

Fall 2013

# CEG 4500/6500-01: Computer Graphics

Thomas Wischgoll

Wright State University - Main Campus, [thomas.wischgoll@wright.edu](mailto:thomas.wischgoll@wright.edu)

Follow this and additional works at: [https://corescholar.libraries.wright.edu/cecs\\_syllabi](https://corescholar.libraries.wright.edu/cecs_syllabi)



Part of the [Computer Engineering Commons](#), and the [Computer Sciences Commons](#)

---

## Repository Citation

Wischgoll, T. (2013). CEG 4500/6500-01: Computer Graphics. .  
[https://corescholar.libraries.wright.edu/cecs\\_syllabi/845](https://corescholar.libraries.wright.edu/cecs_syllabi/845)

This Syllabus is brought to you for free and open access by the College of Engineering & Computer Science at CORE Scholar. It has been accepted for inclusion in Computer Science & Engineering Syllabi by an authorized administrator of CORE Scholar. For more information, please contact [corescholar@www.libraries.wright.edu](mailto:corescholar@www.libraries.wright.edu), [library-corescholar@wright.edu](mailto:library-corescholar@wright.edu).



Welcome to  
CEG4500/CEG6500 - Computer Graphics



Instructor: Dr. Thomas Wischgoll  
[thomas.wischgoll@wright.edu](mailto:thomas.wischgoll@wright.edu)  
485 Joshi Research Center  
937-775-5057

Office Hours: Tue/Thur 04:00pm - 05:00pm  
(or by appointment)

Textbook: Computer Graphics  
Donald Hearn and M. Pauline Baker  
Prentice Hall, 2004, ISBN 0-13-015390-7

Webpage: <http://avida.cs.wright.edu/courses/CEG4500/>

Lecture: Tue 05:00 pm - 06:20 pm  
Thur 05:00 pm - 06:20 pm  
(Russ Engineering Center 154A)

Exams: Midterm: Thur, Oct 24th, 05:00 pm (in class)  
Final project: due Wed, Dec 11th, 11:59 pm

Grading Policy: 40% (assignments) + 30% (midterm) + 30% (final project)= 100%

Each class is different. Therefore, no absolute grading scheme can be defined in advance. However, the following guarantees will always be made:

90%	80%	70%	60%	50%
A	B	C	D	F

## Course Goals/Objectives

By the end of this quarter, you will have learnt techniques for constructing 2-D and 3-D objects as well as manipulating and rendering the objects using OpenGL.

The outline of the course is as follows:

- Introduction
- Geometric primitives
- Attributes of geometric primitives
- Antialiasing techniques
- Homogeneous coordinate system
- 2-D and 3-D viewing transformations
- Structures and hierarchical modeling
- Input devices and interactive techniques
- Visible surface detection methods
- Three-Dimensional Object Representations (chapter 8)
- Visible-Surface Detection (chapter 9)
- Illumination Models and Surface-Rendering Methods (chapter 10)
- Interactive Input Methods and Graphics User Interfaces (chapter 11)
- Color Models and Color Applications (chapter 12)
- Advanced Rendering and Illumination Methods

## Prerequisites

- CS400 and MTH253 or 255

If you are unsure about any of these requirements, come talk to me.

## Course Format

The course consists of two lectures a week. Attendance of the lectures is not strictly mandatory. However, you are responsible for all materials, announcements, assignments, *etc.* covered in either the lecture or assignments. If you miss a class, consult a classmate for any missed materials.

The purpose of the class is for everyone to understand the issues involved with computer graphics. To this end, if you don't understand something during class, please ask. If you are confused, it is likely that a few of your classmates are as well. Also, listen to others' questions. Many times you'll think you understand a concept until you hear someone else's question about it. Dialogue is the best way to learn things, so don't be afraid to speak up.

There will be two assignments to be returned on the specified date, one in class midterm, and one final project. The grade will be determined as stated earlier.

## Assignments

Four assignments will be given which are due on the following dates:

Assignment 1:	due Thur, Sep 26th, 11:59 pm
Assignment 2:	due Thur, Oct 10th, 11:59 pm
Assignment 3:	due Thur, Oct 24th, 11:59 pm
Assignment 4:	due Thur, Nov 21th, 11:59 pm

For implementing the assignments, you can use the PCs in room 154a RC. You can also use any other computer that is available to you. However, you need to be able to demonstrate your software on one of the computers within Russ Engineering Center. On the day the assignment is due, please turn in a screenshot of your software and your source code, including makefiles or project files. Late submissions will get a 10% deduction for each day it is late. After being three days late, the submission will no longer be excepted.

## Office Hours

Office hours are as listed above or by appointment. If you are unable to come to the posted office hours, contact me and we can arrange to meet. There is no reason why anyone should be unable to see me if they need to.

## Other Resources

The class web page is maintained at <http://avida.cs.wright.edu/courses/CEG476/>. It will keep information, assignments, announcements, *etc.* There is also a class mailing list. Make sure your email address is registered with the registration system. Please check the web page and read your email. I will try to make any announcements in both places as well as in class, but you don't want to miss anything.

## Class Policy

- Assignments that are submitted late will incur a penalty.
- The solution for the assignment has to be turned in as executable and source code to receive full credit. The solution has to work on one of the computers in the Russ Engineering Center receive full credit.
- During the midterm, after completing the test, each student must sign his test solution in with the instructor.

## Fine Print

**Exams** Exams will emphasize insight and problem solving ability rather than memorization. Exams will be closed notes, closed book, and no laptops or calculators.

**Missed Exams** Makeup exams will only be given for the gravest of reasons. If you must miss an exam due to extreme illness, *etc.*, contact the instructor (email is fine) or leave a message with the Department of Computer Science and Engineering office (937-775-5131) *before* the exam. Be sure to leave both the reasons for missing the exam and how to reach you.

**Add/drop Policy** A copy of the add/drop policy is available at the main office or [online](#).

**Cheating** Please do not. I am not obsessed with looking for cheating, but if I see something suspicious, I will refer it to the Office of Judicial Affairs. This is more work for me, and is embarrassing for everyone. Again, please don't; this has been a problem in the past. If the rules are unclear or you are unsure of how they apply, ask the instructor *beforehand*. The academic integrity policy is available [online](#).

**Feedback** If you like, dislike, or don't understand something I'm doing with the course, please stop by my office hours, send me email, or paste together a note from newspaper clippings and drop it in my mailbox. I won't always change things, but I will always explain why I'm doing them the way I am.

**Copyright** All federal and state copyrights reserved for all original material presented in this course through any medium, including lecture or print. Individuals are prohibited from being paid for taking, selling, or otherwise transferring for value, personal class notes made during this course to any entity without the express written permission of the lecturer.