COMM 494LI
Social Life of Algorithms
Fall 2023

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Assistant Professor
Department of Communication

Meetings: Tue/Thu 11:30-12:45 pm at Hasbrouck Lab Add room 109

Credits: 3 (fulfills Integrative Experience requirement)

Drop-in hours: Tue/Thu: 1-2 pm or by appointment

Contact Information:
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* I will respond to emails within 48 hours of receiving them. I will try to respond faster during the lead-up to assignment deadlines and presentations. Feel free to send a follow-up email if you do not hear back after 48 hours.

Where do you find course materials and texts?
There is no required textbook for this course. All course materials and other critical course content will be on Canvas.

What is this course about?
Algorithmic systems are at the center of today's digital world, and mediate communication processes in areas as diverse as social media, journalism, healthcare, cities and even governments. How do algorithmic systems capture, represent, and transmit information about everyday interactions? How do they shape, and are shaped by, social, cultural, and political life? What kind of new issues and concerns arise from their ubiquitous use? *Social Life of Algorithms* provides a critical introduction to algorithmic systems, and how they relate to issues of communication, power and inequalities in society.

What are Our Learning Objectives?
Integrative Experience: The seminar fulfills the General Education Integrative Experience requirement for Communication majors. As an Integrative Experience course, it provides you with an opportunity not only to acquire knowledge in the field of communication but to explore the connections between your major and the questions addressed in General Education classes, to reflect on your own experience and learning as a student of UMass Amherst, as well as your development as an intellectual, a member of disciplinary community, and a global citizen.

Specific Integrative Experience Objectives (according to the GenEd website):
"Providing a structured, credited context for students to reflect on and to integrate their learning and experience from the broad exposure in their General Education courses and the focus in their major."

- Algorithmic systems pervade many aspects of everyday life from social media, education, or politics to labor, criminal justice, or cities. Each week is structured to cover specific themes around algorithmic systems from a broad perspective, including their technical features, the political economic context in which they are designed, and their consequences on the way we understand ourselves and connect with others, how we participate in workforce as well as politics, how we experience urban life and inequities, and how to regulate and re-organize these systems. Therefore, we will draw on not only communication, but also computer science, statistics, sociology, psychology, economics, political science, legal studies, and public policy. By critically reading and discussing a broad range of examples concerning algorithmic systems in social life, you will find an opportunity to integrate your learning in GenEd courses and your own focus in Communication into the analysis of algorithmic systems.

- Throughout the course you will reflect upon your various experiences with algorithmic systems and document how these computational systems re-structure social life. Weekly discussion posts, in which you react to course readings and bring up examples of your experience in algorithmic worlds, will be an opportunity to draw on the critical thinking skills you have developed through your studies at UMass. Similarly, in midterm and final paper assignments, you will explore how topics from other fields of studies (in addition to Communication), such as power, identity, status, sociality, politics, inequalities, and governance, can be used to explain the complexity of designing algorithmic systems and their influence in everyday life from multiple perspectives.

"Providing students with the opportunity to practice General Education learning objectives such as oral communication, collaboration, critical thinking and interdisciplinary perspective-taking, at a more advanced level."

- Throughout the semester we will have in class discussions about how algorithmic systems restructure different areas of life (work, community building, politics. cities, criminal justice...etc) and their varied impact on different groups in society. This will require not only interdisciplinary perspective-taking, but also critical thinking to unpack the consequences of these complex systems.

- The midterm essay requires analyzing a recent news story that documents an algorithmic controversy, and you will have the opportunity to practice critical

thinking and interdisciplinary perspective-taking as you unpack how this controversy is framed and how you'd explain it from a viewpoint that recognizes both the technical and social challenges involved in algorithmic systems.

- You will present your midterm and final paper projects to your peers before the final submission. You will also work in small groups to give each other feedback on ongoing projects. The presentation of your work-in-progress and commenting on your peers' work fulfil the IE requirement of advanced oral communication and collaboration skills.

"Offering students a shared learning experience for applying their prior learning to new situations, challenging questions, and real-world problems."

