Spring 2005

CEG 476/676-01: Computer Graphics I

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# Course Syllabus

## CEG-476/676 Computer Graphics I Spring '05

*No. Units:* 4, *Lectures:* 2:45 - 4:00, M, W, 150 Russ Ctr.  
*Instructor:* A. Goshtasby, *Office Location:* 341 RC, *Phone:* X5170  
*Email:* agoshtas@cs.wright.edu, *Office Hours:* M,W 1-2, Tu 2-3, or by appointment.

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**Prerequisite:** CS400, MTH253 or MTH255

**Textbook:**  
Computer Graphics with OpenGL, 3rd Edition  
Donald Hearn and M. Pauline Baker  
Prentice Hall, 2004

**Reference Manual:**  
M. Woo, et al.  
Addison-Wesley Developers Press, 2004

**Purpose of Course:**  
TO learn techniques for generating 2-D and 3-D models and interacting with the models.

**Contents:**  
1. Introductions  
2. Geometric Primitives  
3. Attributes of Geometric Primitives  
4. Antialiasing  
5. Homogeneous coordinate system  
6. Geometric transformation  
7. Structures and hierarchical modeling  
8. 2-D and 3-D viewing transformations  
9. Input devices and interactive techniques  
10. Visible surface detection methods

**Learning Goals:**  
The objective of this course is to learn the fundamentals of model representation, algorithms that generate realistic 2-D and 3-D models, and practice some of the concepts through program implementation.

**Assignments:**  
There will be three programming assignments and a final project. An assignment would typically require 15 to 20 hours of work and the final project would require from 30 to 40 hours of work.

**Grading:**  
Programming Assignments will worth 40%, Midterm Exam will worth 25%, and Final Project will worth 30% of the total grade. Class participation will count the remaining 5%. Grades will be assigned as follows. A: [92 .. 100], B: [86 .. 91], C: [76 .. 85], D: [60 .. 75], E: [0 .. 59].
Policies:
Materials covered in class will closely follow the textbook. Late assignment programs will be accepted but with one point deduction per a late day.

Calendar:
Assignments 1, 2, and 3 will be handed out on 4/6, 4/20, and 5/11, and will be due 4/18, 5/2, and 5/23, respectively. The assignments are intended to practice some of the materials learnt in class. The assignments can be completed individually or with a partner. Final project will be handed out on 5/23 and will be due exam day (6/6).

Midterm exam will be on 5/9, 2:45 - 4:00 PM.