LIVE MEDIA (ARTTECH 3108)

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This course presents a hands-on, critically informed approach to embodied digital media. This is done through a range of modalities stretching from the sculptural to the choreographic, stressing the malleability of digital media, while at the same time exploiting it's ability to be embedded in objects and deployed in spaces. The resulting work bridges the gaps between installation, performance and cinematic projections, utilizing elements from each to create hybrid visual systems. Students are invited to freely mix audio, video, 3D, text and DIY software, all within the contexts of dynamic, temporal and ephemeral work. Driving these explorations is the Max/MSP/Jitter graphical programming environment, studied with a focus on live video and 3D work, enabling the use of unconventional presentation formats incorporating camera feeds, multiple screens, synchronized videos, reactive systems, projection mapping, networks, sensors and other devices. The curriculum relates to the concept of "liveness", drawing on areas such as architecture, choreography, performance art and media installation, mixed with a critical exposure to the latest in military-industrial tech-culture. These themes are explored through a series of lectures, guest visits, discussions and screenings, but always grounded in studio sessions and projects.

Requirements:

1. <u>Attendance and promptness</u>: You are expected to show up, on time. If you know you be coming to class, let me know as soon as possible by email. 3 unexcused absences will result in failure/no credit. 2 lates of more than 10 min = 1 absence. If you miss class, it is your responsibility to make up for what you missed by contacting classmates. It's especially important that you work through the technical material you missed since we'll be moving fast. Expect to invest more of your personal time in making up for what you would have learned faster in class. If you miss class, you will need to contact me and I will let you know whether to submit a patch demonstrating what we studied in that class, or if not applicable then a typed 1 page response to the material screened and discussed in class. If you register later in the semester, during add/drop, the classes you missed will be counted as absence and you'll be responsible for making them up. See pp. 123-4 of SAIC Bulletin: http://www.saic.edu/life/policies/index.html#bulletin.
2. <u>Projects</u>: Submission of all projects on time (see below for details). If for any reason you know you will not be able to show the project when it's due, let me know ASAP and we'll try to solve the problem.
3. <u>Readings</u>: There will be mandatory readings for some classes. On such occasions please make a note to yourself of at least one point for discussion concerning the reading. This is not submitted to me, but is still required.
4. <u>Technology</u>: It's your responsibility to make sure you have the necessary software licenses, installations, and Media Center authorizations to make full use of the class, by the end of add/drop on Feb 10th. See below for details.
5. <u>Independent learning + mutual assistance</u>: One of the essential components in learning how work with Live Media is being able to learn new tools and techniques out of available public resources on the web, in forums, from your friends, and best of all, by trying and failing in magnificent ways. Please apply this approach as much as possible- We will not be able to provide constant technical support for each student, though we are of course always there for you in case you need us. I will be reluctant to provide help to a student who does demonstrate that they had tried to solve the problem on their own before contacting me.

Class projects:

1. <u>Micro-project 1</u>, due on class #3, **Feb 10th**. Done alone, or in pairs if you must.
2. <u>Mid-class project 2</u>, due on class #8, **Mar 17**. Done in groups of up to 3 or alone if you must. Documentation due on class blog by the following class.
3. <u>Final project</u>: proposals due by posting to class blog + showing in class #10, **Apr 7**; Projects due on **end of class event / last day of class** if you are not participating for some reason. Done alone or in groups of up to 3, may be more in special cases with my permission. May involve collaborators from out of class, again with my consent.
4. <u>Short presentation</u> (in pairs): 1 per class, 30 minutes including discussion, on a subject related to the class subject, accompanied by a blog post to the class blog due by the date of the presentation. Dates to be determined.

Readings:

A readings list is available on the class portal. Some reading are available on the portal as well.
There is also a recommended reading and resources list on the blog, which will be expanded by your own contributions to form a pool we can all draw on.

Communication:

1. We will be communicating regularly by email. Please check your SAIC email account daily as updates and announcements will be delivered during the week.
2. The class has a blog. On it you will post some things as mentioned above. Please look at your classmates posts and occasionally comment on them. Additionally there is a pool of links that you are welcome to add to. We will try post each week's lecture notes, but don't count on this as a recap of the class – you should still take your own notes.

Tech Requirements:

1. A personal computer + external harddrive, preferably firewire or esata, 7200 rpm.
2. The latest version of Max/MSP/Jitter, currently it's 5.1.7 as of the beginning of class.
3. Latest versions of the Max extensions: Cv.Jit, Jasch Objects, Jit.freenect. Syphon for Jitter
4. Apple developer tools + Quartz Composer (if you have a school computer it's probably already installed)
5. Working knowledge of Apple Compressor, video codecs. There's a Media Center workshop for this.
6. Working knowledge + Media Center authorization of video camera operation (XH-A1, HV30), basic lighting, projector operation. THIS IS A REQUIREMENT.

Accommodations for students with disabilities:

If you have a disability and may need an accommodation, please contact SAIC's Disability and Learning Resource Center (DLRC) by calling 312-499-4278, or by e-mailing dlrc@saic.edu. You should contact DLRC as early in the semester as possible. Staff at the DLRC will review your disability documentation and work with you to determine appropriate accommodations. They will then provide you with a letter outlining approved accommodations, which must be presented to me before any accommodations will be implemented.

