LMC 2700 | FALL 2015
INTRODUCTION TO COMPUTATIONAL MEDIA

Tuesdays and Thursdays, 9:35AM-10:55AM, Weber SST III 2
School of Literature, Media and Communication
Georgia Institute of Technology

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Russell Huffman office hours in Skiles lab 346
Mondays and Wednesdays 11:15 am to 12:15pm

Ashley Jennings office hours in Clough room 150
Tuesdays and Thursdays from 2pm - 3pm

COURSE DESCRIPTION

It is not often that human cultures invent new media of representation. The computer is a powerful example that has quickly assimilated older representational forms including spoken language, printed text, drawings, photographs, music and moving images. But the computer is not just an aggregator of old formats; it brings its own representational powers as well as new genres, such as data art, video games, animated robots, and interactive storytelling. This course will approach the computer as a medium of expression, connected to the history of media while evolving its own characteristic forms. LMC 2700 is the introductory course for the Computational Media degree and an elective course for LMC students with a Media Studies specialization. Students will read, discuss and write about key developments in the history of computation media. Moreover, they make their own computational artifacts using a variety of programming languages including Java and JavaScript. Basic experience with programming is expected of all participants in the course.

LEARNING OUTCOMES

● Students understand and apply the computational principles and

affordances of creative digital expression.

● Students understand the historical and cultural forces that have led to the rise of digital media.

● Students learn to create digital artifacts with an awareness of history, audience, and context.

● Students learn to communicate information and ideas to a range of audiences.

For STAC/LMC Majors

● Textual/Visual Analysis: Students will learn to read, analyze, and interpret not only cultural projects such as film, literature, art, and new media, but also scientific and technical documents.

● Interpretive Frameworks: Students will become familiar with a variety of social, political, and philosophical theories and be able to apply those theories to creative and scientific texts, as well as to their own cultural observations.

● Communication Skills: Students will be able to gather, organize, and express information clearly and accurately, with sensitivity to audience. They will be able to do so both by using traditional media and by tapping the potential of new digital media.

● Historical Analysis: Students will study literary and cultural texts within a historical framework to become familiar with the various forces that shape artistic and commercial production. They will learn to interpret history actively, rather than passively accepting archival information.

ASSIGNMENTS

There are three types of deliverables in this course: readings, projects, and written assignments.

Readings structure the historical and theoretical portion of the course. Each student should engage these materials and prepare questions and comments to discuss in class. Readings are often synced with projects and written assignments, but not always. All reading selections listed on the syllabus are tentative. Additional readings may be assigned as supporting material along with projects and written assignments.

Projects are substantial, multi-week efforts meant to develop your capacity to conceptualize and execute creative works in computational media. This is hard! It requires the merger of technical expertise and creative vision.

Projects also demand that you identify and describe a creative vision and goal, such that we can evaluate your work against your stated objective. One of these projects will be a group project.

Written Assignments are short and focused on documenting computational media in use. Written assignments will prompt you to observe technology in the wild and identify questions, problems, or opportunities that would otherwise go unseen. Weekly blog assignments will typically be 300-500 words in length. Mid-term and final papers, in which you reflect upon previous writing assignments, will only be slightly longer (~1000 words) but they are expected to be much more refined.

The purpose of assignments is to give you regular, repeated practice exercising the course goals.

GRADING

Grades will be given based on completeness and excellence, distributed as follows:

50% Projects
25% Blog assignments
10% Midterm paper
10% Final paper
5% Overall performance

Roughly speaking, an assignment will be excellent (A), good (B), satisfactory (C), unsatisfactory (D), or failing (F).

Students whose projects meet only the requirements of the assignment and are executed adequately (i.e., it works, it's coherent, etc.) will receive a "C" on that assignment (remember, C means "satisfactory"! Students whose projects meet all the requirements of the assignment and are executed with additional care, creativity, and coherence will receive a "B." To receive an "A" on the assignments (and therefore, in the course), students must go above and beyond the basic requirements of the assignments, showing exceptional care, creativity, and coherence. Students who fail to meet the requirements of the assignment or whose execution is incomplete or inadequate will receive a "D" or below.

Project Grading Each project will involve a different programming environment, which you will need to learn to use and then to make expressive. For this reason, projects are necessarily ambiguous. When you submit a project, I will be looking for clear and convincing statements of intentions in your project write-ups, and effective executions of those intentions in the project. Attention to detail in execution is appreciated, but rougher-edged well-conceived work is encouraged over very polished,

unimaginative work.

Blog Grading I am looking for concise and well-written responses to weekly prompts. A pass/fail grade will be awarded based on the completion and coherence of your initial submission. This includes grammar and spelling, so proofread your work carefully.

