ACAD 178 - Motion Graphics

Spring 2016 - Aaron Siegel
Tuesday/Thursday 10:00am - 11:20am.
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Course Description:

ACAD 178 - Motion Graphics intends to introduce students to tools for the creation of two dimensional animations with a particular focus on generative composition. The course is broken down into two main components; non-linear digital animation using Adobe After Effects, and object oriented programming of generative compositions using Processing. Students will concentrate on conceptual elements of animation, visual composition, timing, color, typography, and interaction design while simultaneously providing context for learning the technical knowledge required to execute complex visual effects in software.

The output of assignments will be targeting social media as the primary platform rather than television or film. With this in mind project output will be hosted online in HTML5 compatible h.264 video formats such as mp4, webm, and gifv. Students will be creating individual Tumblr accounts to post the progress of their assignments and share the final results of their work with the world.

Schedule:

#	Tuesday	Thursday
1	Syllabus. Schedule / Assignments. After Effects interface. Photoshop / Illustrator / Premiere Pipeline.	Checkpoint #1: After Effects Tutorials Timeline, Keyframes, Animation Curves. Compositions, Layers, Shapes, Masks. Exporting media.
2	WORK DAY!	DUE: Project #1: Sol Lewitt Animated Wall Drawing.
3	Audio, Transitions, Text.	Checkpoint #2: After Effects Tutorials Effects.
4	WORK DAY!	DUE: Project #2: 16 Bars.
5	Processing development environment, basic syntax. Variables, Values, Operators. Conditionals, Loops, Functions. Arrays, Objects, Classes. Drawing functions. Loading/Drawing Images. Photoshop / Illustrator / Processing Pipeline.	Checkpoint #3: Processing Text Tutorials Procedural animation by frame. Procedural animation by milliseconds. Vectors, Math functions. Saving images. Capturing video from the screen.
6	WORK DAY!	DUE: Project #3: Generative Composition.
7	Mouse input. Keyboard input. Forces, Oscillation, Particle Systems.	Checkpoint #4: Nature of Code Ch. 1-4 Exporting for Javascript.
8	WORK DAY!	DUE: Project #4: Interactive Graphics.

Projects:

#	Description
1	*Sol Lewitt Animated Wall Drawing* (6 secs) Create an animated composition following the rules presented. The rules must be followed, but any room for interpretation is encouraged to be played with. The animation must be exactly 6 seconds long and must be able to loop seamlessly. Examples: ● Sol LeWitt Animation: https://www.youtube.com/watch?v=V5M-jmHl1cU Core competencies: 2D composition. Technical skills: adobe after effects, layers, keyframes, transitions, nesting.
2	*8 Bars* (15 - 30 secs) Use 8, 16, or 20 lyrical measures of a song to create a short video using kinetic typography animated in sync with the music. Use After Effects and the various title, image and effects tools to implement the appropriate styles and transitions to match the style of music and content of the lyrics. Examples: ● Beauty Hip-Hop Kinetic Typography: https://www.youtube.com/watch?v=MVvX4-h2Zak ● Eminem - Rap God: https://www.youtube.com/watch?v=6JIfIdPnSas ● Zach Rap: https://www.youtube.com/watch?v=UaJ76yj7X1U Core competencies: 2D composition, timing, typography. Technical skills: adobe after effects, layers, keyframes, transitions, effects, titles.
3	*Generative Composition* (30 secs) Using Processing create a generative animated composition. Your software should make use of variables, loops, objects, and random/noise functions. Examples: ● Casey Reas - Process 10: https://vimeo.com/74310535 ● Casey Reas - Process 13: https://vimeo.com/39078758 ● Jared Tarbell - Substrate: https://www.youtube.com/watch?v=Ipq-10CIDEk ● Robert Hodgin - Magnetosphere: https://vimeo.com/8581392 ● Robert Hodgin - Addition/Subtraction: https://vimeo.com/5564490 Core competencies: 2D composition, algorithmic thinking, programming composition, inheritance, entropy, methodology. Technical skills: processing, object oriented programming.
4	*Interactive Graphics* Use mouse/touch interaction to affect on screen graphics through responsive animation. The software should be able to export as Javascript and run in the web browser. Examples: ● Jono Brandel - Patatap: http://www.patatap.com/ ● datadreamer - dailies: http://datadreamer.com/dailies/ ● Hakim - Particles: http://hakim.se/experiments/html5/particles/01/ Core competencies: 2D composition, interaction design, system design. Technical skills: processing, object oriented programming.

