PHIL 4200: Science, Technology & Society

Instructor Contact

Name: Dr. Kim De Wolff
Pronouns: she/hers
Office Hours: Tuesdays, 2:00-4:00pm in ENV 310S
Email: kim.dewolff@unt.edu

Course Description

This course explores the interconnections between science, technology and society and the ways they mutually shape one another to the benefit and detriment of social life and the environment. The semester is organized into two main units that each have a distinct entry point into thinking about science-technology-society relationships: the first considers scientific ways of knowing from social constructivist, feminist, and anti-colonial perspectives and leads to an extended case study of vaccine hesitancy as a crisis of values and public trust; the second focuses on technologies and their embodied politics, culminating with a critical analysis of how racial inequality is coded in algorithms, apps, AI, and the structures of everyday life. The major assignments help us move from looking at isolated 'facts' to building a deeper understanding of the nuanced, situated relationships between knowledges, technologies and the kinds of worlds we live in – and want to live in.

Course Structure

This in-person class meets Tuesdays and Thursdays from11:00-12:30 in Wooten 217. Canvas is organized into weekly modules, each with a clear 'to do' list and access to readings, assignments, and other required course materials.

Course Objectives

By the end of this course, students will be able to:
1. Demonstrate an understanding of diverse approaches to the problems and promises of science and technology
2. Critically map facts and technologies in their complex social and political relationships
3. Develop respectful practices of dialogue and collaboration across difference
4. Demonstrate improved academic reading, writing, and analysis skills

Materials

All required course materials will be available digitally via links on each week's respective materials page. No book purchases required! If you have the means and prefer paper copies, we will be reading multiple chapters from the two following books:

- Goldenberg, Maya J. 2021. *Vaccine Hesitancy*: *Public Trust, Expertise and the War on Science.* University of Pittsburg Press.
- Benjamin, Ruha. 2019. *Race After Technology: Abolitionist Tools for the New Jim Code*. Polity Press.

Course Requirements

Assignment	Percentage of Final Grade
AI Reflection Exercise	10%
Midterm paper: Are facts enough?	25%
Implosion Topic and Brainstorm	10%
Final: Implosion Exercise	25%
Attendance and Participation	15%
Quizzes (5 x 3%)	15%

Grading

Assignments will be graded on a point basis, with final letter grades calculated as follows:

A = 90-100
B = 80-89
C = 70-79
D = 60-69
F = 0-59

Assignments

Attendance & Participation (15%)
Regular attendance and participation in class is required. Missing class without instructor permission or an approved excuse will result in lost points.

Quizzes (5 x 3% = 15%)
There are five scheduled in-person quizzes interspersed throughout the course. Each quiz consists of 2-3 short answer questions corresponding to the key concepts and reading tips for the weeks specified.

AI Reflection Exercise (10%)
Do you trust AI? More details on Canvas. Draft of your prompt for ChatGPT is due one week in advance.

Midterm Paper: Are facts enough? (25%)
Write a 1000-word response to the question: Are facts enough? More details on Canvas.

Implosion Exercise: Topic ID and Brainstorm (10%)
Write a 300-word paragraph explaining your choice of artifact/technology for the implosion exercise. Submit along with brainstorm in visual or note form. More details on Canvas.

Implosion Exercise: Final Paper and Map (25%)
Write a 750-word reflection on the implosion exercise and submit with a final 'map' of your object's relationships. More details on Canvas.

Course Policies

Communication
Please connect with me through my UNT email. You are also always welcome to drop in to office hours, but If you have a more involved question, a heads up is appreciated. During busy

times, my inbox can be overloaded, so if you contact me and do not receive a response within two business days, a gentle follow-up reminder is always appreciated.

Late Work

Late work will only be accepted with permission from the instructor. If you are about to or do miss a deadline for reasons beyond your control, please email me as soon as possible. Otherwise, all work turned in after the due date/time may receive a grade of zero unless the student has a university-excused absence and provides documentation with 48 hours of the missed deadline.

