



Introduction to Information Science

INST 201
Fall 2020

Learning Outcomes

Most individuals, organizations, and governments are quick to adopt new technologies, but rarely take the time to consider how that technology is shaping their behaviors and, conversely, how users shape the development of future technologies.

Successful completion of this course will give you the conceptual tools necessary to understand the social, political, and economic factors associated with a networked society. Issues will range from the theoretical (what is information and how do humans construct it?), to the cultural (how are newer communication technologies different from earlier distance-shrinking and knowledge-building technologies such as telephones?), to the technical (what are the basic architectures of computing networks?).

As a core course in the BSIS, this class will also provide you a knowledge-based foundation for future courses in information, technology, and policy.

After successfully completing this course you will be able to:

- Demonstrate knowledge of fundamental concepts and ideas around the rise of the information society.
- Demonstrate critical thinking in evaluating causal arguments regarding the relationship between technology and society, including analyzing major assertions, background assumptions, and explanatory evidence.
- Explain how information & communication technologies (ICTs) shape national and global events.
- Use information technologies to conduct research and to communicate effectively about ICTs.
- Articulate how the historical events leading to the information society have shaped our modern-day use of ICTs.
- Articulate ways technology use can be problematic, and how to harness technology for positive change.
- Work collaboratively to create and disseminate information content broadly.

Campus Policies

It is our shared responsibility to know and abide by the University of Maryland's policies that relate to all courses, which include topics like:

- | | |
|------------------------------------|---------------------------------------|
| • Academic integrity | • Attendance and excused absences |
| • Student and instructor conduct | • Grades and appeals |
| • Accessibility and accommodations | • Copyright and intellectual property |

Please visit www.ugst.umd.edu/courserelatedpolicies.html for the Office of Undergraduate Studies' full list of campus-wide policies and follow up with me if you have questions.

Dr. Jessica Vitak
(pronounced VEE-tack)

jvitak@umd.edu

she/her/hers

Class meets online only

Office Hours

Always reachable via email

Book a time on Calendly:

<https://calendly.com/jvitak>

Zoom office hours:

Wednesdays 12pm-1pm

Grader Information

Anna Arisco

aarisco@umd.edu

they/them

Course Communication

- Time-sensitive announcements will be posted on ELMS.
- Contact me via ELMS or by e-mail (include "INST 201" in the subject). For questions about a grade, cc Anna.
- I will reply to e-mails within 48 hours (not counting weekends). Generally I reply much quicker than this, but wait 48 hours before re-sending me an email.

Class Structure

This course will occur asynchronously and completely online. This means that you will work at your own pace, rather than attending a virtual class session at set times. The course is organized on ELMS (Canvas) via Modules. Each module will open on a set date, and you will be responsible for working through content and assignments for that module and submitting any assignments. I will provide an overview of each module to help you understand the content being covered and what is due.

Note that you have been randomly assigned into two separate groups for the semester. These groups are final and cannot be changed.

- I have broken the class into 12 discussion groups of approximately eight people each. There is a discussion board for each module, and this will allow discussions to be more manageable in size.
- The class has also been broken into 20 project groups of 4-5 students each. You will be working on a project as a team throughout the semester. You should immediately exchange contact information with members of this group to make it easier to collaborate.

For any questions about the course, you have a few options. You can join the weekly [Zoom office hours](#), which will be held each Wednesday from 12-1pm. You can also schedule a 15- or 30-minute time slot to meet with me using my Calendly link: <https://calendly.com/jvitak>. You will receive an invitation to join the class Slack channel, which can serve as a place for both communicating with me and your classmates as well as for organizing team communication.

Finally, I want to acknowledge that this is an especially stressful time for many people. I know that many of you are balancing work and school and living at home. If you are experiencing problems keeping up with class material, please reach out to me and we can work on a plan to help you make it through the semester. I am also offering each student **two “get out of jail free” cards** for the semester: for any of the discussion boards, quizzes, Exit Tickets, or ILRA assignments, you may submit it up to **one week late without a penalty**. To use this card, you must note when you submit (on ELMS or via email to myself and Anna) that you want to use it. Without a note, your assignment will be graded as late.