Standard Procedures and Ground Rules:

Students are expected to attend all classes and arrive promptly. Attendance will be taken and can impact your grade. Due to the limited number of class hours and contact time, the in-class instruction will focus on lectures and critiques. Students are expected to complete projects, exercises and additional studio time outside of class - a complete listing of computer labs / hours on campus will be provided. Mutual respect in the classroom is critical. Critique is inevitable. Criticism will be constructive, and is based in the appropriateness of the idea and not the dignity of the individual. It is imperative to meet the deadlines given, every class day a project is late the student will be penalized one grade (10%) on their assignment. Every week the class will engage in a discussion topic that explores the impact that computing and the world wide web has had on culture at large, and art-making in particular. Discussion topics will be given during the class meeting the previous week.

Course Requirements & Grading:

Grades will be assigned according to strength of the concept/design, process/implementation and presentation/craftsmanship. 100% of your grade is based on the completion of the creative projects assigned.

Students are responsible for all assignments, including homework, in-class work, critiques, presentations, demos, readings, process and archiving work on removable media. It is the student's responsibility to submit missed work and information missed if absent. Attendance is crucial for the success of this class; students must attend class since information exchanged in a group discussion or setting may not be imparted through handouts or notes.

- 95 - 100 A = 4.0
- 90 - 94 A- = 3.7
- 85 - 89 B+ = 3.3
- 80 - 84 B = 3.0
- 75 - 79 B- = 2.7
- 70 - 74 C+ = 2.3
- 65 - 69 C = 2.0

Requirements for Assignments:

- Do not discard any of your work or research. You will be asked to turn in all research and iterations of your progress with each project. Research may be stored in sketchbooks, documented through photos or in e-journals formats such as blogs by other digital means.
- All homework and assignments must be submitted on time, in the format outlined. Late assignments will be docked one full grade for each class day they are late.
- All work to be critiqued must be ready for display at the start of class. Hardcopies should be cropped and pinned to the wall by the start of class. Project images should be saved in the appropriate formats and ready to present. Please consider presentation and its display.

- Please proofread and spell-check your work. Writing and designing use different sides of the brain. It is common for designers to misspell familiar words. All cited work must include a bibliography.
- Label all work that is handed in clearly! Work submitted via email attachment should include the student's name in the document name. (e.g.:*lastname_firstname_assignmentname.zip*)

Attendance:

This is a studio-based class. Attendance is crucial to the success of the student. Please note that the design area adheres to the following attendance policy:
- After missing the rough equivalent of 10% of regular class meetings (3 classes) the student's grade and ability to complete the course will be negatively impacted.
- Being absent on the day a project or assignment is due can lead to an "F" for that project or assignment. Absence will be excused if accompanied by a doctor's note.
- It is always the student's responsibility to seek means (if possible) to make up work missed due to absences, although such recourse is not always an option due to the nature of the material covered.
- It should be understood that 100% attendance does not positively affect a final grade.
- Any falsification of attendance may be considered grounds for a violation of ethics before the University Office of Student Judicial Affairs.
- Tardies can accumulate and become equivalent to an absence. 3 tardies = 1 absence.
- Attendance will be taken using sign-in sheets available the first 20 minutes of class and may be circulated again at the end of class.
- After a first warning, students who persist in the following disruptive activities: sleeping, texting, emailing or online browsing for purposes other than class research, will be given a tardy for that class session.
- Students will be considered absent if they leave without the instructor's approval before the class has ended.

Academic Conduct:

Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Section 11, Behavior Violating University Standards (https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions/). Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct (http://policy.usc.edu/scientific-misconduct/). Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the Office of Equity and Diversity (http://equity.usc.edu/) or to the Department of Public Safety (http://capsnet.usc.edu/department/department-public-safety/online-forms/contact-us). This is important for the safety whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report, or can initiate the report on behalf of another person. The Center for Women and Men (http://www.usc.edu/student-affairs/cwm/) provides 24/7 confidential support, and the sexual assault resource center (sarc@usc.edu) webpage describes reporting options and other resources.

Support Systems

A number of USC's schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the American Language Institute (http://dornsife.usc.edu/ali), which sponsors courses and workshops specifically for international graduate students. The Office of Disability Services and Programs (http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html) provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, USC Emergency Information (http://emergency.usc.edu/) will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.

Disabilities and Academic Accommodations

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me as early in the semester as possible. DSP is located in STU 301 and is open 8:30am - 5:00pm, Monday through Friday. The phone number for DSP is (213) 740-0776.