

LMC8803 SYLLABUS

SCIENCE, TECHNOLOGY, AND SOCIETY (STS) STUDIO

Spring 2021 (3 Credits)

Meetings: T/Th 3:30 pm - 4:45 pm

Tuesday [Synchronous Meetings]

Thursday [Asynchronous Meetings]

Instructor

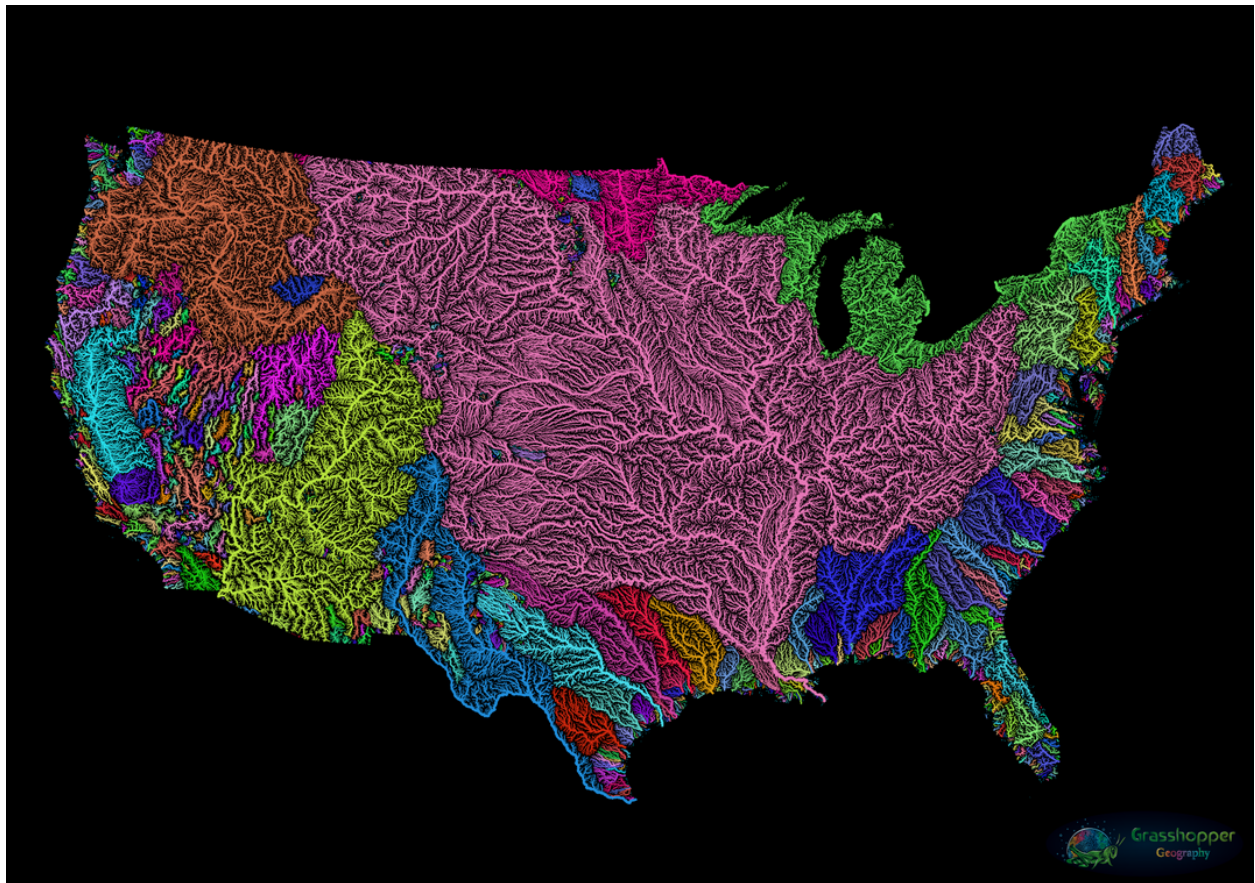
Yanni Loukissas, PhD

Email

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Office Hours & Location

Online, by appointment



How can design shape the public understanding of science and technology?

