

CSCI-4962: Three-Dimensional Computer Graphics
Class 4: September 9, 2002
3D Geometric Transformations

Today's Class

1. 2D Geometric transformations: reflection, shearing
2. Coordinate system transformations
3. 3D geometric transformations: translation, scaling, rotation
4. Some simple OpenGL examples: `double.cpp` (example 1-3 in red book), `basic3d.cpp` (attached)
5. Modeling and viewing transformations in OpenGL

Reading

Chapters 2.6–2.7, 3.5, 3.9, 4.3, 4.6–4.9, and 5.3 of the Angel textbook.
Chapter 3 of the OpenGL red book.

Activity

Try Nate Robins' OpenGL *Transformation* tutorial. Do you get the same image if you swap the rotation and translation operations?

Also try Nate Robins' *Projection* tutorial.

Next Class

3D projection transformations.