**[LCC 2700: Introduction to Computational Media](http://ledantec.net/teaching/lcc-2700-fall-2012/)**

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Office Hours: Friday, 12–2pm

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Office Hours: Monday, 11–12; Wednesday, 11–12; Thursday 11–12:30pm

Class Meetings: Monday/Wednesday/Friday, 10:05-10:55AM  
Location: Architecture East (ARCH) 123

**Prerequisite**: ENGL 1102 and (CS 1315 or 1316 or 1301 or 1321 or 1371)

**Course Description**:

It is not often that human culture invents a new medium of representation. The computer is a powerful form of representation that is quickly assimilating older representational forms including spoken language, printed text, drawings, photographs, moving images. But the computer is not just a transmitter of old formats: it brings its own representational powers and its own new genres such as videogames, web sites, animated robots, and interactive television programs. This course approaches the computer as an evolving medium of expression, connected to the history of media while it is evolving its own characteristic forms. Together, we will be exploring the unique representational properties of the computer and surveying key advances in the expressive capabilities afforded by this new medium.

To this end, LCC 2700 is the introductory course for the Computational Media degree and the Literature, Media and Culture Interaction Design thread. Students will read, discuss, and write analytically about key developments in history of digital media and the work of important theorists and inventors who shaped the development of the medium. Students will critique digital artifacts from classic programs like Zork and Weizenbaum’s Eliza up through contemporary video games. They will also create projects within key representational traditions of computational media.

**Learning Outcomes**:

For CM Majors:

* Students understand and apply the mathematical principles and computational affordances appropriate to creative digital expression.
* Students understand the historical and cultural forces that have led to the rise of digital media.
* Students can create digital artifacts with an awareness of history, audience, and context.
* Students can 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 an 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.

**Required Texts**:

The following books are required for the class. Content from the books is not guaranteed to be covered during class lectures. It is your responsibility to complete the reading.

Books are (or should be) available at the Georgia Tech Bookstore (Barnes & Noble).

* Noah Wardrip-Fruin and Nick Montfort, *The New Media Reader* (MIT Press 2003)
* Don Norman, *The Design of Everyday Things* (Basic Books, 2002)

Additional reading will be available via the class’ T-Square site and links and handouts provided in class.

**Grading**:

Grades will be given based on completeness and excellence, described as follows.

Projects: 50%  
Written assignments: 20%  
Quizzes on readings: 10%  
Final examination on readings and lectures: 10%  
Critique and class project presentations: 10%

***Projects & Writing Assignments***

Students whose projects meet all the requirements of the assignment and are executed adequately (i.e., it works) will receive a “C.” Students whose projects meet all the requirements of the assginment 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.

In the case of projects, 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 will win out over very polished, unimaginative work.

In the case of written assignments, I will be looking for well-written and well-reasoned arguments that address the question posed. Mere descriptions of the function of a particular software artifact are not what I’m looking for; you will be asked to analyze, evaluate, and then make and support arguments about such artifacts. This is a formal written assignment, not a note or a blog post. Proofread and cite sources. Well-reasoned, persuasive writing is what I’m looking for, whether or not I agree with your position is irrelevant.

In both cases, going beyond the letter of the assignment and integrating it with your own ideas, questions, and interests is encouraged, and indeed will help you improve your performance.

***Quizzes***

These short answer written tests will be graded to confirm the student’s complete and fluent understanding of the key principles of the material. Quizzes will be comprised of very short answer questions with clearly correct and incorrect answers. Quizzes will be based on class readings. **Quizzes may occur at any time reading is assigned, so please be sure to read the assignments for each week. Clarification on which reading assignments are required for the next meeting will be provided at the end of each class meeting**.

***Final Exam***

The final exam will consist of short answer and essay questions on the content of the readings and lectures. Students can expect to be prepared for the final exam if they attend lecture, do the readings, and perform well on the quizzes.

***Critiques & Presentations***

Students will be asked to make in-class presentations to their colleagues several times through throughout the semester The first will be short, the second longer. I am looking for clear and concise explanations of your intentions and how you implemented them, as well as challenges and how you overcame them. Your oratory abilities **will** be a factor in these grades.

**Note that to receive an “A” in the course, students must go above and beyond the basic requirements of the assignments. This is a course about expressive computing; the best work will articulate and deliver on clear expressive goals.**

***Attendance Requirements***

Students are expected to attend all classes. Three excused absences are permitted, any more will result in a reduction in the the student’s final grade by one letter grade for every two additional unexcused absenses. Tardiness over 10 minutes will be considered an unexcused absence. Attendance will be taken **every class**, starting the second week of class to allow for new students/churn. If you anticipate having a problem attending class for whatever reason, you are urged to see the professor in advance of your expected absense.

***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 is not necessarily plagiarism. To facilitate your success on projects, I will try to provide my own 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.