Science, technology, and society (STS) is an interdisciplinary field that examines scientific and technological processes from a social perspective. This class will focus on “environmental STS,” a subfield dedicated to understanding how science and technology interact with public conceptions of nature—with particular attention to open environmental data. The sensibilities and methodologies of STS will be our starting points for rethinking the role of design in our understanding of the non-human world. The course will be part seminar and part studio. In the early weeks of the term, students will learn about historical and contemporary relationships between environmental STS and design. In later weeks, students will draw upon these precedents to design new experimental concepts and prototypes. In the final project, students will use design to explore new forms of public engagement with environmental data about the [Chattahoochee](#) river, which runs through Atlanta.

This course counts towards the [STS Certificate](#). No prior experience with STS or design is required. Please send any questions to the instructor at yanni.loukissas@lmc.gatech.edu

OBJECTIVE

To lay a foundation for students who want to creatively intervene in public discourse about science and technology.

COVID-19 Accommodations

The Spring 2021 version of this course is designed to be run remotely because of the risks related to meeting in person during the COVID-19 pandemic. To fully participate, you will need regular access to a high-speed internet connection. If that is not possible for you, please reach out to me so we can assess your situation. We must all acknowledge that this will not be a “normal” semester. And although we should strive to create a stimulating and rewarding learning environment, complications are bound to arise. Dealing with them will require flexibility and mutual trust. Please do not hesitate to contact me directly if there is anything else you would like to discuss before the beginning of the course or at some later point.

LEARNING OUTCOMES

After taking this course you should be able to do the following:

- Engage with the field of Science, Technology, and Society as a source of theories and methods to motivate or evaluate design projects.
- Use design to explore the social implications of scientific and technological artifacts, such as sensors, models, visualizations and data.

- Contribute to the development of new genres and forms of digital media.
- Create digital media with an awareness of history, audience, and context.
- Appreciate and evaluate future trends in the development of digital media.

ASSIGNMENTS

The purpose of assignments is to give you regular, repeated practice exercising the course goals. There are several types of assignments in this course: readings responses, studio exercises, and a final studio project.

Reading Responses

Regular readings will structure the theoretical portion of the course. Each student should complete readings and prepare a short, written response (300-500 words). Your responses should address the following questions:

- What would you say is the main question or claim of the reading?
- What kind of evidence do the authors use to answer their question or support their claim? In your own words, describe an easily graspable example of this evidence.
- Pose a question that you have about this evidence or the activities used to produce it.

All reading selections listed on the syllabus are tentative. Additional readings may be assigned as supporting material.

Studio Exercises

There will be multiple short studio exercises throughout the term. Instructions will be provided for each.

Final Studio Project

The final project will focus on using digital media to explore new forms of engagement with scientific data about the Chattahoochee river. The deliverables may take different forms depending on the interests and skills of students, as well as their long-term goals.

Grading

Reading responses and studio exercises will be graded according to a contract model. If you complete all parts of the assignment, you will get full points. Points will be deducted only if you are missing components of the assignment. Class participation is strongly encouraged, but not graded. The Final project will be given a letter grade (A-F), according to a rubric distributed with the assignment. Your overall grade for the class will be calculated as follows:

20% Reading Responses
40% Exercises
40% Final Project

Deadlines

All assignments will include submission instructions and a due date. Failure to complete a number of readings, exercises, or the final project may be grounds for a failing grade.

CLASS REQUIREMENTS AND POLICIES

Attendance

Class will be held online. Students are expected to attend all sessions and actively participate in all classes.

Readings and Materials

Readings will be distributed electronically. You will need your own laptop computer (Windows or Mac) as well as access to a strong network connection to participate in synchronous sessions.

Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. For information on Georgia Tech's Academic Honor Code, please visit: <http://www.catalog.gatech.edu/policies/honor-code/> or <http://www.catalog.gatech.edu/rules/18/>.

Plagiarism of any form will not be tolerated and will result in a failing grade for the course. This is not only the uncredited copying of text from another's work but also copying ideas or code from other digital artifacts. However, adaptation of code samples (provided or found online) is not necessarily plagiarism, as long as it is appropriately credited. Having said that, students are encouraged to share and critique each other's work. You are allowed (and encouraged!) to work together with other students, but collaboration is only permitted when specified. 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.

Accommodations for Students with Disabilities

If you are a student with learning needs that requires special accommodation, contact the Office of Disability Services at (404)894-2563 or <http://disabilityservices.gatech.edu/>, as soon as possible, to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Student-Faculty Expectations Agreement

It is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. See <http://www.catalog.gatech.edu/rules/22/> for an articulation of some basic expectation that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek.

