

# Computer Animation I

(ART 374) Fall 2006 Syllabus

revision date: 9/5/06 22:34

<u>Date</u>	<u>#</u>	<u>Class Topic</u>	<u>Assignment</u>
Wed Sep 6	1	First day stuff. The CG production pipeline and the ray tracing algorithm for making images.	Kerlow sections 2.4, 10.1, 6.3, 6.6 and chapter 7. Optional BG reading: Kerlow chapter 1.
Mon Sep 11	2	Discuss reading. Cameras in detail. Orthographic and perspective views. Simple transformations (translate, rotate). Maya: running, loading a scene, camera settings, camera transformations, rendering images. How to hand in assignments.	<b>Assignment 1</b> (camera control), due Weds. Do the Maya intro tutorials and read the relevant sections of the Maya manuals (in the classroom and online) for assistance with the software.
Wed Sep 13	3	Hand in and discuss assignment 1. Get to know each other. Expose the wizard behind the curtain: Animating numerical values using keyframes. Curve control, ease-in and ease-out.	<b>Assignment 2</b> (2D ball), due Weds. Kerlow section 11.1, 11.2 (through "motion paths"), 11.7, 10.2 (stop before "A Few New Principles"). Lasseter on squash/stretch and timing. Read about the graph editor in the Maya manual. Finish Assignment 2.
Mon Sep 18	4	Discuss reading. Principles of animation I (squash and stretch, timing). Controlling keyframes and interpolation in Maya. Making playblasts.	
Wed Sep 20	5	Hand in and discuss assignment 2. Introduce transformation hierarchy.	<b>Assignment 3</b> (2D ball with tail), due Wed Sep 27. Read Kerlow and Lasseter on anticipation, follow-through/overlapping action, and secondary action. Kerlow section 11.5 (animating hierarchies)
Mon Sep 25	6	Principles of animation II (anticipation, follow-through/overlapping action, and secondary action). Basics of hierarchical animation and more advanced Maya animation tools (dope sheet, re-timing in the time slider).	Finish assignment 3 for next class.

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Wed Sep 27	7	Hand in and discuss assignment 3. Return to 3 dimensions.	<b>Assignment 4</b> (3D balls), due Wed Oct 11. Read Kerlow and Lasseter on staging, exaggeration, slow in/slow out, and arcs.
Mon Oct 2	8	Principles of animation III (staging, exaggeration, slow in/slow out, arcs). Brainstorming ideas and planning for assignment 4.	Work on assignment 4.
Wed Oct 4	9	In-class bouncing ball demo and the layered approach to animating.	Finish assignment 4 for next Wed.
Mon Oct 9	-	NO CLASS (Columbus Day)	
Wed Oct 11	10	NOTE: MONDAY CLASS SCHEDULE Hand in and discuss assignment 4. Basics of lighting outside of the computer (key, fill, rim, etc.). Lighting theory from Calahan. Digital color.	<b>Assignment 5</b> (light a scene to match), due Wed Oct 18. Read Kerlow chapter 8 (pp. 199-226). Read Maya manual on lighting.
Mon Oct 16	11	Lighting on the computer. Light types, cheats to simulate diffuse reflection, shadows. Maya: light creation, control.	Finish assignment 5 for Weds.

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Wed Oct 18	12	Hand in and discuss assignment 5. Cover the previously-skipped lighting theory stuff and introduce the final project.	Final project pre-proposals, due Monday Oct 23.
Mon Oct 23	13	Hand-in pre-proposals. Storyboarding, shot breakdown, and other supporting material for final project proposals. Modeling with polygons. Modifying primitives (SRT on part or whole).	Due Monday: finished <b>final project proposal</b> . Read Kerlow section 2.1, 10.3, 10.4.
Wed Oct 25	14	Hand back pre-proposals. Comments. Review modeling thus far. Image planes. "Baking in" vertex data versus transforming an object. Rigging complexities, such as scale correction, and the expression editor.	Due Monday: finished <b>final project proposal</b> . Read Kerlow chapter 3 for Monday (don't worry too much about section 3.5). Begin working on final project models.
Mon Oct 30	15	Hand in final proposals. Discuss reading. Building a reasonably complex character from the ground up (more on expressions, hierarchies). Introduction to single-skin modeling.	Final project models, shaded and rigged, due Monday Nov 13. Consult the Maya manual and CG community as needed for assistance. Optional reading: Kerlow chapter 4.
Wed Nov 1	16	More on modeling and rigging: normals and poly smoothness, Milestone 3 Q&A, some more single-skin examples and tools.	Work on models.
Mon Nov 6	17	Shading I. Modeling Q&A.	Finish models for next Monday.

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Wed Nov 8	18	Shading II. Rigging Q&A.	Finish models for next class.
Mon Nov 13	19	Hand-in and look at models. Intro to blocking.	Layout and do blocking animation for next Monday.
Wed Nov 15	20	TBA (layout/blocking related)	Finish layout and blocking for Monday.
Mon Nov 20	21	Layout/blocking dailies in class.	Polish animation for next Monday. Read Kerlow sections 9.1, 9.2, 9.4 (skip Reflection Maps and Environment Maps), the first part of 9.5 (skip Color Maps), the first part of 9.7 (skip Transparency Maps). Keep animating.
Wed Nov 22	22	Animation dailies. How to get there from here: approaches to managing complex hierarchical animation.	Keep animating.
Mon Nov 27	23	Animation dailies.	Make appropriate animation fixes given comments during review. Read Kerlow chapter 9.

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Wed Nov 29	24	Final animation dailies.	Add lights to your scene(s) and render a single frame of each for review next Wednesday.
Mon Dec 4	25	More on lighting.	Finish your lit frames for Wednesday.
Wed Dec 6	26	Lighting review in class. Render wrangling.	Finish final projects for Wednesday Dec 13.
Mon Dec 11	27	Final Project Q&A. What working in the industry is like, course evaluation forms. Beyond CA I.	Finish final projects for Wednesday.
Wed Dec 13	28	Hand in and screen final projects.	