- The final project is an audit study of how an algorithmic system operates, in which you will compare/contrast two digital apps or social media platforms after feeding them with biased data and documenting the ways these systems respond to your experiment. The design of this audit can derive from biases in race, gender, ethnicity, sexual orientation, socio-economic status, geographical location, political interests, disabilities, or any other area of your choice. You will share your final project proposals and works-in-progress with your peers to receive feedback, thereby enjoying a shared learning experience. The broad perspective you take in the design and analysis of this audit study will allow you to combine prior learning in GenEd and Communication classes with topics covered in this course. It will also help you apply the theoretical concepts to real-world problems and develop new, challenging questions about algorithmic systems.

By the end of the class, you should be able to:

- Identify content, interactions, and habits that are shaped by algorithmic systems.
- Demonstrate and critically analyze what kind of values and goals inform the architecture of algorithmic systems.
- Explain different mechanisms through which algorithmic systems reproduce and reinforce inequalities.
- Apply these mechanisms to deciphering the effects and consequences of existing algorithmic systems.

WHAT WILL HELP YOU TO BE SUCCESSFUL IN THIS COURSE?

Accommodation Statement

Your success in this class is important to me. We all learn differently and bring different strengths and needs to the class. If there are aspects of the course that prevent you from learning or make you feel excluded, please let me know as soon as possible. Together we'll develop strategies to meet both your needs and the requirements of the course.

The University of Massachusetts Amherst is committed to providing an equal educational opportunity for all students. If you have a documented physical, psychological, or learning disability on file with Disability Services (DS), you may be eligible for reasonable academic accommodations to help you succeed in this course. If you have a documented disability that requires an accommodation, please notify me within the first two weeks of the semester so that we may make appropriate arrangements. For further information, please visit Disability Services (https://www.umass.edu/disability/)

Academic Honesty Statement

Since the integrity of the academic enterprise of any institution of higher education requires honesty in scholarship and research, academic honesty is required of all students at the University of Massachusetts Amherst. Academic dishonesty is prohibited in all programs of the University. Academic dishonesty includes but is not limited to: cheating, fabrication, plagiarism, and facilitating dishonesty. Appropriate sanctions may be imposed on any student who has committed an act of academic dishonesty. Instructors should take reasonable steps to address academic misconduct. Any person who has reason to believe that a student has committed academic dishonesty should bring such information to the attention of the appropriate course instructor as soon as possible. Instances of academic dishonesty not related to a specific course should be brought to the attention of the appropriate department Head or Chair. Since students are expected to be familiar with this policy and the commonly accepted standards of academic integrity, ignorance of such standards is not normally sufficient evidence of lack of intent (http://www.umass.edu/dean_students/codeofconduct/acadhonesty/).

Title IX

In accordance with Title IX of the Education Amendments of 1972 that prohibits gender-based discrimination in educational settings that receive federal funds, the University of Massachusetts Amherst is committed to providing a safe learning environment for all students, free from all forms of discrimination, including sexual assault, sexual harassment, domestic violence, dating violence, stalking, and retaliation. This includes interactions in person or online through digital platforms and social media. Title IX also protects against discrimination on the basis of pregnancy, childbirth, false pregnancy, miscarriage, abortion, or related conditions, including recovery. There are resources here on campus to support you. A summary of the available Title IX resources (confidential and non-confidential) can be found at the following link: https://www.umass.edu/titleix/resources. You do not need to make a formal report to access them. If you need immediate support, you are not alone. Free and confidential support is available 24 hours a day / 7 days a week / 365 days a year at the SASA Hotline 413-545-0800.

What you need to know about the technology we are using
Our Canvas site is the central hub for this course. On Canvas, you will find items such as the syllabus, announcements, course materials, presentations, assignments, grades, and other relevant course information. There is also an e-mail function that I will use to send updates and reminders during the semester. Please make sure to check Canvas on a regular basis.

Class discussion will take place over Slack. **Every Monday evening by 5 pm** you will post write a short response to the readings. I will discuss the details below.

Names & Pronouns
Everyone has the right to be addressed by the name and pronouns that they use for themselves. You can indicate your preferred/chosen first name and pronouns on SPIRE, which appear on class rosters. I am committed to ensuring that I address you with your chosen name and pronouns. Please let me know what name and pronouns I should use for you if they are not on the roster. Please remember: A student's chosen name and pronouns are to be respected at all times in the classroom.

