

Introduction to Digital Imaging

Fall 2002 Syllabus

Date	#	Class Topic	Assignment
Mon Sep 9	1	What is digital imaging and why bother with it?	Check course web page for enrollment information.
Wed Sep 11	2	Introductions. Images as arrays of pixels. Bits, bytes, bit depth and the conversion between resolution and memory.	The assignment for Wednesday will be emailed to the class email list sometime on Friday.
Mon Sep 16	-	NO CLASS (Yom Kippur)	
Wed Sep 18	3	Discuss assignment. Quiz. Making digital images. Digitizing, aliasing, banding. Sampling theory. Scanning. Normalized color coordinates.	Scanning and file format assignment due Monday.
Mon Sep 23	4	Hand in and discuss assignment. Representing and perceiving color. RGB vs. HSV.	Project I assigned, due Monday September 30. Read chapters 3 and 9 of Brinkmann (p. 33-63 and p. 133-139).
Wed Sep 25	5	View project I images. 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.
Mon Sep 30	6	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, due in instructors mailbox by Friday at 4:30pm.

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Wed Oct 2	7	Discuss in-progress 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".
Mon Oct 7	8	Discuss reading. Making mattes: Chromakeying, roto-scoping, etc. Debugging matte problems.	Project II assigned, due Monday Oct 21. Find your article and summarize it for Wednesday. Begin gathering source images.
Wed Oct 9	9	Review article summaries. Learning to See, part 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 Oct 14	-	NO CLASS (October Break)	
Wed Oct 16	10	Discuss reading. Correcting perspective, grain, and focus. In-class composite demonstration. (wire removal and background replacement.) Project II Q&A.	Finish project II for next class.
Mon Oct 21	11	Turn in project II and review them in class.	Read chapter 6 of Brinkmann (p. 93-102).
Wed Oct 23	12	Discuss reading. Vector graphics and time-based compositing. Interpolation and keyframes.	Project III assigned, due Monday Nov 11. Write script and bibliography for next Wednesday.

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Mon Oct 28	13	Discuss in-progress scripts. 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.
Wed Oct 30	14	Hand in scripts and bibliographies. AE in depth.	Continue working on project III. Read handout on AE.
Mon Nov 4	15	Audio import. Basics of using text. Readability and design in animated composites. Exporting movies, video compression.	Continue working on project III.
Wed Nov 6	16	In-class project Q&A. Temporal artifacts. Motion blur. Track mattes.	Finish project III for next class.
Mon Nov 11	17	Hand in project III and view projects in class. Discuss final project.	Final Project assigned. Project proposals due Wednesday Nov 20. Read chapter 16 of Brinkmann (p. 269-290).
Wed Nov 13	-	NO CLASS (Exam/Advising Day)	
Mon Nov 18	18	Discuss reading and final project ideas. Inspirational screenings.	Finish project proposal.

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Date	#	Class Topic	Assignment
Wed Nov 20	19	Final project proposals due. Articulated mattes, rotoscoping. In-class matting project.	Finish final project for Tuesday Dec 11.
Mon Nov 25	20	Getting frames from video and vice versa. Tracking. Time remapping. In-class tracking/matting project.	Continue working on final project.
Wed Nov 27	-	NO CLASS (Thanksgiving Break)	
Mon Dec 2	21	In-class final project Q&A session. Blending modes.	Continue working on final project.
Wed Dec 4	22	TBA (perhaps digital image capture and display: CCD, LCD, DMD, DVD)	Continue working on final project.
Mon Dec 9	23	TBA	Finish final project for next class.
Wed Dec 11	24	Final projects due. In-class screening. Last day of class.	