CS 357 **Computer Graphics** **Spring 2010**

Syllabus

Class meets Tu 2:15-3:30, Th 9:30-10:45 in RH 121 (Linux Lab)

Instructor Bryan Clair

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Office Ritter Hall 110. 977-3043.

Office Hours M 2-3, Tu 10:30-11:30, W 1-2

Web Page `http://mathcs.slu.edu/~clair/graphics`

Textbooks E. Angel, Interactive Computer Graphics: A Top-Down Approach Using OpenGL (5ed)

The OpenGL Programming Guide (the "Redbook").

Software Most of our programs will be C programs that use the OpenGL library. We will make use of PPM format image files, so having an image conversion program (such as ImageMagick) will be helpful. Also, we will (probably) experiment with Blender 3D and SketchUp.

Exams I give makeup exams only for severe and documented reasons.

Midterm	Thursday, March 4
Final Exam	Thursday, May 6

Homework Programming assignments will be due approximately weekly, and are the main component of the course. There will be occasional written homework assignments.

Grading Grading is weighted as follows:

Programming assignments	60%
Written homework	10%
Midterm	15%
Final Exam	15%

Grading is on a straight scale (uncurved), with 90%, 80%, 70%, and 60% guaranteeing A-, B-, C-, D- respectively.

Honesty Students are expected to be honest in their academic work, as per the Honesty Policy of the College of Arts & Sciences. Plagiarism, cheating and dishonesty will be reported to the dean and may result in probation, expulsion, or worse.

Schedule Pixels, PPM files. Introduction to OpenGL (1 week)

Line drawing (1 week)

Triangle rasterization (1 week)

3D Modeling (1 week)

Transformations. Homogeneous coordinates and perspective. Matrix stack. (2 weeks)

Depth. Z-buffering. (1 week)

Lighting and materials (1 week)

Texture mapping (1 week)

Shadows (1 week)

Ray tracing (2 weeks)