CS551 Computer Graphics

Instructor: Eugene Zhang  
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Prerequisite: Linear Algebra, Trigonometry, Computer Graphics CS450/550

Description:  
Advanced course in computer graphics focusing on rendering techniques. Topics include:
• 3D graphics hardware.  
• Line and polygon scan conversion.  
• Modeling and viewing transformation.  
• Matrix stacks.  
• Hierarchical models.  
• Perspective and orthographic projections.  
• Visible surface determination.  
• Illumination and shading models.  
• Texture mapping.  
• Ray tracing.

Textbooks (required):  
Fundamentals of Computer Graphics by Peter Shirley

Projects and Grading:  
This course is primarily project based. Each student will complete 4 independent projects plus a term project to be discussed later. Class attendance is mandatory.

Late Policy  
Late assignments will be marked off 10% for each weekday that it is late.

Academic Dishonesty  
Please do your own work. The default consequence for academic dishonesty is a failure for the course. It is okay to discuss with other students general ideas about implementing a program. It is not okay to copy another student's program. It is okay to discuss possible program bugs. It is not okay to debug another student's program.

Expectations  
Students are expected to attend lectures, participate in the discussions, and work with their group members on group projects. You should come to class prepared and speak up when something is not clear. Being prepared means completing the assigned reading and assignments. Students are expected to be creative and have fun!

Students with documented disabilities who may need accommodations, who have any emergency medical information the instructor should be aware of, or who need special arrangements in the event of evacuation, should make an appointment with the instructor.
as early as possible, and no later than the first week of the term. Class materials will be made available in an accessible format upon request.