CS 446/446G Interactive Computer Graphics
Spring 2014
Instructor: Qi Li

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Homepage	https://people.wku.edu/qi.li	
Office Hours	MW: 14:00-15:30	
	TR: 14:30-15:30	
	and by appointments	
Prerequisites	MATH 307 and a grade of "C" or better in CS 280	
Text	*Computer Graphics Using OpenGL* by Francis S Hill, Stephen M Kelley, Prentice Hall 2007 (3rd Edition) ISBN-10: 0131496700	
Grading	Test I and II	15%
	Final	30%
	Homeworks	35%
	Attendance	5%
Grading scale	90-100	A
	80-89	B
	70-79	C
	60-69	D
	< 60	F
Exam Dates	Dates for the first two exams will be announced at least one week in advance.	
	The final exam is scheduled for Tuesday May 13, 10:30-12:30.	

Course Description:

- This course gives introduction to interactive computer graphics. The major topics include: computer graphics technology, graphics primitive drawing, two-dimensional and three-dimensional systems, transformation of objects, modeling, and rendering.

Course Outcome:

- Be able to apply homogeneous coordinate to represent two-dimensional and three-dimensional transformations
- Understand 3D camera geometry
- Be familiar with Bresenham's algorithm for line drawing
- Understand the basic of shading and texture mapping

Course Policy:

1. Submit your homeworks on time. If you have to submit homeworks after the due day, you must get the permission from the instructors TWO days before the due day.
2. Students are responsible for attending the exams on time. If you cannot attend the exam, you must get permission from the instructor, and present documented excuse.
3. If the instructor is late, students should remain in the class orderly working (studying) until the instructor arrive or until the class is dismissed officially by a person of authority.
4. No food or drink is permitted in the classroom, and no mobile phone usage in the classroom.
5. Plagiarism and other forms of academic dishonesty will result in F for the course. Copying code from other groups, or the Internet is not allowed.

Distinction between CS 446 and CS 446G: Projects for CS 446G contain lower-level implementation (e.g., without using openGL functions), and exams for CS 446G contain additional questions.

Student Disability Services:

In compliance with university policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Office for Student Disability Services in Downing University Center, A-200. The phone number is 270 745 5004.

Please DO NOT request accommodations directly from the professor or instructor without a letter of accommodation from the Office for Student Disability Services.

Course Content: We will attempt to cover the following topics, as time allows.

- 2D/3D Transformation
- 3D viewing
- Introduction of OpenGL
- Introduction of rasterization
- Intersection and clipping
- DDA and Bresenham's algorithms
- Rasterizing images
- Shading models
- Hidden surfaces
- Texture mapping
- Introduction of modeling
- Triangulation
- Introduction of ray tracing
- BSP tree