CSCE 4230.1
Introduction to Computer Graphics
Spring 2016
TR 2:30-3:50, NTDP B142

Instructor: Robert Renka, NTDP F244, 565-2816
robert.renka@unt.edu

Office Hrs: TR 4:00-5:00, W 1:00-2:00, and by appointment

Web page: http://www.cse.unt.edu/~renka/4230

Course description: Concepts and principles, survey of present display
and input technology, systems and applications. Study of basic concepts,
and mathematical and geometric principles. Design and use of graphics
software packages. Design and implementation of an application using
available hardware and software.

Course Outcomes:

* Analyze, modify and implement existing computer graphics algorithms.
* Design and implement new computer graphics algorithms that are
effective and efficient.
* Develop and apply knowledge of computer graphics hardware effectively
in the design and implementation of graphics algorithms.
* Create computer graphics applications using standard graphics
libraries and products, including OpenGL.
* Use basic matrix and vector operations and related concepts from
linear algebra in the design and development of graphics algorithms
and applications.

OpenGL Architecture Review Board,
Addison Wesley.

Prerequisites: CSCE 2110 or equivalent (discrete structures)
Math 2700 or equivalent (linear algebra)

Grading: Homework 15%
Programs 45%
Midterm exam 20%
Comprehensive final exam 20%

Homework assignments are due at the beginning of class on the
assigned due date. In the rare event that you cannot attend a
class, you may email the assignment to both me and the grader,
preferably as an ASCII text file, any time before class.

Late homework will not be accepted.

Program source code files must be submitted before midnight on the due date in order to avoid a late penalty. The penalty is 5% per day after the due date.

Makeup exams and incompletes will be given only as the result of a verified emergency.

Cheating will result in a course grade of "F". Collaboration on assignments, copying another student's work, and allowing another student to copy your work all constitute cheating.

SPOT:

The Student Perceptions of Teaching (SPOT) is a requirement for all organized classes at UNT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider SPOT to be an important part of your participation in this class.

Americans With Disabilities Act:

The Computer Science Department cooperates with the Office of Disability Accommodation to make reasonable accommodations for qualified students (cf. Americans with Disabilities Act and Section 504, Rehabilitation Act) with disabilities. If you have not registered with ODA, we encourage you to do so. If you have a disability for which you require accommodation please discuss your needs with me after class or submit your written Accommodation Request on or before the fourth class day.

Class schedule:

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<thead>
<tr>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Jan 19</td>
<td>Introduction</td>
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<tr>
<td>21</td>
<td>Raster display hardware</td>
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<tr>
<td>26</td>
<td>OpenGL, Linear Algebra, Transformations</td>
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<td>Feb 2</td>
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Mar 1
  3
  
  8
  10 Midterm Exam

  15 Spring break
  17 Spring break

  22 Light and color
  24 Reflection and shading

  29
  31

Apr 5
  7 Polygonal Surfaces

  12
  14

  19
  21

  26 Curve Fitting
  28

May 3
  5

  10 Final Exam: 1:30 pm to 3:30 pm