

INTRODUCTION TO DIGITAL IMAGING

Fall 2001

Cognitive Science/HACU 116

Adele Simmons Hall 126, TTh 12:30 – 1:50 pm

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phone: TBA
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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 Bookstore)

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 **NOON on Monday, September 10th**.

**Introduction to Digital Imaging (syllabus)
Expectations for Evaluation**

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You will not receive an evaluation for the course if:

- you ever fall behind by two assignments/projects,
- you fail to hand in all assignments/projects by the end of the term, or
- you miss more than 2 classes (tardiness of 10 minutes counts as an absence).

As long as none of the above apply, you will be evaluated (or graded, if 5-college) 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). I will try to give written feedback on all projects that are handed in on time and that meet the requirements of the assignment.

Other assignments. Beyond the official four projects, there will be smaller, project-supporting assignments that are due in class. These won't receive written comments 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 doing the reading 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.

Reading. There are regular reading assignments from the textbook. If it becomes clear in class discussions or from a surprise reading quiz that a student is not doing the reading, such will be noted in their evaluation.

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.

To earn 1/2 of a division I credit, Hampshire students must meet all of the above criteria for evaluation AND demonstrate a strong understanding of the course material over the entire term. Feel free to check with me during the semester on your 1/2 division I status.