Class Schedule (definitely subject to change!)

1. **Jan 27 [Define: Live Media]**
   <u>Discuss</u>: What is / isn't live media. Cybernetics and Immediatism. Art antecedents.
   <u>Do</u>: Intro to visual programming. Max / Vizzie basics 1

2. **Feb 10 [Media Machines]**
   <u>Discuss</u>: Control, feedback and reflexivity via the posthuman. Tangible repetition machines, the mechanical loop.
   <u>Do</u>: Max basics 2. Looping, sequencing, mapping. *Micro Project 1: Hybrid Machine.*

3. **Feb 17 [A-Life: primal soup and building blocks of the new flesh]**
   <u>Discuss</u>: Artificial Life, Emergence, Noise.
   Micro Project 1 crit
   <u>Do</u>: Jitter basics 1: What is a matrix? Planes and dimensions, mixing, drawing

4. **Feb 24 [The shape of things past]**
   <u>Discuss</u>: Spatialized, elastic time and memory, scanning and rendering.
   <u>Do</u>: Jitter basics 2: Slitscans, buffers, timelapse, and other spatio-temporal tinkering.

5. **Mar 3 [Improvisation technologies]**
   <u>Discuss</u>: Body-movement workshop with Guest Artist TBA
   Screenings of systematic media/dance work in class.
   <u>Do</u>: *Project 2: body/image reflexive machine. In groups of 1-3. / Jitter: recording, buffers, keying*

6. **Mar 6 [Bodies in space] ** SUNDAY CLASS (not optional)**
   <u>Discuss</u>: Live/virtual feeds, realtime real world systems part 1
   Project 2 ideas workshop
   <u>Do</u>: Tracking environments & setups: lighting, hardware, space / basic tracking and sensing

7. **Mar 10 [The Vision machine]**
   <u>Discuss</u>: Computer vision systems: Kino-Eye vs. ARGUS, surveillance, sousveillance, DARPA and Baghdad 2020
   Project 2 process review 1
   <u>Do</u>: Jitter CV: Blob tracking, pattern recognition, Kinect (OpenNI?)

8. **Mar 17 *Project 2 Crit* + EVL field trip**
   Meet in class, leave @ 10, afternoon: Project workshop, tutorials, individual meetings

   Mar 24 Spring break

9. **Mar 31 [Project 2 crit, 3D]**
   <u>Discuss</u>: Project 2 Presentations & Crit
   <u>Do</u>: Jitter: Intro to openGL 3D and GPU work

10. **Apr 7 [Media Architecture / Virtual space / Spatial AR]**
    <u>Discuss</u>: Guest Architect/Artist talk TBA
    Spatial Augmented reality, Daemon and Blast Theory
    <u>Do</u>: Jitter AR / *Final project proposals/presentations due (in class review and discussion).*

11. **Apr 14 [Living facades / Architectural AR aka projection mapping]**
    <u>Discuss</u>: From Wodiczko to AntiVJ, Individual meetings
    <u>Do</u>: Using HC Gilje's projection tools, Jitter DIY mapping basics

12. **Apr 21 [The Data stream / Synchronicity] // Workshop Day**
    Discuss: Live AV art, generative data systems, Individual meetings
    Do: Max/MSP/Jitter: Networking, Audio-Video syncing and locking

13. **Apr 28 [Workshop day]**
    Documentation tutorials if needed

    May 5 Critique Week

14. **May 12 [Final Presentations prep]**
    Review of project states, tech help, prep for event night
    * If final presentations event date is earlier than this, we will instead look at and discuss the documentations and consume junk food of you choice.

    Date TBA [Final works presentation]: shown at event of type/location to be determined in class.

SAIC Plagiarism Policy

The School of the Art Institute of Chicago prohibits academic misconduct, which includes "both plagiarism and cheating, and may consist of the submission of the work of another as one's own; unauthorized assistance on a test or assignment; submission of the same work for more than one class without the knowledge and consent of all instructors; or the failure to properly cite texts or ideas from other sources" (Students' Rights and Responsibilities, Student Handbook, http://www.saic.edu/pdf/life/pdf_files/rights.pdf).

Plagiarism is a form of intellectual theft. One can plagiarize even if one does not intend to. The penalty for plagiarizing may range from failure on the specific plagiarized assignment to failure in the class. Repeat offenses can lead to disciplinary action, which could include suspension or expulsion from the School.

The Faculty Senate Student Life Subcommittee has prepared a 28-page handbook entitled **Plagiarism: How to Recognize It and Avoid It.** The document is available online on at <http://www.artic.edu/saic/programs/resources/library/plagiarismpacket.pdf>

The final page of the handbook has been designed as a one-page handout, "When to Give Credit." It is available online in PDF format at <http://www.artic.edu/saic/programs/resources/library/plagiarism_credit.pdf>

Library staff have also prepared a two-page synopsis of the committee's handbook, designed as a handout for students. "Avoid Plagiarism: Quick Guide" is available at <http://www.artic.edu/saic/programs/resources/library/plagiarism.pdf>