Inclusive Learning Environments

Philosophy classes (and society!) flourish with a diversity of perspectives. You do not need to share my views to do well in this class, but you do need to be kind! Please work with me to create a culture of open communication, mutual respect, and belonging. Meaningful, respectful discussion is a requirement, but personal attacks are unacceptable. Together, we can ensure a safe and welcoming environment for all. If you ever feel like this is not the case, please let me know. We are all learning together.

Course Generative AI Policy

Use of AI generated content without permission is not allowed. If you choose to use Grammarly or similar for spelling and minor grammar edits, you must submit both a rough draft – mistakes and all – as well as a clearly labelled final version that discloses what program you used and how. All written work will be submitted through Turnitin, which has an integrated AI-checker. Given the possibility of false positives, I strongly suggest drafting your work using track changes or through a google doc with a version history that clearly documents your writing process. Similarly, all lectures, assignments, and feedback will be made by me without AI-generated content. Any exceptions will be very clearly explained. Ideas are social, so let's make them together!

UNT Policies

Academic Integrity Policy

Communities of trust and respect are integral to college education and academic research alike. I recognize that we all have many responsibilities that can bring a lot of pressure. If you are struggling, please reach out to me for support – don't make bad choices!

Students using other people's work without citation or using generative AI without permission of the instructor (ie. outside of the very specific parameters of the AI reflection paper) will be in violation of UNT's Academic Integrity Policy. Please read and follow this important set of guidelines for your academic success (https://policy.unt.edu/policy/06-003). If you have questions about this, please email me or come discuss this with me during my office hours.

ADA Policy

UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one's specific course needs. Students may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any

delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the ODA website (https://disability.unt.edu/).

Prohibition of Discrimination, Harassment, and Retaliation (Policy 16.004)

The University of North Texas (UNT) prohibits discrimination and harassment because of race, color, national origin, religion, sex, sexual orientation, gender identity, gender expression, age, disability, genetic information, veteran status, or any other characteristic protected under applicable federal or state law in its application and admission processes; educational programs and activities; employment policies, procedures, and processes; and university facilities. The University takes active measures to prevent such conduct and investigates and takes remedial action when appropriate.

Emergency Notification & Procedures

UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Canvas for contingency plans for covering course materials.

Acknowledgments

This syllabus builds from the stellar pedagogy of Marisa Brandt, Xan Chacko, and Joe Dumit. Many thanks for so graciously sharing teaching resources personally and publicly.

PHIL 4200: SCHEDULE

INTRODUCTION

Week 1: Science, Technology & Society

READ
- 8/19The Syllabus!
- 8/21 Subramaniam, Banu. 2014. "Singing the Morning Glory Blues," Pp. 70-91 in *Ghost Stories for Darwin: The Science of Variation and the Politics of Diversity*. University of Illinois Press.

DUE
- 8/21 Complete the "Welcome Survey" on Canvas

PART 1: WAYS OF KNOWING

Week 2: (Why) Should We Trust Science?

READ

- 8/26 Kofman, Ava. 2018. "Bruno Latour, the Post-Truth Philosopher Mounts a Defense of Science." *New York Times Magazine.* October 25. https://www.nytimes.com/2018/10/25/magazine/bruno-latour-post-truth-philosopher-science.html
- 8/26 (Recommended) CBC Radio "How to Think about Science: Part 1." https://www.cbc.ca/player/play/1479821350
- 8/28 Oreskes, Naomi. "Why We Should Trust Scientists." June 25th, 2014. TED.
- 8/28 Bailey, Mark. 2023. "Why Humans Can't Trust AI." *The Conversation.* September 13rh.

DUE
- 8/28 Quiz 1 In Class

Week 3: Gender and Science

READ
- 9/2 Martin, Emily. 1991. "The Egg and the Sperm: How Science Has Constructed a Romance Based on Stereotypical Male/Female Roles," Signs 16(3): 485-501.
- 9/2 LaMotte, Sandee. 2020. "A women's egg chooses lucky sperm during last moments of conception, study finds" *CNN* June 9th.
- 9/4 Lab tour – Location TBD

Week 4: Situated Knowledges

READ
- 9/9 Halpern, Megan. 2019. "Feminist Standpoint Theory and Science Communication." *Journal of Science Communication* 18 (4).
- 9/11 Haraway, D. J. (1988). 'Situated knowledges: the science question in feminism and the privilege of partial perspective'. *Feminist Studies* 14 (3), pp. 575–599.

