Goal:

The goal of this course is to provide an introduction to the theory and practice of computer graphics.

Prerequisites:

The course will assume a good background in programming in C or C++ and a background in mathematics including familiarity with the theory and use of coordinate geometry and of linear algebra such as matrix multiplication.

Course Content:

Course Material (Chapers 1-10,13 of the class text):

2. Graphics Programming: Getting started with OpenGL.
3. Input and Interaction in OpenGL.
4. Geometrical Objects and Transformations in 2D and 3D: Objects representation, Coordinates transformation, windows and viewports.
5. Viewing in 3D: Orthogonal and projective views, hidden surface removal.
7. From Vertices to Fragments: Graphics pipeline, rasterization, color system.
8. Texture Mapping.

and possibly one or more from the following in less detail:


Grading:

Grades will be assigned according to the following scale:

- A 90-100.
- B 80-89.
- C 70-79.
- D 60-69.
- F 0-59.

Grade Calculations:

- Midterm 20%.
- Final 20%.
- Class Assignments 60%.
- Note: Assignments will primarily be programming assignments requiring implementation of applications employing the theory covered in the lectures and the books. There will however be some theoretical homeworks and questions as well. Students are reminded that completion of both theory and programming parts of the homework are necessary to achieve a good grade.

Cheating and Plagarism

Please note the University Policy on [Cheating and Plagarism](#)
Students with Disabilities:

University policy 3342-3-18 requires that students with disabilities be provided reasonable accommodations to ensure their equal access to course content. If you have a documented disability and require accommodations, please contact the instructor at the beginning of the semester to make arrangements for necessary classroom adjustments. Please note, you must first verify your eligibility for these through Student Disability Services (contact 330-672-3391 or visit www.kent.edu/sds for more information on registration procedures).