CS 116: Introduction to Digital Imaging **Spring 2001**
Class and Assignment Schedule

Date	#	Class Topic	Assignment
Wed Jan 31	1	First day stuff. Introductions. Why digital imaging? The digital imaging pipeline and some definitions.	Check list Thursday at 5pm. If you're in the class, get a Mac-formatted Zip disk and read chapter 1 of Brinkmann (p 1-12).
Mon Feb 5	2	Images as arrays of pixels. Bits, bytes, bit depth and the conversion between resolution and memory.	Read chapter 2 of Brinkmann (p. 13-32). Bring in one photograph and one image from a magazine, book, or other printed source.
Wed Feb 7	3	Reading quiz. Making images. Digitizing, aliasing, banding. Sampling theory. Scanning. Normalized color coordinates.	Read chapters 3 and 9 of Brinkmann (p. 33-63 and p. 133-139). Scanning and file format assignment.
Mon Feb 12	4	Representing and perceiving color. RGB vs. HSV. Single-source image processing operators.	Project I assigned. Find photo and 2 reference images.
Wed Feb 14	5	Review reference images. Image manipulation with single-source operators. In-class color matching exercise.	Continue working on project I. Thursday, 8:00pm: A digital imaging Div I being screened at FPH.
Mon Feb 19	6	Learning to See, part I (visual cues relevant for project I). Making localized changes using masks and Photoshop “selections.”	Finish project I for next class.
Wed Feb 21	7	Hand in and discuss project I. The mathematics behind masks. Masks/mattes as images used to blend between other images.	Write a post-mortem on project I.
Mon Feb 26	8	Hand in post-mortems. The alpha channel. Two-source operators such as “over” and others. Premultiplied alpha. Layers.	Read chapters 4 and 5 of Brinkmann (p. 65-92). Read handout on "over".
Wed Feb 28		NO CLASS (Exam/Advising Day)	
Mon Mar 5	9	Making mattes: Chromakeying, rotoscoping, etc. Debugging matte problems.	Project II assigned. Gather your source images and digitize an example image that contains matting.
Wed Mar 7	10	Learning to See, part II (visual cues relevant for project II). Review findings and other inspirational examples. How to break down a composite (in-class exercise).	Read chapters 12, 13, and 14 of Brinkmann (p. 189-240). Continue working on project II.
Mon Mar 12	11	Correcting perspective, grain, and focus differences, retouching for wire removal and background replacement. Project II Q&A.	Finish project II for next class.
Wed Mar 14	12	Turn in project II and review them in class.	Read chapter 6 of Brinkmann (p. 93-102).
Mon Mar 19		NO CLASS (Spring Break)	
Wed Mar 21		NO CLASS (Spring Break)	
Mon Mar 26	13	Vector graphics and time-based compositing. Interpolation and keyframes.	Project III assigned. Write script and bibliography for next Monday.
Wed Mar 28	14	TA: In-class screening of some time-based composites. Identify changes in position, opacity, scale. Basics of AE interface.	Finish script and bibliography for next class.
Mon Apr 2	15	Hand in scripts and bibliographies. AE in depth. Animating mattes/rotoscoping, tracking.	Continue working on project III. Read handout on AE.
Wed Apr 4	16	TA?: Audio import. Using text. Readability and design in animated composites. Exporting movies, video compression.	Continue working on project III.

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Mon Apr 9	17	TA: In-class project Q&A. In-class text exercise. Temporal artifacts. Motion blur.	Finish project III for next class.
Wed Apr 11	18	Hand in project III and view projects in class. Discuss final class project.	Final Project assigned. Project proposals due Wednesday April 18. Read chapter 16 of Brinkmann (p. 269-290).
Mon Apr 16	19	TA: Inspirational screenings.	Finish project proposal.
Wed Apr 18	20	Final project proposals due. DV and codecs.	Finish final project for Wednesday May 2.
Mon Apr 23	21	TA: Tour of AE filters.	Continue working on final project.
Wed Apr 25	22	In-class final project Q&A session.	Continue working on final project.
Mon Apr 30	23	TA?: Digital image capture and display: CCD, LCD, DMD, DVD.	Finish final project for next class.
Wed May 2	24	Final projects due. In-class screening/show. Last day of class.	