Overall Performance Grading Five (5) percent of the total course grade will be reserved for "overall performance." This is a grab-bag category that provides me with a half letter-grade to account for your personal level of effort. This might be used to bolster students who exhibit profound improvement, or to penalize those who don't strive to improve at all. Think of this as a bonus you can earn by impressing us with your progress.

Submitting Assignments All assignments will include submission instructions and a firm due date. Unless there are extenuating circumstances, anything not turned in by the due date will not be accepted. To dampen the harshness of this policy, every student will be granted one (1) "assignment reprieve," allowing you to turn in your work up to three (3) days beyond the due date. So, if an assignment would have been due Tuesday at 11am, you can turn it in Friday at 11am. Once you've used up your reprieve, that's it, you don't get another. Use it wisely. Even better, think of it as insurance: don't use it at all, so that if you really need to it'll be there to help.

Please Note: Failure to complete a number of readings, projects, or writing assignments may be grounds for a failing grade.

CLASS REQUIREMENTS AND POLICIES

Students are encouraged to bring their laptops to class. It is important to keep in mind that this class focuses on the principles and processes of computational media, not on technical skills; it is therefore up to you to develop and/or hone your facility with any tools required to complete assignments. Lectures will not be posted. It is your responsibility to take notes and remain attentive in class.

Attendance Students are required to attend and actively participate in all classes. Failing to attend and participate in class regularly will result, ultimately, in a poor grade for overall performance.

Readings and Materials Readings will be distributed electronically via T-Square, email, or another readily available means. Some readings will be linked directly from the syllabus. Any materials not linked here can be found in the T-Square resources. Additional materials for projects will be distributed electronically. You will need your own laptop computer (Windows or Mac).

Class Organization With a few exceptions (the first week of class, weeks with exams and holidays, etc.), the class will be organized around two activities: media studies and media design. We'll devote one day each week to each of these activities. Typically, that will mean one day of reading historical or critical materials (with associated lecture and discussion) and one day of experimenting with computational media platforms and critiquing things students have made using those platforms.

SCHEDULE

This schedule is subject to change at any time. Updates and changes will be announced in class or by email to students.

WK 1: WHAT IS COMPUTATION?

[Tues] August 18: Welcome / About

[Thurs] August 20: Project 1 Intro
> ***Due: Reading***
> Ian Horswill, 2008
> "What is Computation?"
>
> Seymour Papert, 1980
> "Gears of my Childhood"

WK 2: WHAT ARE MEDIA?

[Tues] August 25: Lecture
> ***Due: Reading***
> Marshall McLuhan, 1964
> from *Understanding Media*
>
> Lev Manovich, 2001
> from *The Language of New Media*

[Thurs] August 27: Projects Overview
> ***Due: Blog***
> [B1] MEDIA MEMOIR

WK 3: PERSONAL MEDIA

[Tues] September 1: Lecture
> ***Due: Reading***
> Alan Kay and Adele Goldberg, 1977
> "Personal Dynamic Media"

Sherry Turkle and Seymour Papert, 1990
"Epistemological Pluralism
and the Revaluation of the Concrete"

[Thurs] September 3: Project 2 Intro
Due: Project
[P1] REMIXING MEDIA (language: Scratch)

WK 4: PROFESSIONAL MEDIA

[Tues] September 8: Lecture
Due: Reading
D. C. Engelbart, 1962
from Augmenting Human Intellect

Ted Nelson, 1974
from "Computer Lib/Dream Machines"

[Thurs] September 10: Project 1 Review
Due: Blog
[B2] SEMI-STRUCTURED INTERVIEW

WK 5: NETWORKED MEDIA

[Tues] September 15: Lecture
Due: Reading
Ted Nelson, 1965
"A File Structure for The Complex,
The Changing, and the Indeterminate"

Tim Berners-Lee et al, 1994
"The World Wide Web"

Anil Dash, 2012
"The Web We Lost"

[Thurs] September 17: Project 3 Intro
Due: Project
[P2] TOOLING (language: Processing)

WK 6: BIG DATA

[Tues] September 22: Lecture
Due: Reading
Vannevar Bush, 1945
"As We May Think"

Kate Crawford and Danah Boyd, 2012
"Critical Questions for Big Data"

[Thurs] September 24: Project 2 Review
Due: Blog
[B3] QUANTIFIED SELF REPORTING

WK 7: VISUALIZING DATA

[Tues] September 29: Lecture
Due: Reading
Ben Fry, 2008
from Visualizing Data, Chapter 1

Johanna Drucker, 2011
"Humanities Approaches to Graphical Display"

[Thurs] October 1: Project 3 Critique

WK 8: DATA AND NARRATIVE

[Tues] October 6: Project 4 Intro
Due: Project
[P3] DATA VISUALIZATION (language:

Processing)

[Thurs] October 8: Lecture
Due: Reading
Lev Manovich, 1999
"Database as Symbolic Form"

