

HUM 200: Decoding & Designing Texts with Data

Spring 2025

IIT Tower 1F6-1 | MW 10:00 to 10:50am + lab (F)

Instructor information

Instructor: Dr. Hannah Ringler

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Office: Siegel 214

Office hours: Mon 1 – 2pm (in person), Tues 11:30am – 12:30pm ([virtual](#), passcode 538356), or by appt

Note: Do pop in! I love chatting about course material, and usually have tea and candy.

Teaching assistant: Hana Hanifah

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Course description

This course introduces students to thinking critically about how topics like engineering, design, and technology interact with ethics, public media, and writing. Students will learn reading strategies for data-driven texts across genres, fundamentals of data visualization, and learn to communicate science- and data-driven arguments both professionally and to the public.

Learning outcomes

By the end of this course, students should be able to:

Course-specific outcomes

1. Critically read and analyze scientific, technical, and data communications from a variety of sources
2. Demonstrate an understanding of rhetorical challenges involved in communicating data and science academically, professionally, and publicly
3. Communicate scientific and technical information effectively in academic, professional, and public contexts

Humanities-specific outcomes

4. Articulate questions about human expression
5. Demonstrate understanding of the language and concepts of the humanities and arts
6. Produce original work of creative expression (e.g., creative writing, argumentative research paper, fine arts, etc.)

Communication-specific outcomes

7. Critically read and analyze a variety of texts (e.g., news articles, academic papers, data sets) in order to develop their own claims in writing.
8. Craft a text with attention to audience, purpose, context, and conventions.
9. Revise their text through participation in multiple phases of the writing process (e.g., pre-writing, drafting, revising, peer-review, editing).

10. Appropriately use evidence (e.g., data, cited sources) as part of their argument.
11. Present an effective argument in the appropriate medium of communication, which can include written visual, oral, or other emergent forms of communication.
12. Communicate specialized knowledge appropriately for an audience.

Materials

All readings and materials will be available on Canvas. Please have all readings and assignments for that day available to reference in class, either in virtual or printed form.

Grading breakdown

- 25% Homework assignments (all weighted equally)
- 15% Tech report (*LOs 1, 2, 3, 7, 8, 10, 11, 12*)
- 30% Op-eds (*LOs 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12*)
- 30% Literature review (*LOs 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12*)

Midterm and final grades will be assigned as follows: 100 – 90.00 (A); 89.99 – 80.00 (B); 79.99 – 70.00 (C); 69.99 & below (E)

I reserve the right to curve the course if appropriate, though this will only cause your grade to increase. Please follow [university guidelines](#) if you would like to request an I (incomplete).

Attendance

This class is based largely upon lectures and workshopping writing, so attendance is required. You are allowed 4 absences with no explanation needed; after that, your final grade will drop 2 percentage points per absence. Please save these days for unexpected emergencies. Excessive or repeated lateness may also result in being counted as absent.

If you have a serious or extenuating circumstance that forces you to miss class, send me an email and we'll figure it out.

Deadlines & late work

Each student is allowed 4 “late days” to use over the course of the semester. Using a late day extends the deadline for the assignment by 24 hours. No need to let me know if you are using one of these – I’ll automatically apply any you have left when you hand in your work. No more than 2 late days can be used on any one assignment, though.

If you have used up your late days (either you have used up all 4, or used 2 for an assignment already), 10% will be deducted per day that the assignment is late.

I also recognize that life can get messy and sometimes we fall behind. If you find yourself really struggling to meet a particular deadline, simply come talk to me and we can often work something out.

Plagiarism & academic integrity

Any cheating or plagiarism is strictly prohibited and will be reported to university administration. See IIT's [code of academic honesty](#) for a full description of the university's rules and regulations.

If you find yourself desperate enough in this class that you are feeling the need to cheat, please come and talk to me and I will be happy to work with you. Additionally, sometimes the line between citation, acknowledgement, and plagiarism can feel fuzzy – if you are unsure if something is plagiarism, come and talk to me and I'm happy to help you navigate this.

A note on ChatGPT and other generative AI tools: Generative AI can be a useful tool at times to help us with writing, but in an academic context, it may occasionally interfere with your learning. I'll clarify for each assignment whether its use is permitted or not, to what extent, and why. In general, my goal is to teach you to write well by critically using all of the resources (computational and not) available to you, which means it will often be allowed or encouraged with certain “guideraills” to shape your learning. In places where it is not allowed, using it will be considered a violation of academic honesty.

Disability accommodations

Students with disabilities requiring academic accommodations should ideally: (1) register with and provide documentation to the Center for Disability Resources; (2) request the Center for Disability Resources to provide or bring an accommodation letter to the instructor indicating the need for accommodations and what type. This should be done during the first week of class or as soon as possible. For more information about services available to Illinois students with disabilities, contact the [Illinois Tech Center for Disability Resources](#) at disabilities@iit.edu or 312.567.5744.

I also recognize some disabilities are “invisible” or undocumented in some way. If you feel you need accommodations, simply let me know and we will try to work something out. There is no need to disclose specific disabilities if you feel uncomfortable doing so. We're all human here.

Additional resources

IIT has a number of resources on campus to help you succeed. In particular, I would point your attention to our [writing center](#), where tutors can help you plan and revise your writing.

Also, please note our [Title IX office](#), [student health and wellness center](#), [ELS services](#), and [many others](#) that can help you with different concerns you may have as a student on campus.

