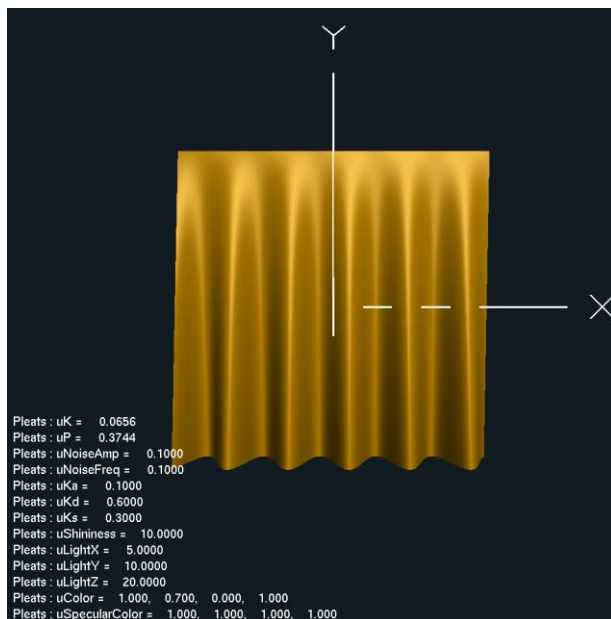
Project #3

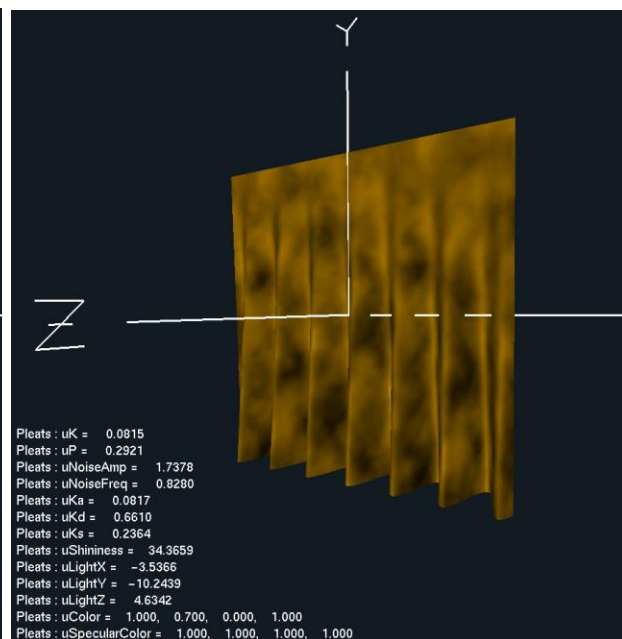
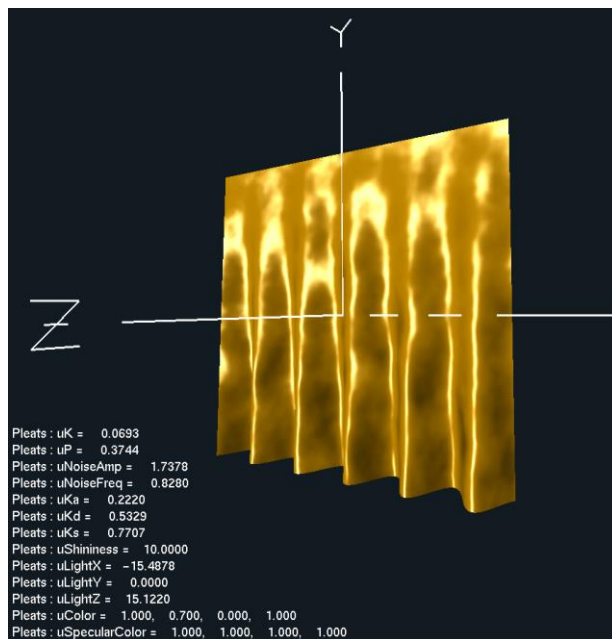
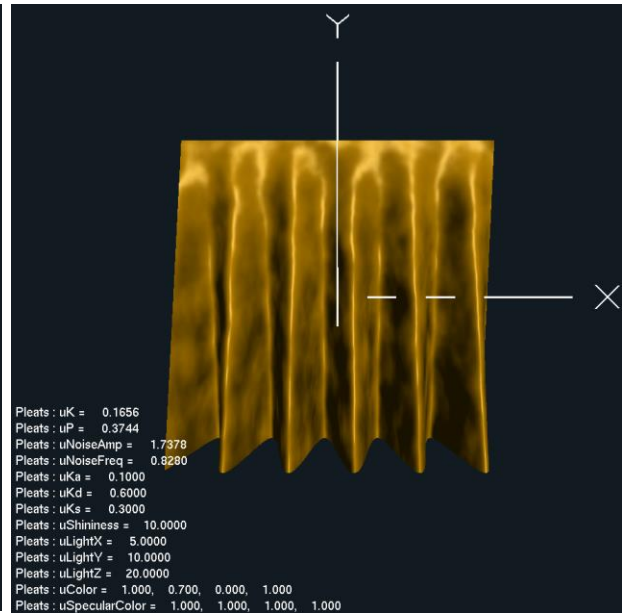
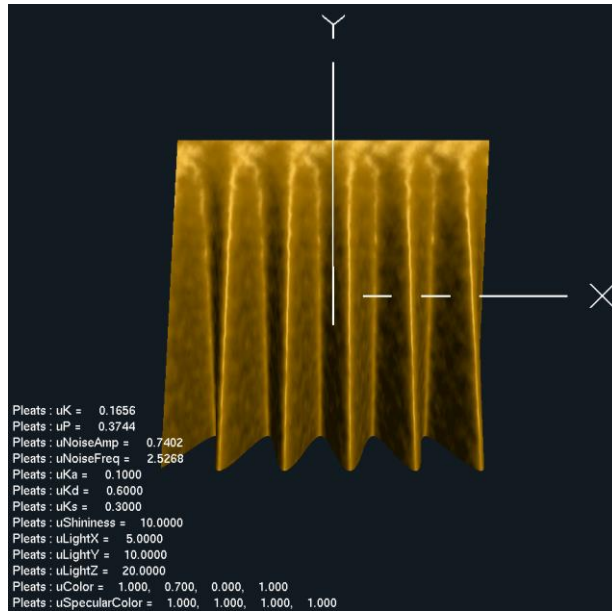
Displacement Mapping, Bump Mapping, and Lighting

Name: Chun-Yu Chen

E-mail: chench6@oregonstate.edu

- **What I did and explaining why it worked this way:**
 1. Set the Normal vector, Light vector, Eye vector as vNs , vLs , vEs .
 2. Insert and get the value of gl_Vertex then makes z axis equal to $uK * (1 - \text{vert.y}) * \sin(2 * \pi * \text{vert.x} / uP)$. Then it will simultaneously change the relevant variable like vLs and vEs .
 3. Use the concept of Noise to calculate two value $angx$, $angy$. Then, put $angx$, $angy$, and vNs into the function "RotateNormal" to get the latest value of normal. Then, the latest value of normal can be used to get the new value diffuse and specular.
- **Screen shots from program:**





- Demo video link: <https://youtu.be/xaFxr4iLMns>