course document IN5010/9010 | 2026

1. learning outcomes

The learning outcomes for IN5010/9010 are:

- understand the complexity of the relations between technology and society
- discuss social, environmental, political, and ethical challenges in technology design and use
- present your perspective on the ethical responsibility of the information technology developer/designer/innovator
- engage in critical and reflexive discussions of new and emerging information technologies

2. mandatory assignments

1. attendance 80%
We will keep track of your attendance. If you are ill and you will not be able to attend 80% of the lectures, or you miss a mandatory assignment, please submit a 'legeattest' to the 'studieadmin'. If there is a special circumstance, talk to Maja or Andrea. We are always open to finding a solution together!

2. two presentations
Everyone needs to participate in a group presentation and in an individual presentation. See section 5. presentations.

3. group project
Every student will be a member of a group. They will present their project together on the last day of the course, May 18, in an exhibition in the library. See section 6. project.

3. mandatory literature

February 2: Course introduction

February 9: What is technology I – Technology as a practice

1. Franklin, U. (1999). *The real world of technology*. House of Anansi Press. Pp. 1-26 (Chap. 1)
2. Ingold, T. (1997). Eight Themes in the Anthropology of Technology. *Social Analysis: The International Journal of Social and Cultural Practice*, *41*(1), 106–138. https://www.jstor.org/stable/23171736

Groups will make their first concept map

February 16: Constructivist theories of technology and AI

3. Bijker, W. E. (2010). How is technology made?—That is the question! *Cambridge Journal of Economics*, *34*(1), 63–76. https://doi.org/10.1093/cje/bep068

4. Feng, P. & A. Feenberg (2008). Thinking about Design: Critical Theory of Technology and the Realization of Design Possibilities. In P.E. Vermaas et al. (eds) *Philosphy and Design: From Engineering to Architecture*. Dordrecht: Springer, pp. 105-118. Online: https://link.springer.com/chapter/10.1007/978-1-4020-6591-0_8

Discussion: How do theories of technology contribute to understanding AI

February 23: Determinist and feminist theories of technology and AI

5. Wyatt, S. (2010). Technological Determinism: What It Is and Why It Matters. In *Technology Ethics: A philosophical introduction and readings*. Routledge. https://www-taylorfrancis-com.ezproxy.uio.no/chapters/edit/10.4324/9781003189466-6/technological-determinism-sally-wyatt Pp. 26-33 (Chapter 4)
6. Wajcman, J. (2010). Feminist theories of technology. *Cambridge Journal of Economics*, *34*(1), 143–152. https://doi.org/10.1093/cje/ben057
7. Verbeek, Peter-Paul (2015). Beyond Interaction. Interactions, 22, 26. https://interactions.acm.org/archive/view/may-june-2015/beyond-interaction

In addition, read: Sam Altman's blog post: The gentle singularity
https://blog.samaltman.com/the-gentle-singularity

March 2: Materiality of AI

7. Pierce, J. (2012). Undesigning technology: Considering the negation of design by design. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 957–966. https://doi.org/10.1145/2207676.2208540
8. Fallan, K. (2025). Designing is Mining: Historicizing Material Ecologies of Design. *Design Issues*, *41*(1), 5–16. https://doi.org/10.1162/desi_a_00789
9. Ansari, A. (2019). Decolonizing design through the perspectives of cosmological others: Arguing for an ontological turn in design research and practice. *XRDS: Crossroads, The ACM Magazine for Students*, *26*(2), 16–19. https://doi.org/10.1145/3368048

Each group needs to bring one mobile phone that can be taken apart.

