

CS 395/495

Advanced Computer Graphics

Winter (Jan.-March) 2003

General Info

Instructor: Jack Tumblin

Office: rm. 350, 1890 Maple

Phone: (847) 467 2129

Email: jet@cs.northwestern.edu,

Office hours: by appointment

Prerequisites: CS 351 or equivalent

Final exam: none

Website:

http://www.cs.northwestern.edu/~jet/Teach/2003_1winAdvGraphics/395.2_main2003.htm

Textbooks and Readings:

Required:

A. Watt, *3D Computer Graphics*, 3rd edition, Addison-Wesley.

The textbook gives a good introduction to many of the topic areas. In some cases the big ideas get lost in excess detail, but then that's textbooks.

Required: web-available research papers (see website)

You will also be expected to read the assigned papers each week, and be ready to discuss them in class. It isn't necessary to understand everything, but it is necessary for you to know what it is you don't understand. Confusions often lead to interesting questions and discussions in class.

Lectures

Every week will begin with a 45-minute introduction to a research area from Prof. Tumblin. This will be followed by three presentations of in-depth topics within that area by students, with accompanying discussion.

Course Description

CS 395 is an advanced seminar course in computer graphics. It serves as an introduction to advanced topics and research in the field. There is far too much to graphics today to cover everything in depth, instead the course strives to cover most things in breadth, and a few in depth.

Coursework

Participating in reading and discussions is extremely important in this course. We may give pop quizzes to check whether or not you have truly read the week's papers. These quizzes will be trivial for you if you have read the paper.

In addition to participating in discussions, you will be expected to participate in two ways: First, you will present one in-depth research topic in class to the instructor and students. You will find and read relevant papers (with instructor's help), make a Powerpoint presentation, and present the results to the class. We will post your presentation afterwards on the class website.

Second, you will do a project. For most of you, this will be a more in depth survey of the research you presented to the class. This survey will take the form of a paper you turn in at the end of the quarter. Graduate students (those taking CS 495) will make two such surveys, one in the area they present, one in another area they choose.

If you are particularly enthusiastic and the scope of the class permits it, you may substitute a coding project for your paper survey(s). Though individual projects are simpler, you may choose to form a group to tackle more ambitious projects if you wish. Group projects must be discussed beforehand, so that I can help you determine whether or not such a project can be completed within the quarter. I will not accept projects that have not been discussed beforehand—it is too easy to take on an attractive but impossibly huge task in graphics. After some discussion with me, you will submit a brief (1-2 page) written project proposal that describes what you will do and assign grading weight to each project component.

Course Evaluation

The proportion of the final mark associated with the different components of the course is as follows:

Class Participation	15%
Class Presentation	35%
Project/Survey Paper	50% (grads: 25% / 25%)

Website

Prof and student presentations will be posted to the website:

http://www.cs.northwestern.edu/~jet/Teach/2003_1winAdvGraphics/395.2_main2003.htm

Also look to the website for course schedule, each week's readings, and announcements.