Activities and Learning Assessments

Learning Assessments	#	Points Each	Category Total
Search Mastery: Built into Module 2. Learning activities and review quizzes.	1	7.5	7.5
Discussion Boards: Conversations with subsets of the class about course content (prompts in modules)	5	3	15
Content Quizzes (CQ): quizzes to assess comprehension of content presented in modules	10	1.5	15
Module Exit Tickets: lessons learned	10	1	10
Interactive Learning & Reflection Assignments (ILRA): activities with short writing assignments	4	5	20
Midterm	1	10	10
Team Project (multiple parts and due dates throughout semester)	8	varies	22.5
Total Points:			100

- **Discussion Prompts (15% total / 3% each).** In an in-class lecture, I often have students break into groups to discuss topics or have prompts for class discussions; while we can't do that "live" in an online class, I will have a number of discussion prompts throughout the semester for students to engage in. To receive credit, you'll have to (1) reply to the original post and (2) reply to at least one classmate; there will be separate due dates for the two posts. You'll be broken into smaller groups so the discussion threads stay manageable. If more than five discussion boards are listed during the semester, only the highest five scores will count.
- **Content Quizzes (15% total / 1.5% each).** To help you evaluate how well you comprehend the assigned readings and lectures, most modules will have a quiz to assess your knowledge. These quizzes will be open note but will be timed (typically 5-8 minutes for five questions), so you should not take them if you have not been paying attention to the readings or lectures. If more than 10 quizzes are offered, only the highest 10 scores will count.
- **Module Exit Tickets (10% total / 1% each).** At the completion of each module, you'll be asked to briefly reflect on what you've learned. To receive credit for this, you will be asked to submit at least two concrete things you learned about in that module and one question you have based on the content. This can be presented as bullet points or a numbered list (full sentences though!) and does not need to be written in paragraphs. If there are more than 10 modules, I will only count the highest 10 scores.
- **Interactive Learning & Reflection Assignments (ILRAs; 20% total / 5% each).** There will be four assignments that will ask you to complete a "real world" activity, then (1) write a 400-600 word reflection on the experience.
- **Midterm (10%).** There will be one online exam during the semester. The exam must be taken during the time window allotted on the specified day to receive credit, unless arrangements are made before the exam with me. The exam will be open for a 12-hour window; once you begin the exam, you have 60 minutes to complete it. The midterm will be open notes; however, you **may not** collaborate or interact with anyone else regarding the exam. Completing the exam with another student or asking other people for help will be considered cheating. Plagiarism on the midterm will result in a zero.
- **Search Mastery (7.5%).** As we'll discuss in Module 2, information literacy involves developing the skills to effectively search and evaluate content you find online. To help you practice these skills, there are a number of videos and activities built into Module 2, along with two assessments along the way.
- **Team Project / Research Report (22.5% total; multiple components).** When you graduate, you'll almost certainly work on a team in your job. And while remote collaboration presents some challenges, the pandemic has shown that work must continue, even when we're not able to meet in person. Therefore, this team project is meant to give you experience working with others you may or may not know, remotely, and producing a collaborative end product. You have been randomly assigned to teams of 4-5 students.

During the first week of the semester, each team will be assigned a broad research topic, a piece of technology or an issue related to information technology. Over the course of the semester, your team will complete a number of assignments which require you to coordinate and work together with the rest of your group. In lieu of a final exam, the final deliverable will be a report (2700-3500 words) and a 4-6 minute video presentation from each group. The final report should contain five integrated sections:

- A history of the technology or issue's precursors (why are these things related?).
- An account of the technology or issue's major developmental milestones.
- A review of contemporaneous social, political, and cultural impacts and reactions to the technology or issue, including controversies, panics, or utopian idealizations.
- An argument for what the technology or issue's impacts have been and why.
- A prediction for how the technology or issue will develop and impacts the technology will have in the near future.

Extra credit opportunities (1-4 points each, up to 8 points total, multiple): Extra credit opportunities give you a chance to engage with course material outside of class. Each opportunity will have a rubric, and there will be multiple opportunities to complete each. I will communicate about these through ELMS Announcements.

Grades

Grades are not given, but earned. Your grade is determined by your performance on the learning assessments in the course. If earning a particular grade is important to you, please speak with me at the beginning of the semester so that I can offer some helpful suggestions for achieving your goal.

All assessment scores will be posted on the course ELMS page. If you would like to review any of your grades (including the exams), or have questions about how something was scored, please email me to schedule a time for us to meet in my office. I am happy to discuss your grades with you, and if I have made a mistake I will immediately correct it. Any formal grade disputes must be submitted in writing and within one week of receiving the grade.