Unauthorized collaboration between students. Students are encouraged to share and critique each others’ work. You are allowed (and encouraged!) to work together with other students, but collaboration is only permitted on group projects. On all other assignments, you are expected to complete and turn in your own work.

Unauthorized use of any previous semester course materials. This includes tests, quizzes, homework, projects, and any other coursework (aka “Word”), is prohibited in this course.

Violating these terms will be considered a direct violation of academic policy and will be dealt with according to the GT Academic Honor Code (available at www.honorcode.gatech.edu).

**Course Schedule:**

What follows is an outline for the semester. As the semester progresses, we may adjust dates and materials; however, unless specifically stated in class, you should assume this schedule is current and accurate.

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| ***Week 1, August 20: Introduction*** | | | | |
|  | ***Monday*** | ***Wednesday*** | ***Friday*** |  |
| *Topic* | Introduction | Computation as a medium | Marshall McLuhan |  |
| *Read* |  | NMR Preface | NMR McLuhan (13) |  |
| *Do* |  |  |  |  |
| ***Week 2, August 27: Properties of the Medium: Spacial*** | | | | |
|  | ***Monday*** | ***Wednesday*** | ***Friday*** |  |
| *Topic* | Properties of the Medium | Spatial Property | Getting Lost in Virtual Spaces |  |
| *Read* | ITM: Ch. 2 (T-Square)  NMR: Nelson (21) | ITM: Ch. 6 (T-Square)  NMR: Borges (1) | (in class) ADVENT  Adventure  The Legend of Zelda |  |
| *Do* | Play Zork, Book & Volume  Start Written Assignment 1 |  |  |  |
| ***Week 3, September 3: Properties of the Medium: Participatory*** | | | | |
|  | ***Monday*** | ***Wednesday*** | ***Friday*** |  |
| *Topic* | Labor Day. No class. | Programming in Inform 6 | Participatory Property |  |
| *Read* |  | HoH: Chapter 5 (T-Square) |  |
| *Do* | Start Project 1 Written Assignment 1 Due |  |  |
| ***Week 4, September 10: Properties of the Medium: Encyclopedic I*** | | | | |
|  | ***Monday*** | ***Wednesday*** | ***Friday*** |  |
| *Topic* | Participation and Affordances | Managing Data | Peer Critique |  |
| *Read* | Norman: Chapter 1 | NMR: Bush (2) |  |  |
| *Do* | Start Written Assignment 2 |  |  |  |
| ***Week 5, September 17: Properties of the Medium: Encyclopedic II*** | | | | |
|  | ***Monday*** | ***Wednesday*** | ***Friday*** |  |
| *Topic* | Data Networks | The World Wide Web | The Free Software Movement |  |
| *Read* | NMR: Nelson (30) | NMR: Berners-Lee (54) | NMR: Stallman (36) |  |
| *Do* | Written Assignment 2 Due |  | Project 1 Due |  |
| ***Week 6, September 24: Properties of the Medium: Encyclopedic III*** | | | | |
|  | ***Monday*** | ***Wednesday*** | ***Friday*** |  |
| *Topic* | Programming in Processing | The Semantic Web | Peer Critique |  |
| *Read* |  | Berners-Lee, Hendler and Lassila, The Semantic Web: A new form of Web content that is meaningful to computers will unleash a revolution of new possibilities (T-Square) |  |  |
| *Do* | Start Project 2 Start Written Assignment 3 |  |  |  |
| ***Week 7 October 1: Properties of the Medium: Procedural I*** | | | | |
|  | ***Monday*** | ***Wednesday*** | ***Friday*** |  |
| *Topic* | Web 2.0 | Modern Computation | Procedurality |  |
| *Read* | O’Reilly, [**What is Web 2.0?**](http://oreilly.com/web2/archive/what-is-web-20.html)  Video: [**The Machine is Us/ing Us**](http://www.youtube.com/watch?v=6gmP4nk0EOE)  O’Reilly, [**Web 2.0 Compact Definition: Trying Again**](http://radar.oreilly.com/2006/12/web-20-compact-definition-tryi.html)  Anderson, [**Tim Berners-Lee on Web 2.0: “nobody even knows what it means”**](http://arstechnica.com/business/2006/09/7650/) | NMR: Turing (3) | Chris Crawford, Process Intensity (T-Square)  Greg Costikyan, [**Process Intensity**](http://www.manifestogames.com/node/2348) |  |
| *Do* | Written Assignment 3 Due |  | Project 2 Due |  |
| ***Week 8, October 8: Properties of the Medium: Procedural II*** | | | | |
|  | ***Monday*** | ***Wednesday*** | ***Friday*** |  |
| *Topic* | Web Remix | Eliza | Peer Critique |  |
| *Read* |  | Eliza Online NMR Weizenbaum (24) |  |  |
| *Do* | Start Project 3 |  |  |  |
| ***Week 9, October 15: Procedural Characters*** | | | | |
|  | ***Monday*** | ***Wednesday*** | ***Friday*** |  |
