CS 4204 Computer Graphics

Final Exam Preview

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Final Exam

- *Classroom exam (3:25pm – 5:25pm, Monday, 12/15/2014)*

  - Include 15 – 20 multiple choice questions and 1-2 written questions.

  - For multiple choice questions, *NO* points will be subtracted for the wrong answers.

Transformation

- *Affine Transformation and its properties*

- *2D and 3D Transformation Matrix*

- *Transformation in Homogeneous coordinate system*

Projection

- *Orthographical projection*

- *Perspective projection*

  - Perspective Projections of 3-D Objects

  - Properties of perspective projection

  - Projection of lines and vanish point

  - NOT COVERED: pseudo-depth, projection matrix

Lighting and shading

- ***Phong local illumination model***

  - Specular component

  - Diffuse component

  - Ambient component

- ***Gouraud and Flat Shading model***

Texture Mapping

- *Texture coordinate*

- *OpenGL texture mapping functions and parameters*

  - Warping mode: GL_REPEAT and GL_CLAMP

Vector Algebra

- *Vector and Matrix*

- *Vector addition, subtraction*

- *Dot product*

- *Cross product*

- *Geometry explanations for these operations*