

CPSP 349T: Fall 2020  
Infrastructure and Society (3-credit)  
Tuesdays & Thursdays: 3:30 – 4:45  
Room: CCC 1205 (This Depends)

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**Overview:** One of the most important, and underappreciated, aspects of our society is its infrastructure (roads, buildings, communication systems, water delivery systems, sanitation systems, energy systems, etc.). We often take for granted the services infrastructure bring us. As a consequence, the United States, which at one time was a world leader in creating infrastructure, is experiencing an “Infrastructure Crisis,” where many of our roads, bridges, buildings, sanitation systems, reservoirs, etc. are in need of maintenance. Furthermore, not everyone experiences this issue equally.

COVID-19 has only exacerbated this crisis. And like with many issues, COVID-19 has made more apparent existing infrastructural issues (e.g., healthcare system, law enforcement system, use of public space, urban/suburban/rural planning, Internet infrastructure, cybersecurity, public transportation, public recreational areas, energy production, disaster vulnerability) and created new ones (e.g., adjusting to COVID-19 health policies, public education, surveillance infrastructure, under-utilized infrastructure, mail delivery, election infrastructure, food distribution, vaccine distribution, etc.). There are even cases where COVID-19 has made some infrastructure improvements accelerate (e.g., road improvements and construction). For this class, we will use STS systems thinking and data collection techniques to map and assess local infrastructure (e.g., campus) and see how it connects to current scientific, technological, and social issues.

**Learning Outcomes:**

- Learn about the importance of infrastructure systems to a functioning, productive society
- Explore the social and political barriers to the proper maintenance and building of vital infrastructure, including impacts resulting from COVID-19
- Gain hands-on practical knowledge about infrastructure assessment
- Apply STS Systems thinking skills and data collection techniques to assess and map infrastructure systems

**Course Organization and Grading**

**Course Text:** All course readings will be posted on Canvas. You are not required to purchase a textbook for this course.

**Course Structure:** This 3-credit course will serve as a STS Scholars practicum credit (unless you are from another program or taking it solely for the General Education requirement). The course is project and discussion-based. For the first two weeks, we will meet virtually via Zoom during the scheduled course time (3:30-4:45 T/TH). Thereafter, how we meet will be contingent on UMD COVID-19 safety protocols. Any in-person classes and activities are TBD. If we do in-person work, you are not required to attend these if you are not comfortable due to COVID-19 concerns. All assignment and activities will have online equivalents. However, even if we are online, I will ask you to individually do some observations outdoors in safe locations. Attendance and participation in all activities is necessary to do well in this course. In general, we have to remain flexible and willing to adapt to changing circumstances, just like resilient infrastructure.

**Late Policy:** All assignments, except participation grade assignments, lose one letter grade per calendar day late after the due date (For example, an “A” becomes a “B,” a “B+” becomes a “C+”). *You cannot make up participation grade assignments.*

**Grading Scale:** A+ = 97+, A = 92-96, A- = 90-91, B+ = 87-89, B = 82-86, B- = 80-81, C+ = 77-79, C = 72-76, C- = 70-71, D+ = 67-69, D = 62-66, D- = 60-61, F < 60

**Grading Breakdown:**

Participation	20%
Weekly Journals	20%
Infrastructure Mapping and Assessment Project	30%
Inventing an Infrastructural Landscape	20%
Final Presentation (Mural Activity)	10%
Total	100%

**Course Assignments**

**Participation** – Attending class and participating in activities and discussion is vital, as you will be working to learn how to evaluate the safety and viability of infrastructure. There is a great deal of knowledge you will need to know to become an effective evaluator. You will also have readings and preparatory work each week. Completing these tasks will count toward your participation grade.

**Weekly Observations** – Weekly anthropological observations of infrastructure use. You will be given specific directions on what to observe each week. This assignment is designed to help you develop greater appreciation for the nuances of infrastructure in our daily lives. These observations will often contribute to the “Infrastructure Mapping and Assessment Project.”

**Infrastructure Mapping and Assessment Project** – We will develop a map of local infrastructure and corresponding issues. Each of you will individually go out in your local environment (campus if you are on campus, somewhere near your home if you are at home) and use a variety of data collection techniques to assess your local infrastructure system. You will learn how to integrate STS systems thinking skills and data collection techniques to identify important stakeholders and social processes associated with infrastructure. At the conclusion of each mapping exercise, you should be able to identify a variety of important questions and issues relevant to you. We will also work together on developing a set of recommendations to improve local infrastructure based on your findings. During these exercises you will be collecting a lot of data. **You are required to keep this data in a google doc that I have access to. I will provide details on how to maintain this document in class.**

**Final Presentation** – Based on what you find for your “Infrastructure Mapping and Assessment Project,” you will create an entertaining, interactive discussion-based activity for the class. Your peers will participate in this activity. Think of it as an alternative way of doing a final presentation – one that allows you to learn from others while you are helping them learn about your findings.

**Invent a Future Infrastructure Landscape (IFIL Project)** – Based on observations made throughout the semester and additional research, the last few weeks of the semester I will ask you to create a new infrastructural landscape of a place you care about. This landscape will take into consideration all of the human senses, not just the notions of productivity and efficiency, which are based in an abstract mind/body separation that overlooks physical and non-physical harms.