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 expected to be respectful of others' values and beliefs. Repeated inappropriate or abusive comments and/or behavior will be addressed accordingly. 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 paper. With the pandemic underway, the communication center is continually revising its practices. 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. All services are free and confidential.

ASSIGNMENTS

- E1 = Exercise 1: Found (Un)Natural Objects
- E2 = Exercise 2: Mapping Lived Experience
- E3 = Exercise 3: Environmental Media Design Critique
- E4 = Exercise 4: Redesigning Environmental Media
- E5 = Exercise 5: Reflection on Readings
- P = Final Project: Environmental Media Project on the Chattahoochee

SCHEDULE

DATE	DAY / THEME	READINGS	ASSIGNMENTS
Week 1 Welcome			
January 14	Thursday [Synchronous]	Syllabus	E1 Introduced
Week 2 Rethinking Nature			
January 19	Tuesday [Synchronous]		

January 21	Thursday	William Cronon. 1995. <i>Uncommon Ground: Rethinking the Human Place in Nature</i> (excerpt)	E1 Due
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Week 3 STS: Past and Present

January 26	Tuesday [Synchronous]	Latour, Bruno. 1990. "Drawing Things Together."	E2 Introduced
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Wylie, Sara Ann, Kirk Jalbert, Shannon Dosemagen, and Matt Ratto. 2014. "Institutions for Civic Technoscience: How Critical Making Is Transforming Environmental Research."

January 28	Thursday		E2 Draft
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Week 4 STS and Design

February 2	Tuesday		E2 Due
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February 4	Thursday [Synchronous]	Noortje marres, Michael Guggenheim and Alex Wilkie. 2018. <i>Inventing the Social</i> (Intro)	
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Vertesi, Janet, David Ribes, Laura Forlano, Yanni A. Loukissas, and Marisa Cohn. 2016. "Engaging, Critiquing, and Making Digital Systems: Crossings between STS and Design."

Week 5 STS and Design

February 9	Tuesday [Synchronous]		E2 Redesign E3 Introduced
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February 11	Thursday		E3 Working Session
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Week 6 Environmental Data

February 16	Tuesday [Synchronous]	Kim Fortun, Lindsay Poirier, Alli Morgan, Brandon Costelloe-Kuehn and Mike Fortun. 2016. "Pushback: Critical data designers and pollution politics." Gabrys, Jennifer, Helen Pritchard, and Benjamin Barratt. 2016. "Just Good Enough Data: Figuring Data Citizenships Through Air Pollution Sensing and Data Stories."	
February 18	Thursday		E3 Due E4 Introduced

Week 7 Open Data

February 23	Tuesday [Synchronous]	Irene V. Pasquetto, Ashley E. Sands, and Christine L. Borgman. 2015. "Exploring openness in data and science: What is "open," to whom, when, and why?" Sheena Erete, Emily Ryou, Geoff Smith. 2016. " Storytelling with Data: Examining the Use of Data by Non-Profit Organizations " Michael B. Gurstein. 2011. Open data: "Empowering the empowered or effective data use for everyone?"	E4 Due E5 Introduced
February 25	Thursday		E4 Due E5 Introduced

Week 8 Reflection on Readings

March 2	Tuesday [Synchronous]	Revisit Course Readings	E4 Due
March 4	Thursday		

Week 9 Final Project Introduced

March 9	Tuesday	
March 11	Thursday [Synchronous]	Guest Visit: <i>Chattahoochee Riverkeepers</i>
Week 10	Final Project Continued	
March 16	Break: No Class	
March 18	Thursday [Synchronous]	Working Session
Week 11	Final Project Continued	
March 23	Tuesday [Synchronous]	Guest Visit: <i>Brennan Collins</i>
March 25	Thursday	Final Project Proposal Due
Week 12	Final Project Continued	
March 30	Tuesday [Synchronous]	Guest Visit: <i>Jude Mwenda Ntabathia</i>
April 1	Thursday	Working Session
Week 13	Final Project Continued	
April 6	Tuesday [Synchronous]	Working Session
April 8	Thursday	Working Session
Week 14	Mid Project Review	
April 13	Tuesday [Synchronous]	Final Project Draft Due
April 15	Thursday [Synchronous]	
Week 15	Final Project Continued	

April 20 Tuesday
 [Synchronous] Working Session

April 21 Thursday Working Session

Week 16 Course Review

April 27 Tuesday Course Reflection

TBD Final Project Submission