| *Topic* | Fall Break. No Class | Procedural Characters | Behavior and Improv |  |
| *Read* | HoH: Chapter 8 (T-Square) |  |  |
| *Do* | Start Written Assignment 4 | Project 3 Due |  |
| ***Week 10, October 22: Origins of Procedurality*** | | | | |
|  | ***Monday*** | ***Wednesday*** | ***Friday*** |  |
| *Topic* | Intro to AIML | Dada and the Beats | The Oulip |  |
| *Read* |  | NMR: Burroughs (7) | NMR: Oulipo (12) |  |
| *Do* | Written Assignment 4 Due  Start Project 4 |  |  |  |
| ***Week 11, October 29: Procedural Authorship*** | | | | |
|  | ***Monday*** | ***Wednesday*** | ***Friday*** |  |
| *Topic* | Peer Critique | Procedural Literacy | Surrealism |  |
| *Read* |  | Michael Mateas, Procedural Literacy: Educating the New Media Practitioner (T-Square) |  |  |
| *Do* |  |  | Project 4 Due |  |
| ***Week 12, November 5: History of Procedural Media I*** | | | | |
|  | ***Monday*** | ***Wednesday*** | ***Friday*** |  |
| *Topic* | The Poetics of Code, Programming in Chef | Class Canceled | Cybernetics |  |
| *Read* | Mateas and Montfort, A Box, Darkly (T-Square) |  | NMR: Wiener (4) |  |
| *Do* | Start Written Assignment 5  Start Project 5 |  |  |  |
| ***Week 13, November 12: History of Procedural Media II*** | | | | |
|  | ***Monday*** | ***Wednesday*** | ***Friday*** |  |
| *Topic* | Peer Critique | Interfaces I A History of Interfaces | Interfaces cont’d Affordances and Efficiency |  |
| *Read* |  | NMR: Engelbart (8) | NMR: Kaye & Goldberg (26) Norman: Chapters 4, 5, 7 |  |
| *Do* | Written Assignment 5 Due |  | Project 5 Due |  |
| ***Week 14, November 19: The Poetics of Code & Procedural Constraint*** | | | | |
|  | ***Monday*** | ***Wednesday*** | ***Friday*** |  |
| *Topic* | Programming in Batari BASIC | Thanksgiving. No Class | |  |
| *Read* |  |  |
| *Do* | Start Written Assignment 6 Start Final Project (Atari) |  |
| ***Week 15, November 26: The Poetics of Code & Procedural Constraint II*** | | | | |
|  | ***Monday*** | ***Wednesday*** | ***Friday*** |  |
| *Topic* | Class presentation of project summaries | DemoScene & HomeBrew | Final Project Presentations |  |
| *Read* |  | Camper, Reveling in Restrictions  Bogost and Montfort, New Media As Material Constraint (T-Square) |  |  |
| *Do* |  | Written Assignment 6 Due |  |  |
| ***Week 16, December 3: Final Presentations*** | | | | |
|  | ***Monday*** | ***Wednesday*** | ***Friday*** |  |
| *Topic* | Final Project Presentations | Final Project Presentations | No Class. |  |
| *Read* |  |  |  |  |
| *Do* |  |  | Final Project Due |  |
| ***Finals Week: Final Exam is December 10, 11:30am–2:20pm*** | | | | |

***CLASS POLICIES***

***General Class Policies***

It is important to keep in mind that this class focuses on the principles and processes of information design, not on technical skills; it is therefore up to you to develop and/or hone your facility with Adobe Illustrator, InDesign, and Photoshop.

Students whose work meets all criteria outlined for an assignment will receive a grade of C; students whose work meets all criteria and shows additional sophistication, thoughtfulness, research and creativity will receive a grade of B; students whose work meets all criteria and goes well beyond the expected in terms of sophistication, thoughtfulness, research, and creativity will receive a grade of A; students whose work fails to meet to all criteria outlined for an assignment will receive a grade of D or F.

Two points will be deducted for all typographic, spelling, and grammatical errors in all writing assignments.

Late assignments will not be accepted. Presentations must be given on the designated day.

Lectures will not be posted. It is your responsibility to take notes and remain attentive in class.

If you have questions or concerns about this or any other course policies stated in this syllabus, class assignments, email correspondence, or announced in class, please speak with me in class, during office hours, or via email as soon as possible so that we can discuss your concerns.

***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 their [**website**](http://communicationcenter.gatech.edu/content/make-appointment). 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**](http://ledantec.net/teaching/lcc-2700-fall-2012/www.adapts.gatech.edu/guidebook.html)