Attendance & Participation
The success of the class depends on your regular attendance and reliable participation. What does it mean to "attend" and "participate"? It means showing up on time to scheduled class meetings; completing the readings, screenings, and weekly posts in advance of each class session; contributing to verbal discussions, and being prepared to engage constructively and respectfully with one another.

I simply request that you please notify me of your absence in advance, if you can, so I can plan group activities accordingly. If you miss five or more classes, I'll advise you to withdraw.

I strive to create an inclusive, accommodating classroom – one that's responsive to students dealing with tech or connectivity issues; students with specific access needs, etc. – that should enable (and, I hope, incentivize!) all of you to attend and engage. If additional obstacles or personal challenges arise for you over the course of the semester, please feel free to bring them to my attention; we can work together to discuss alternative means of engagement.

Attendance Policy and COVID-19. Do not attend in-person class if you have COVID-19, if you are experiencing symptoms consistent with COVID-19 if you need to care for an individual with COVID-19, or have other health concerns related to COVID-19. If you are unable to attend class, notify me via email, and please do so before our next class meeting or as soon as possible.

Students who miss class due to the above conditions will not be penalized. We are here to support you. As your instructor, I will trust your word. I also expect that you notify

the school or your academic advisor immediately and submit medical documentation in reasonable time so you can receive proper accommodations and attention from the university.

ASSIGNMENTS & ASSESSMENTS

1. Class Participation – Weekly – 15% of your final grade
It goes without saying, but you are expected to show up to class and participate in whatever we are doing. This means getting in on time and staying until class is over. I may have surprise quizzes from time to time to make sure you're paying attention. We will also engage in small group work during class every now and then. This will be an opportunity for those not comfortable speaking to the larger group to earn some participation points. Your participation is worth 15% of your grade.

2. Weekly Readings & Written Responses – Weekly – 15% of your final grade
There is no textbook for this course but each week will have required readings (academic articles and book chapters) as well as a number of supplementary materials such as press articles, blogposts, videos, etc., all of which will be available on the course Canvas site. Each week, you will be expected to: 1) complete the required readings and videos in time for classes and 2) write a short (~150-300 words) response to the readings, **by 5 pm on Monday**.

Your response should include a quick summary of the articles and either your thoughts/reactions on the content in relation to one of the keywords for the week or questions that demonstrate that you have read the materials and are engaging with them on a critical level. We will use these questions to help direct our discussions. These responses will be worth 15% of your grade.

3. Three Exams – In Class– 30% of your final grade
There will be three short exams based on course readings and class discussions. These are in-class exams and each will count 10% of your final grade.

4. "Algorithmic Audit" Part I – DUE OCT 13 – 20% of your final grade
Throughout the course you will conduct an "algorithmic audit" of social media platforms or apps you frequently use. The first part of this audit, which will also be your mid-term paper, is to design your audit and share the initial findings in a 5-page essay (1250-1500 words). The details of this assignment are on Canvas, and it makes up 20% of your final grade.

5. Final Research Paper – DUE DEC 8 – 20% of your final grade
The final paper will build on the feedback you receive on the midterm paper, report on the final results of your algorithmic audit, and present a strong argument based on your findings and course materials. The essay will not be longer than 10 pages (2500-3000 words). Further instructions are on Canvas.

Grading Scale

Percentage Total	Grade
93-100%	A
90-92%	A-
87-89%	B+
83-86%	B
80-82%	B-
77-79%	C+
73-76%	C
70-72%	C-
67-69%	D+
60-66%	D
59% or below	F
Incomplete	INC

I am always happy to discuss grades. I have two requests though. First, wait 48 hours between getting your grade and contacting me. This will give you time to go over the assignment and review the comments you have received. Second, bring specific questions when you come to chat. Where exactly do your expectations diverge from the grade? What comments or questions are you having trouble wrapping your head around? This will help us start a productive discussion.

Submitting Assignments
Unless otherwise instructed, please submit all assignments via Canvas. Please include your name and the assignment title in the file name.