Finally, please note that my door is always open to students. If you find yourself needing a friendly ear, a cup of tea, a piece of candy, or help getting a meal, drop by my office anytime. I am generally on campus MWF. All are welcome here.

Schedule

Week	Date	In class	To do (complete before class):	Assignments
FOUNDATIONS & DATA VISUALIZATION				
1	13 Jan	Welcome! Syllabus What do you write in tech fields?		
	15 Jan	Genre Reader-oriented prose	Read "Writer-based prose" by Flower	
	17 Jan	No lab this week		
2	20 Jan	No class: MLK Jr. Day		
	22 Jan	Storytelling with data; data viz fundamentals	Read "Data visualizations" by Kennedy & "Intro" in <i>How Charts Lie</i> by Cairo	
	24 Jan	LAB: Practice data viz	Review HW #1	
3	27 Jan	Principles of effective data communication	Read Yi, "How to choose colors for data visualizations"	HW #1 (due 2/4 @ 11:59pm)
	29 Jan	Accessibility & ethics in data viz	Read "Regression by eye" by UW Interactive Data Lab and "Mistakes, we've drawn a few" by Leo	
	31 Jan	LAB: Practice data viz	Review HW #1	
COMMUNICATING SCIENCE PROFESSIONALLY				
4	3 Feb	What is a technical report?; Intro tech report assg; Sketch data stories	Read NASA tech report	HW #2 (completion grade, due 2/7 BEFORE LAB) HW #3 (due 2/13 @ 11:59pm)
	5 Feb	IMRD: part 1		
	7 Feb	LAB: Methods & results analysis	Complete HW #2 (submit online and bring to class)	
5	10 Feb	IMRD: part 2		HW #4 (completion grade, due 2/14 BEFORE LAB) Tech report (due 2/18 @ 11:59pm)
	12 Feb	Executive summaries; professional formatting: nuts & bolts	Draft results section and bring to class	
	14 Feb	LAB: Structured peer review	Complete HW #4 (submit online and bring to class)	
COMMUNICATING SCIENCE PUBLICLY				

6	Feb 17	Why communicating science & data to the public is hard; intro public data assg		HW #5 (due 2/21 BEFORE LAB)
	Feb 19	Types of evidence	Read "Like Kennedy" by Szalavitz and "OpenAI could be a force for good" by Kassoy	
	Feb 21	LAB: Evidence analysis	Complete HW #5 (submit online and bring to class)	
7	Feb 24	Analyzing data from different lenses	Read "NATO has to change" by Stockman	HW #6 (due 2/28 BEFORE LAB)
	Feb 26	Ethics of data analysis & viz	Read "Deceptive by design" by Jones	
	Feb 28	LAB: Data analysis ethics	Complete HW #6 (submit online and bring to class)	
8	Mar 3	Structuring an argument; counterarguments	Read "Toulmin Argument"	HW #7 (due 3/7 BEFORE LAB)
	Mar 5	Precision & accuracy in claims with evidence	Read "Precise and concise wording"	
	Mar 7	LAB: Workshop outlines for public data assg	Complete HW #7 (submit online and bring to class)	
9	Mar 10	Common rhetorical moves in public-facing science writing		
	Mar 12	Understanding & adapting for your context & audience	Read "The science of scientific writing" by Gopen & Swan	
	Mar 14	No lab this week		
10	Mar 24	Scaling vocab & detail for a public audience	Read "Writers should not fear jargon" by Quirk	HW #8 (completion grade, due before LAB 3/28) Op-eds (due 4/1 @ 11:59pm)
	Mar 26	Making it interesting: written text		
	Mar 28	LAB: Rhetorical move identification		
COMMUNICATING SCIENCE ACADEMICALLY				
11	31 Mar	What is research? Research gaps & questions Analyze an IMRD research paper	Read Anson, pp. 176-191	HW #9 (due 4/8 @ 11:59pm)

	2 Apr	Genres of research writing across disciplines	Read Ali et al, "OSBSS"	
	4 Apr	LAB: practice reading strategies for academic writing	Review HW #9	
12	7 Apr	Intro lit review project; look at sample papers; synthesis for learning	Read "Techniques for interpretable machine learning" by Du, Liu, & Hu	
	9 Apr	Information literacy to learn about a new topic; scoping a topic & sources	Read Anson, pp. 191-222	
	11 Apr	LAB: Picking the right source		
13	14 Apr	Information literacy (guest lecture by the libraries)		HW #10 (due 4/20 @ 11:59pm)
	16 Apr	Information literacy (guest lecture by the libraries)		
	18 Apr	LAB: Citations	Watch citation video: https://www.youtube.com/watch?v=ibtAFfcATIU (only 2:43!)	HW #11 (due 4/22 @ 11:59pm)
14	21 Apr	Synthesis matrices & note-taking	Read "Note-taking for synthesis"	
	23 Apr	Crafting an outline; topic sentences & paragraph structure	Read "A scoping review" by Kewalramani, Allen, Leif, & Ng	HW #12: (due 4/29 @ 11:59pm)
	25 Apr	LAB: Topic sentences & structure		
15	28 Apr	Hedging & academic honesty	Read "Hedges"	
	30 Apr	Precision & concision		Lit review (due 5/9 @ 11:59pm)
	2 May	LAB: Peer review		
Finals week				