**Course Policies and Expectations**

**Please read through University of Maryland’s “General Course Policies”:**

<http://www.ugst.umd.edu/courserelatedpolicies.html>

**Code of Academic Integrity:** All students are expected to abide by this code. I will not tolerate cheating, plagiarism, or any other infraction that violates the ethical norms of the University of Maryland. Please consult the Code of Academic

Integrity website for details on inappropriate behavior: <http://studentconduct.umd.edu/>. For more information on the Student Honor Council, go to <http://www.shc.umd.edu/>.

**Excused Absences:** Per university policy, you must provide me with a signed note acknowledging the reason for your absence. This note is subject to the University Honor Code. If you are ill more than two classes during the semester, I will require a doctor’s note to excuse the absences. There are several exceptions to the mandatory attendance rule: 1) Religious holidays; 2) University of Maryland Student Athletes participating in scheduled athletic events. In these cases, you must inform me within the first two weeks of class of your scheduled absences.

**Inclement Weather:** If the University of Maryland officially closes due to inclement weather, I will make an announcement via Canvas and e-mail about how we will handle the missed class. If an assignment is due the day of a canceled class, it will be due the next scheduled class.

**Writing Center:** This is a writing intensive course. Therefore, your overall grade depends heavily on your ability to communicate effectively through writing. If you know that you have trouble with writing or I identify that you have problems with writing, you should seek help with the university Writing Center (<http://www.english.umd.edu/academics/writingcenter/>).

**Course Evaluation:** Your feedback at the end of the semester is extremely important to me, as I use this information to improve the course. Please do the online evaluation: [www.CourseEvalUM.umd.edu](http://www.CourseEvalUM.umd.edu)

**Disabilities:** If you have a documented disability, please notify me immediately. If I have not heard from you by September 9, 2020, I will assume you do not require special accommodations.

**E-mail Policy:** I prefer communication via e-mail rather than phone. I check my e-mail regularly and try to answer e-mail as soon as possible. However, you should expect to wait until the next regular work day to receive an answer to e-mails sent after 5PM on week days or at any time during the weekend.

**Laptops and other Communication Technologies:** I prefer that you don’t bring laptops and other communication technologies to class unless otherwise instructed, as they provide temptations that distract from class discussions and lectures.

## Infrastructure & Society (CPSP 349T) Course Schedule (Subject to Change)

Week/Day	Topic	Readings	Activities
Week 1: 9/1	What is infrastructure?	Fulmer; Allenby	Discussion
Week 1: 9/3	STS Systems Thinking Skills and Infrastructure	Students bring in COVID-19 and Infrastructure	NY Times Pedestrian Article: The Potential Future COVID Gives Us
Week 2: 9/8	State of Infrastructure	ASCE Report Card; LaHood; Jaffe	Preliminary Priority Analysis
Week 2: 9/10	Campus Infrastructure: Data collection and analysis – Mind/body separation and observation	Mind/body dichotomy	Discussion of Fatbergs
Week 3: 9/15	Infrastructure as Socio-technical Systems: Physical and Non-physical Harms	Neely; Kline; “Built on Sand” Podcast (99% Invisible)	Purple Line Stakeholder Analysis
Week 3: 9/17	Campus/Local Observations – Visionscapes - Purple Line on Campus	None	Stakeholder Analysis Activity

Week 4: 9/22	Infrastructure and Path Dependency	Roberts (Bitcoin); Geels	Discussion
Week 4: 9/24	Campus/Local Observations - Soundscapes	99% Invisible – Sound and the City	Data Collection and Analysis
Week 5: 9/29	Social Construction of Infrastructure: Transportation	TBA	The Body and Traffic
Week 5: 10/1	Designing the Campus for AV	Various AV articles	Designing the Campus for Autonomous Vehicles
Week 6: 10/6	Culture and Infrastructure	Bijker; McPhee	Lecture & Discussion
Week 6: 10/8	Campus/Local Observations - Odorscapes	TBA	Data Collection and Analysis
Week 7: 10/15	Social Justice and Infrastructure	Diamondback article about Disability Access; “Curb Cuts” (99% Invisible)	Guest Speaker
Week 7: 10/17	Campus/Local Observations - Bodyscapes	TBA	Data Collection and Analysis
Week 8: 10/22	Sustainability, Resilience and Infrastructure	Miller et al/TBA	Lecture, Discussion Mark Stewart???
Week 8: 10/24	Campus/Local Observations - Emotionscapes	TBA	Data Collection and Analysis
Week 9: 10/29	Resilience, Social Justice and Infrastructure	Majora Carter; Kimoon & Saurez	Discussion
Week 9: 10/31	Campus/Local Observations: Halloween (Sensory Overload)	TBA	Data Collection and Analysis
Week 10: 11/3	Vote	Vote	Vote
Week 10: 11/5	Campus Energy	None	Visit Campus Co-generation Plant
Week 11: 11/10	Lasting Influence of Decisions	Chahim	Infrastructure Observation Activity
Week 11: 11/12	Developing Final Maps/Assessments	None	Begin drafting final assessment
Week 12: 11/17	STS Concept Review	None	Final Project Priority Analysis
Week 12: 11/19	Invent a Future Infrastructure Landscape (IFIL Project)	Additional readings for priority analysis	Group Work
Week 13: 11/24	No Class	None	Work on Final Discussion Activity
Week 13: 11/26	No Class - Thanksgiving	None	None
Week 14: 12/1	IFIL Project	None	Group Work
Week 14: 12/3	IFIL Project	None	Presentations
Week 15: 12/8	Infrastructure Map Discussions	None	Group Discussions
Week 15: 12/10	Infrastructure Map Discussions	None	Group Discussions
Week 16: 12/20	IFIL Project Due	None	None