Final letter grades are assigned based on the total points earned. To be fair to everyone I have to establish clear, consistent standards, so please understand that being close to a cutoff is not the same this as making the cut (89.99 \neq 90.00). It would be unethical to make exceptions for some and not others. I do not round grades up. **I will not respond to email requests for a grade bump at the end of the semester.** The cutoffs are as follows:

Final Grade Cutoffs									
+	97.00%	+	87.00%	+	77.00%	+	67.00%		
A	94.00%	B	84.00%	C	74.00%	D	64.00%	F	<60.0%
-	90.00%	-	80.00%	-	70.00%	-	60.00%		

Late Assignments

A late penalty will be applied to any assignment that is submitted late (starting one minute beyond the due date and time). Late assignments will be graded according to the following formula:

$$[\text{grade on assignment}] * 0.9^{[\text{number of days late}]}$$

For example, if you turn in a 10-point assignment 1 day late, and earned a 100% on that assignment, your final grade for that assignment would be $(1.00)(0.9^1)$, or 90%. If you turned in the same assignment 3 days late, and earned an 80%, your grade would be $(0.80)(0.9^3)$, or 58%. Therefore, although your grade will take a serious hit if the assignment is late, **in this class it is always better to turn in an assignment late than to not do it at all.** Note that late assignments may not be graded quickly.

Please prepare in advance so that you will not encounter technical difficulties that will result in your work receiving a late penalty. **Technical difficulties are not an excuse for late assignments — if you are having trouble submitting an assignment on Canvas, e-mail it to me before the deadline** to avoid a penalty. If you have a conflict with the due date, assignments can always be submitted early. If you're reading this far and want some extra credit, send an email to me and Anna by the end of the first week of class with a meme that reflects how you're feeling about this semester. Generally speaking, illnesses are not an excuse for late assignments because you will receive the assignments at least one week before they are due.

Also remember that you also have two “get out of jail free” cards to use at any time during the semester (note: these cannot be used on the midterm or team project assignments).

Exam Policy

If you need to miss the midterm because of outside circumstances (e.g., a religious holiday, military duties, work/athletic team travel), you must email me **at least one week beforehand** to reschedule your exam time. If you

are sick on exam day, you must provide me with a doctor's note to be excused ([see the UMD policies on absences](#)) and should email me before the exam time to let me know you're sick. If you miss the exam due to other circumstances (e.g., oversleeping), you will not be able to make it up.

Collaboration, Group Work, and Academic Integrity in INST 201

All of the individually graded assessments must be completed independently. You are welcome (and highly encouraged) to study and discuss the course material with your peers, but providing or receiving quiz/exam answers or letting someone else contribute to your writing assignment constitutes academic dishonesty. Penalties for academic dishonesty can include a 0 on the assignment or an automatic failure and "XF" on your transcript.

Content Quizzes (CQ) and the midterm are open-book. This means that you may consult the readings or your notes (but not another person) as you take the quiz/midterm.

Accommodations

Students with disabilities should inform me of their needs at the beginning of the semester. Please also contact the Disability Support Services (301-314-7682 or <http://www.counseling.umd.edu/DSS/>). DSS will make arrangements with you and me to determine and implement appropriate academic accommodations. Inclusion is one of the iSchool's core values, and I have attempted to make all materials and assignments accessible to people with varying abilities. However, if there is something else I can do to make the class more accessible please schedule a time to come talk to me. This will benefit not only yourself but also my future students.

Get Some Help!

You are expected to take personal responsibility for your own learning. This includes acknowledging when your performance does not match your goals and doing something about it. Everyone can benefit from some expert guidance on time management, note taking, and exam preparation, so I encourage you to consider visiting <http://ter.ps/learn> to schedule an appointment with an academic coach. Sharpen your communication skills (and improve your grade) by visiting <http://ter.ps/writing> and schedule an appointment with the campus Writing Center. Finally, if you just need someone to talk to, visit <http://www.counseling.umd.edu>.



Everything is free because you have already paid for it, and **everyone needs help**... all you have to do is ask for it.

Names/Pronouns and Self Identifications

The University of Maryland recognizes the importance of a diverse student body, and we are committed to fostering equitable classroom environments. I invite you, if you wish, to tell us how you want to be referred to both in terms of your name and your pronouns (he/him, she/her, they/them, etc.). The pronouns someone indicates are not necessarily indicative of their gender identity. Visit trans.umd.edu to learn more.

Additionally, how you identify in terms of your gender, race, class, sexuality, religion, and dis/ability, among all aspects of your identity, is your choice whether to disclose (e.g., should it come up in classroom conversation about our experiences and perspectives) and should be self-identified, not presumed or imposed. I will do my best to address and refer to all students accordingly, and I ask you to do the same for all of your fellow Terps.

