

INTRODUCTION TO DIGITAL IMAGING

Cognitive Science 116
ASH 126, MW 1:00 – 2:20
Spring 2001

Instructor: Chris Perry

Office: ASH 215

Office Hours: Wednesday 2:30-4:30, Thursday 11:00-12:00

Phone: 559-5476

Email: perry@hampshire.edu

Link to class web page can be found at: <http://helios.hampshire.edu/~chpCCS> (case sensitive!)

Teaching Assistant: Shane Wadleigh, open hours in the lab Tuesday 6-9pm.

TA Phone: 559-5027

TA Email: wadleigh@bork.hampshire.edu

Course Catalog Description

This course will introduce students to the theory and practice of digital imaging: the process of creating and manipulating images with computers. About one-half of class time will be spent on theory, covering the mathematical and computational fundamentals of the field. This material will include digital image representation and storage, sampling, matte creation, compositing, image processing and filtering, computer-generated imaging and time-based image manipulation (digital video). The theory section will also include discussions of the perceptual issues at play in the creation and observation of digital images. What makes an image appear photorealistic? What makes an image look “digital”?

The other half of class time will be spent learning off-the-shelf software so that these theories can be explored in practice. Students will be expected to use the software to complete a number of short, creative projects during the first two-thirds of the semester, culminating in a final project during the last third. Project ideas will be offered but students will be encouraged to devise their own.

Class will meet twice a week for one hour and twenty minutes. Enrollment is limited to 18. Knowledge of advanced math is NOT required. This course may serve as one of the two courses for completing a Division I in Cognitive Science.

Text

Brinkmann, Ron. The Art and Science of Digital Compositing, Academic Press, San Diego, California, 1999. ISBN 0-12-133960-2 (available at the Hampshire Book Store)

Enrollment

I will post a final list of the students in the class on my door (ASH 215) and on the class web page by 5:00pm on Thursday, February 1. **Enrolled students should buy the textbook, read chapter 1 (pp. 1-12), and bring a Mac formatted Zip disk to the next class.**

Students will be evaluated on the following criteria:

Projects. Four major projects are due throughout the course of the semester. They will be evaluated for their scope, technical execution, and the extent to which the student has addressed the relevant perceptual cues involved in each. I will propose general project ideas to help get ideas flowing, but the specifics of every project will be up to the student to propose. All project ideas need to be cleared with me (i.e., I don't want to hear about a project for the first time on the day it is handed in). The idea behind this is that I will help the student shape their project into something appropriate for the topic being covered, including making sure a project is neither too easy nor too hard. I will evaluate all projects that are handed in on time and that meet the requirements of the assignment. If a student hands in a project late, they should not expect an evaluation of it.

If a student ever becomes two handed-in assignments behind (or turns in the final project late), they will not receive an evaluation for the course.

Other assignments. Beyond the official four projects, there will be smaller, project-supporting assignments that are due in class. These won't receive written evaluations but will be taken into account in the student's final narrative evaluation. Any of these that are to be handed-in will count toward the "falling two assignments behind" rule, given above.

Regular attendance. The book does not contain all of the material required for the course and therefore should not be considered a substitute for attending class. Roll will be taken at every class. Students that miss class are responsible for the material they missed and should follow-up with me or the other students to catch up.

If a student has more than two unexcused absences they will not receive an evaluation for the course. Tardiness of over 10 minutes will be considered an absence.

Reading. There are regular reading assignments from the textbook. I will give reading quizzes this semester and a student's performance on these will be reflected in their evaluation. Students not comfortable with algebra should bring calculators to class just in case.

Participation. Students will be evaluated on the amount and quality of their participation in class. One form of this is speaking during class discussions and lectures, another is presenting in-progress project work to the class.

Other. I reserve the right to assign something that I haven't included in this syllabus. To be fair, I intend to make it clear when these things come up exactly how much weight they will be given in the evaluations.