DUE
- 9/11 Submit AI reflection paper before 11:59pm

Week 5: Indigenous Knowledges and Anti-Colonial Science

READ
- 9/16 Shih, Ashanti. 2019. "The Most Perfect Natural Laboratory in the World: Making and Knowing Hawaii National Park." *History of Science* 57(4) 493–517.
- 9/18 Liboiron, Max. 2022. "An-anticolonial Pollution Science." Pp. 113-156 in *Pollution is Colonialism.* Durham: Duke University Press.

DUE
- 2/15 Quiz 2 In Class

Week 6: Are facts enough?

READ
- 9/23 Goldenberg, Maya J. 2021. *Vaccine Hesitancy: Public Trust, Expertise and the War on Science.* University of Pittsburg Press. Introduction (especially Pp 11-16) and Chapter 1 "The 'Ignorant Public.'
- 9/25 Listen and take notes: Shankar Vedantam (July 2019) "Facts Aren't Enough." *Hidden Brain Media.* https://hiddenbrain.org/podcast/facts-arent-enough/

Week 7: Public Trust, Democracy & Justice

READ
- 9/30 Goldenberg, Maya J. 2021. *Vaccine Hesitancy*: *Public Trust, Expertise and the War on Science.* University of Pittsburg Press. Chapter 4
- 10/2 *Vaccine Hesitancy* Chapter 5

DUE
- 10/2 Quiz 3 In Class

Week 8: Don't Look Up!

WATCH
- 10/7 In-Class film screening and discussion of *Don't Look Up*
- 10/9 Film continued…

DUE
- 10/9 Submit Midterm Are facts enough? paper before 11:59PM

PART 2: BODIES OF TECHNOSCIENCE

Week 9: Do artifacts have politics?

READ
- 10/14 Volti, Rudi. 2017. "The Nature of Technology." Pp. 1-20 in *Society and Technological Change*. 8th Edition. New York: Worth Publishers.
- 10/16 Winner, Langdon. 1980. "Do Artifacts Have Politics?" *Daedalus* 109 (1): 121-136.

Week 10: Technologies of Everyday Life

READ
- 10/21 Latour, B. (1992) 'Where are the missing masses? The sociology of a few mundane artifacts', in Bijker, W. E. and Law, J. (eds) Shaping Technology/Building Society: Studies in Sociotechnical Change, Cambridge, MA, MIT Press, pp. 225-58.

DUE
- 10/23 Quiz 4 In Class

Week 11: Are we all cyborgs?

READ
- 10/28 Haraway, Donna. 1985. "A Cyborg Manifesto." *The Socialist Review.*
- 10/30 Cyborg Manifesto Continued

DUE:
- 10/30 Submit Implosion Exercise Topic ID and Brainstorm before 11:59PM

Week 12: Can Robots be Racist?

READ
- 11/4 Benjamin, Ruha. 2019. *Race After Technology*. Polity Press. Introduction and Chapter 1.
- 11/6 Listen and take notes: Conover, Adam. "Technology and Race with Ruha Benjamin" *Factually!* https://omny.fm/shows/factually-with-adam-conover/technology-and-race-with-ruha-benjamin

Week 13 Coded Bias

- 11/11 In-class film screening: *Coded Bias*
- 11/13 Coded Bias continued + Discussion

DUE:
- 11/13 Quiz 5 In Class

Week 14 Technologies for Justice

READ
- 11/18 Benjamin, Ruha. 2019. "Retooling Solidarity, Reimagining Justice." Pp. 160-197 in *Race After Technology*.

THANKSGIVING BREAK November 25-30th

Week 15 – Implosion Assignment Workshop

- Details TBD

Tuesday, December 9th - FINAL IMPLOSION PAPERS AND MAP DUE before 11:59PM