Students in Need

Students encountering psychological problems that hamper their course work are referred to the Counseling Center (301-314-7651 or <http://www.counseling.umd.edu/>) for expert help. For more information on UMD's Student Services, see <http://www.studentaffairs.umd.edu/student-life>

If you or someone you know feels unsafe, the university has resources (see list below). Read more about hate-based crimes here: https://ocrsm.umd.edu/files/Hate_Bias_FAQs_final.pdf

Name	Phone	Website
University Counseling Center	301-314-7651	www.counseling.umd.edu
University Health Center and Mental Health Services	301-314-8180	www.health.umd.edu
University of Maryland Chaplains		thestamp.umd.edu/memorial_chapel/chaplains
Office of Civil Rights and Sexual Misconduct	301-405-1142	www.ocrsm.umd.edu
UMD COVID-19 Resources		https://umd.edu/4Maryland

Tips for a Successful Semester

1. Do the readings. Yes, I know readings are often not fun, but I've tried to limit readings to lighter articles and news stories and have avoided denser academic articles when possible.
2. Take the content quizzes seriously. They aren't worth many points but they are excellent practice for the exams.
3. Engage in class discussions. Ask questions. Share your opinions. Be open to others' viewpoints, even if they're different than your own.
4. Have a question? Email me anytime. Make sure to include the course number (INST201) in the subject line to ensure I see it. I will respond within 48 hours (not counting weekends). Do **not** email me multiple times if I have not responded and fewer than 48 hours have passed. After that time, please send me a reminder email.
5. Know your rights as an undergraduate student at UMD: [University of Maryland Policies for Undergraduate Students](#)
6. Struggling with classes in general? Talk to me, friends, family, and/or the counseling center. I will work with you to help you succeed.

SCHEDULE OF CONTENT

NOTES: These are a preliminary listing of readings. These may change and the final set of assigned readings, podcasts, and/or videos will be those listed in the modules. Each module will last between 1-2 weeks of the course, depending on the amount of content being covered. Make sure to regularly check ELMS for when modules will open/close and for due dates.

MODULE	OPEN DATE	TOPIC	REQUIRED READINGS/AUDIO/VIDEO
0/1	Aug 31	Course introduction / Defining and exploring information science	<ul style="list-style-type: none"> • Paul Edwards “How to read a book” (PDF) • John Perry Barlow (1996) “A Declaration of the Independence of Cyberspace” • June Lester and Wallace C. Koehler (2007) “Fundamental Concepts of Information”
2	Sept 7	Information literacies and misinformation	<ul style="list-style-type: none"> • The Fallacy of the ‘Digital Native’: Why Young People Need to Develop their Digital Skills (PDF) • Did Media Literacy Backfire? (Data & Society) • I Helped Popularize The Term “Fake News” And Now I Cringe Every Time I Hear It (Buzzfeed) • Fake News Is Not the Only Problem (Data & Society) • Disinformation campaigns are murky blends of truth, lies and sincere beliefs – lessons from the pandemic (The Conversation)
3	Sept 21	Foundations of Information Technologies	<ul style="list-style-type: none"> • Bundled, Buried & Behind Closed Doors (video) • How the Internet Was Invented, Part 1 (video) and Part 2 (video) • Why tech’s gender problem is nothing new (The Guardian) <p>Recommended (not required):</p> <ul style="list-style-type: none"> • Howard Rheingold (1993) “Visionaries and Convergences: The Accidental History of the Net” (link) • Nathan Ensmenger, “Chapter 1: Computer Revolutionaries,” The Computer Boys Take Over. (2010) pp 1-26
4	Sept 28	Breaking the Internet: How People Use Social and Mobile Media	<ul style="list-style-type: none"> • Social Media Use in 2018 (Pew Internet Project) • A sociology of the smartphone (Longreads) • Why that video went viral (New York Times) • Black Teens Are Breaking The Internet And Seeing None Of The Profits (Fader) <p>Recommended (not required):</p> <ul style="list-style-type: none"> • “Viral Dreams” Chapter in Terms of Service • Confirmed: Echo chambers exist on social media. So what do we do about them? (Washington Post)