Laura Kurgan, 2011
from *Up Close, at a Distance*

WK 9: FALL BREAK

[Tues] October 13: No Class (Fall Recess)

[Thurs] October 15: Project 3 Review

Due: Short Paper
[MID-TERM PAPER]

WK 10: AESTHETICS OF INTERACTION

[Tues] October 20: Lecture

> **Due:** **Reading**
> Alan Turing, 1950
> "Computing Machinery and Intelligence"
>
> Fox Harrell, 2010
> "Designing empowering and critical identities in social computing and gaming "

[Thurs] October 22: Project 5 Intro

> **Due: Project**
> [P4] POETICS OF CODE (language: Chef)

WK 11: INTERACTIVE STORYTELLING

[Sun] October 25: Withdrawal Deadline

[Tues] October 27: Lecture

> **Due: Reading**
> Joseph Weizenbaum, 1976
> from *Computer Power and Human Reason*
>
> Janet Murray, 1998
> from *Hamlet on the Holodeck*

[Thurs] October 29: Project 5 Critique

> **Due: Blog**
> [B4] DIRECT OBSERVATION

WK 12: LANGUAGE GAMES

[Tues] November 3: Lecture

> **Due: Reading**
> Ludwig Wittgenstein, 1965
> from *The Blue and Brown Books*
>
> Michael Reddy, 1993
> "The Conduit Metaphor"

[Thurs] November 5: Project 6 (Final Project) Intro

> **Due: Project**
> [P5] NARRATIVE BOT (language: JavaScript)

WK 13: CONCEPTIONS OF DESIGN

[Tues] November 10: Lecture

Due: Reading
Don Schon, 1984
from *The Reflective Practitioner*

Herbert Simon, 1996
from *Sciences of the Artificial*

[Thurs] November 12: Final Project Feedback
Due: Blog
[B5] PARTICIPANT OBSERVATION

Due: Proposal
[P6.1] PROJECT PROPOSAL

WK 14: DESIGNING INTERACTIONS

[Tues] November 17: Lecture
Due: Reading
Don Norman, 1990
from *The Design of Everyday Things*

Dan Saffer, 2013
"Designing for Interactions"

[Thurs] November 19: Project 5 Review

WK 15: REVIEW

[Tues] November 24: Final Project Feedback
Due: Short Paper
[FINAL PAPER]

[Thurs] November 26: No Class (Thanksgiving Break)

WK 16: FINAL PROJECT WEEK

[Tues] December 1: Final Project Reviews

[Thurs] December 3: Final Project Reviews

[Fri] December 4: No Class
Due: Final Project
[P6] CONCEPT GAME (language: any)

DEBATE, DIVERSITY, AND RESPECT

In this class, we will present and discuss a diversity of perspectives. Although you may not always agree with others' perspectives, you are required to be respectful of others' values and beliefs. Repeated inappropriate or abusive comments and/or behavior will be cause for disciplinary action. If you feel that your perspectives are being ignored or slighted, or you in anyway feel uncomfortable in the classroom, please contact me immediately.

THE COMMUNICATION CENTER

The Communication Center is located in Clough Commons, Suite 447. It is an excellent resource for any student (undergraduate or graduate) who wants help with a communication-related project. You can visit the center for help at any stage of the process for any project in any discipline. The knowledgeable and friendly tutors are available to help you develop and revise your projects. They are not available to "fix" your projects. Please do not ask the tutors to proofread or edit your projects.

For information on making an appointment please visit:
http://communicationcenter.gatech.edu/content/makeappointment.

If you need assistance with the appointment system, you can call 404-385-3612 or stop by the center. All services are free and confidential.

STUDENTS WITH DISABILITIES

Students should self-report to the Access Disabled Assistance Program for Tech Students at: 220 Student Services Building Atlanta, GA 30332-0285 404.894.2564 (voice) or 404.894.1664 (voice/TDD)
www.adapts.gatech.edu/guidebook.html

PLAGIARISM WARNING

Plagiarism of any form will not be tolerated, and will result in a failing grade for the course. Plagiarism is not only the uncredited copying of text from another's work but also copying ideas or code from other digital artifacts. Adaptation of code samples (provided or found online) is not necessarily plagiarism. To facilitate your success on projects, I will try to provide sample code or links to other samples. However, explicitly copying entire algorithms or sample applications and representing them as your own is not permitted. Use sample code and online resources as tutorials to help you write your own original code. Copying more than 10% of a code sample will be considered plagiarism.

Having said that, students are encouraged to share and critique each others' work. However fully collaboration is only permitted on group projects. On all other assignments, you are expected to complete and turn in your own work. Students may not submit work on another's behalf. Unauthorized use of any

previous semester course materials is prohibited. Violating these terms will be considered a direct violation of academic policy and will be dealt with according to the GT Academic Honor Code.