Chatbots/Generative AI
Artificial intelligence is a timely and important topic in media and communication studies. You are permitted to use generative AI – including large language models, image generators, and similar tools – in your work, but you must be transparent and reflexive about its use. Please supplement all assignments with a 300-word note – written by YOU! – explaining how and why you used these tools, how they supplemented your own work, what that collaboration taught you about your own ways of thinking and working, how you acknowledged and accounted for these tools' known biases and risks, and what your experience might have taught you about how you can more responsibly and critically use these tools in your future work. This AI declaration does not count toward your assignment word count.

** Thanks to Shannon Mattern for this extra assignment idea and the wording!

Late Policy
Unless prior permission has been granted, no late work is accepted. This policy is in place to ensure every student has their work returned to them in a timely fashion. Please prepare in advance so that you will not encounter technical difficulties that may prevent submission of a given assignment. If you have a conflict with the due date, assignments can always be submitted early. I may grant extensions on assignments if you provide three days' notice and can send me evidence that you are working on an idea that requires more time. Do not ask for an extension if you have not started writing yet. Late assignments will be docked a half grade (+/-) per day (i.e. after 10 days, you cannot earn a grade higher than F).

How to Read?
While we will not read a whole book each week, I'd highly encourage you to take a look at this guide to develop your strategies for completing readings in the most efficient and effective way possible. Paul Edwards. "How to Read a Book"
http://pne.people.si.umich.edu/PDF/howtoread.pdf

Electronic Devices
The use of electronic devices (phones, tablets, laptops, cameras, etc.) is permitted when the device is being used in relation to the course's work. All other uses are prohibited in the classroom and devices should be turned off before class starts. I know a lot of you will be reading and taking notes on your computers or phones, so if you need those in class, that is of course more than fine. If your devices appear to be distracting you or others, I reserve the right to revoke these privileges immediately and permanently.

The Syllabus is a Living Document
This syllabus is a starting point for the course. It is subject to change as the term unfolds, in response to your feedback and my assessment of how things are going. I'll be seeking out your feedback regularly. Some adjustments are likely. These adjustments may involve altering assignments or adding, removing, or modifying readings. Any changes will be discussed in class and announced via email, so attend class and check your inbox.

Class Schedule:

Class Number and Date	Questions/themes we will explore this session:	How to prepare for this session:	Quick reminders
1. Sept 5 2. Sept 7	#1 Get to know each other #2 What do we think about when we talk about algorithmic systems?	Come excited; be open-minded & curious! **Read** "The algorithms that make big decisions about your life." **Read** "Is generative AI bad for the environment?" **Read** Kate Crawford and Vladan Joler. 2018. "Anatomy of an AI System."	
3. Sept 12 4. Sept 14	#1 Do digital technologies have politics? How do we know their politics? #2 What is the role of technologies in distributing morality in society, if at all?	**Read** Langdon Winner. 1980. "Do Artefacts have Politics?" **Read** Community Defense: Sarah T. Hamid on Abolishing Carceral Technologies	Post your weekly response on Slack by Monday at 5 pm
5. Sept 19 6. Sept 21	#1 What is machine learning? How does it operate? #2 How do machines learn?	**Read** Cathy O'Neil. 2016. "What is a Model?" **Read** Meredith Broussard. 2018.	Post your weekly response on Slack by Monday at 5 pm

	#3 How do machines think?	"Machine Learning: The DL on ML **Read** Jenna Burrell. 2016. "How the Machine 'Thinks': Understanding Opacity in Machine Learning Algorithms."	
7. Sept 26 8. Sept 28	#1 What are the social techniques behind algorithmic systems? #2 Can we design algorithmic systems without classification, surveillance or captivation?	**Read** Mark Andrejevic. 2019. "Automating Surveillance." **Read** Nick Seaver. 2018. "Captivating Algorithms: Recommender Systems as Traps." **Read** Sophia Ciocca. 2017. "How Does Spotify Know You So Well?"	Post your weekly response on Slack by Monday at 5 pm First exam on Sept 28th (in-class)
9. Oct 3 10. Oct 5	#1 What kind of cultural beliefs and values are behind contemporary algorithmic systems? #2 What—and who—gets left out of the stories people tell about Silicon Valley?	**Read** Fred Turner. 2009. "Burning Man at Google: A Cultural Infrastructure for New Media Production." **Listen** "Silicon Valley and Beyond" *Public Books* podcast **Read** Ted Chiang "Will AI Become the New McKinsey?	Post your weekly response on Slack by Monday at 5 pm