5	Oct 5	Economics of the Information Society	<ul style="list-style-type: none"> • What Being a Bike Courier Taught Me about Our Broken Economy [The Walrus] • The Laborers Who Keep Dick Pics and Beheadings Out of Your Facebook Feed [WIRED] • The Next Big Blue-Collar Job Is Coding [WIRED] • The Environmental Toll of a Netflix Binge [The Atlantic]
6	Oct 12	Technology & Design: When Things Work & When They Fail	<ul style="list-style-type: none"> • Design of Everyday Things by Don Norman. Chapter 6 • Facial recognition: https://www.nytimes.com/2020/06/09/technology/facial-recognition-software.html • Of course technology perpetuates racism. It was designed that way. MIT Technology Review. • T. Christian Miller et al. “Collision Course.” [ProPublica] <p>Recommended (not required)</p> <ul style="list-style-type: none"> • More on human centered design (Medium) • Why Human Centered Design Matters [WIRED] • IDEO human centered design kit: https://www.designkit.org//resources/1 • The Untold Story of NotPetya, the Most Devastating Cyberattack in History [WIRED]
7	Oct 19	Datafication of Everything	<ul style="list-style-type: none"> • Charles Duhigg, “How Companies Learn Your Secrets.” New York Times. [NY Times] • Virginia Eubanks (2018) “A child abuse prediction model fails poor families” [WIRED] • There’s No Such Thing as Innocuous Personal Data (Slate) • Cathy O’Neil TED Talk, “The Era of Blind Faith in Big Data Must End” [TED]
8	Oct 26	Algorithmic Bias and Other Challenges of Big Data	<ul style="list-style-type: none"> • Joy Buolamwini’s TED Talk, “How I’m fighting bias in big data” [TED] • Algorithmic Accountability Reporting: On the Investigation of Black Boxes [Tow Center for Digital Journalism] • The Humans Working Behind the AI Curtain (Harvard Business Review) • Tech’s Ethical ‘Dark Side’: Harvard, Stanford, and Others Want to Address It [NY Times] • Big Data Research Creates Ethical Concerns [read or listen] • Safiya Noble’s TED Talk, How biased are our algorithms? [Youtube] <p>Recommended (not required)</p> <ul style="list-style-type: none"> • Anne Milgram TED Talk, “Why Smart Statistics Are the Key to Fighting Crime” [TED] • Crash Course Computer Science: Machine learning & artificial intelligence [YouTube] • Former Baltimore Police Officer Criticizes The Department’s Gang Database [The Appeal] • The Real Name Fallacy (Coral Project)

			<ul style="list-style-type: none"> • The Moral Bias Behind Your Search Results [TED Talk] • Perspectives on Big Data, Ethics, and Society
9	Nov 9	Privacy, Security, and Surveillance	<ul style="list-style-type: none"> • Google's Cerf Says "Privacy May Be An Anomaly." Historically, He's Right (TechCrunch) • Securing Your Digital Life Like a Normal Person (Medium) • Maybe Better If You Don't Read This Story on Public WiFi (Medium) • The Internet of Things: Roadmap to a Connected World (MIT Technology Review) • The \$11 Trillion Internet Of Things, Big Data And Pattern Of Life Analytics (Forbes) • Jennifer Golbeck: Your social media "likes" expose more than you think (TED talk) • The Most Wanted Man in the World (WIRED) • How the NSA Spying Programs Have Changed Since Snowden (PBS Frontline) • Watch the Full Episode: 'State of Surveillance' with Edward Snowden and Shane Smith (VICE)
10	Nov 23	Online Communities, Online Harassment, and Content Moderation	<ul style="list-style-type: none"> • Chapter 4 in Baym's Personal Connections in the Digital Age • Fighting online trolls with bots (The Conversation) • Tarleton Gillespie (2018) "How Social Networks Set the Limits of What We Can Say Online" https://www.wired.com/story/how-social-networks-set-the-limits-of-what-we-can-say-online/ • Trauma Floor: The secret lives of Facebook moderators in America [The Verge] <p>Recommended (not required)</p> <ul style="list-style-type: none"> • Vitak et al. (2017): Identifying Women's Experiences With and Strategies for Mitigating Negative Effects of Online Harassment
11	Dec 7	ICTs and Political Change	<ul style="list-style-type: none"> • Taking power through technology in the Arab Spring [Al Jazeera] • Charlotte Mitchell. "Internet Blackouts: The Rise of Government Imposed Shutdowns." [Al Jazeera] • Defund facial recognition. [The Atlantic] <p>Recommended (not required):</p> <ul style="list-style-type: none"> • Beyond the Hashtags report on #BLM [report] • Ronald Deibert and Rafar Rohozinski. "Control and Subversion in Russian Cyberspace." <i>Access Controlled: The Shaping of Power, Rights, and Rule in Cyberspace</i>. MIT Press. 2010. [link] • M.R. Sauter. "DDOS and Civil Disobedience in Historical Context." <i>The Coming Swarm</i>. Bloomsbury. 2014.