11.	Oct 12	We will workshop your midterm essays working in groups	**Bring** a draft of paper to class, ready to discuss it with your peers	"Algorithmic Audit Part 1" due OCTOBER 13 by 5 pm on Canvas
12. 13.	Oct 17 Oct 19	#1 What is the political economic model of algorithmic systems? #2 How do data companies and platform companies generate value? Are there any differences between the ways they create value online?	**Read** Matthew Crain and Anthony Nadler. 2017. "Commercial Surveillance State." **Read** Marion Fourcade and Kieran Healy. 2017. "Seeing Like a Market." **Read** Shazeda Ahmed. 2019. "The Messy Truth About Social Credit."	Post your weekly response on Slack by Monday at 5 pm
14. 15.	Oct 24 Oct 26	#1 Who profits from our presence on platforms? #2 What do you think people gain from "branding" themselves online? #3 How has being on the internet changed the experience of being human?	**Read** "'Having it All' on Social Media: Entrepreneurial Femininity and Self-Branding Among Fashion Bloggers." **Read** Taina Bucher. 2012. "Want to be on the top? Algorithmic power and the threat of invisibility on Facebook." **Read** Natasha Dow Schull. 2016. "Data for Life: Wearable Technology and the Design of Self Care."	Post your weekly response on Slack by Monday at 5 pm Second exam on Oct 26th (in-class)

16. Oct 31 17. Nov 2	#1 In what ways do algorithmic systems reproduce inequalities? #2 Are robots racist? Why/why not? #3 Can we reimagine the default settings of technology? Why/why not?	**Read** Ruha Benjamin. *Race After Technology* (excerpts) **Watch** "Are robots racist?" **Read** Safiya Noble "The Power of Algorithms"	Post your weekly response on Slack by Monday at 5 pm
18. Nov 7 19. Nov 9	#1 What are the ways automated systems are changing work conditions? #2 What is "ghost work"? How can we recognize it?	**Read** "Algorithmic Labor and Information Asymmetries: A Case Study of Uber's Drivers." **Explore** The Uber Game **Watch** Algorithmic Cruelty and the Hidden Costs of Ghost Work **Read** Refugees help power machine learning advances at Microsoft, Facebook, and Amazon **Read** Interview With Bessemer Amazon Worker: "It Feels the Same as Most of the BLM Protests"	Post your weekly response on Slack by Monday at 5 pm
20. Nov 14	#1 In what ways do digital technologies change politics?	**Explore** John Keegan. 2019. "Blue Feed, Red Feed: See Liberal	Post your weekly response on Slack by Monday at 5 pm

NO CLASS ON NOV 16 21. Nov 21	#2 Are we more polarized as a society because of social media? #3 Do tech companies have a political responsibility in democracies? Why/why not?	Facebook and Conservative Facebook Side by Side." **Read** Francesca Tripodi. 2019. "Devin Nunes and the Power of Keyword Signaling." **Read** All of YouTube, Not Just the Algorithm, is a Far-Right Propaganda Machine **Read** Daniel Kreiss and Shannon C. McGregor. 2018. "Technology Firms Shape Political Communication"	
22. Nov 28 23. Nov 30	#1 Can we regulate algorithmic systems? Would that be enough? #2 What are the ways can people organize and push back against the consequences of algorithmic systems?	**Read** "How to Hold Algorithms Accountable." **Read** Why 'Ditch the algorithm' is the future of political protest Links to an external site. **Read** #MoreThanCode **Read** Amazon employees hope to confront Jeff Bezos about law enforcement deals at an all-staff meeting	Post your weekly response on Slack by Monday at 5 pm Third exam on Nov 28th (in class)

		Read Americans Need a Bill of Rights for an AI-Powered World	
24. Dec 5 25. Dec 7	#1 We will workshop your final papers.	**Bring** a draft of your final paper, ready to discuss it with your peers.	Final paper due DEC 8th by 5 pm on Canvas