March 9: Environmental impact of AI

13. Tironi, M., Albornoz, C., & Chilet, M. (2022). Problematizing Human-Centred Design: Notes on Planet-Oriented Design. *Diid — Disegno Industriale Industrial Design*, *77*, Article 77. https://doi.org/10.30682/diid772022c
14. Light, A., Powell, A., & Shklovski, I. (2017). Design for Existential Crisis in the Anthropocene Age. *Proceedings of the 8th International Conference on Communities and Technologies*, 270–279. https://dl.acm.org/doi/10.1145/3083671.3083688

In addition, read two letters to the editor of Aftenposten: *Kunstig intelligens får skylden for et enormt strømforbruk den ikke har* and *Kunstig intelligens er faktisk «vår tids digitale klimaversting»* (pdfs in Document folder)

March 16: Ethics of AI

17. Kiran, A. H., Oudshoorn, N., & Verbeek, P.-P. (2015). Beyond checklists: Toward an ethical-constructive technology assessment. *Journal of Responsible Innovation*, *2*(1), 5–19. https://doi.org/10.1080/23299460.2014.992769

19. Shilton, K. (2013). Values Levers: Building Ethics into Design. *Science, Technology, & Human Values*, *38*(3), 374–397. https://doi.org/10.1177/0162243912436985

20. Hollanek, T. (2024). The ethico-politics of design toolkits: Responsible AI tools, from big tech guidelines to feminist ideation cards. *AI and Ethics*. https://doi.org/10.1007/s43681-024-00545-z

We will play an AI ethics game

March 23: AI and Big Tech

15. Introna, L. D. (2005). Disclosive Ethics and Information Technology: Disclosing Facial Recognition Systems. *Ethics and Information Technology*, *7*(2), 75–86. https://doi.org/10.1007/s10676-005-4583-2

16. Winner, L. (1980). Do Artifacts Have Politics? *Daedalus*, *109*(1), 121–136. http://www.jstor.org/stable/20024652

We will watch and discuss a documentary.

March 30:Easter holiday
April 6: Easter holiday

April 13: Group presentations

April 20: Bias in AI (with guest lecturer)

11. Costanza-Chock, S. (2018). Design Justice: Towards an Intersectional Feminist Framework for Design Theory and Practice. *Proceedings of DRS*. https://doi.org/10.21606/drs.2018.679
18. Benjamin, R. (2019). Introduction. In *Race after Technology: Abolitionist Tools for the New Jim Code*. Polity Press. Pp. 1-48. (Introductory chapter)

You will watch a movie. Groups will make a concept map of the movie (based on what you can remember, followed by a discussion.

April 27: AI and Alternative Futures I

21. Zoellick, J. C., & Bisht, A. (2018). It's not (all) about efficiency: Powering and organizing technology from a degrowth perspective. *Journal of Cleaner Production*, *197*, 1787–1799. https://doi.org/10.1016/j.jclepro.2017.03.234

23. Kwet, M. (2022). The Digital Tech Deal: A socialist framework for the twenty-first century. *Race & Class*, *63*(3), 63–84. https://doi.org/10.1177/03063968211064478

What do you fear most about a future with AI integrated in all aspects of life? Write one-page story about this future. You can add, in addition, a collage or drawing, if you want.

May 4: AI and Alternative Futures II

22. Reed, B. (2007). Shifting from 'Sustainability' to Regeneration. *Building Research & Information*, 35(6), 674-680. http://www.tandfonline.com/doi/abs/10.1080/09613210701475753
23. Escobar, A., Osterweil, M., & Sharma, K. (2025). Pluriversal Horizons: Notes for an Onto-Epistemic Reorientation of Technology. In *Incomputable Earth: Technology and the Anthropocene Hypothesis (forthcoming)*. Bloomsbury Publishing. https://audir.org/wp-content/uploads/2023/06/For-Incomputable-Earth-Escobar-Osterweil-Sharma-CLEAN-FINAL-single-space-1.pdf
24. Quick Hall, K. M. (2019). Technology in Black Feminist World. *Frontiers: A Journal of Women Studies*, *40*(2), 243–257. https://doi.org/10.5250/fronjwomestud.40.2.0243

How does your preferred future + AI look like? Read these three articles for inspiration and write a one-page story about this future. You can add, in addition, a drawing or collage.

May 11: Course Summary, Maps, and Zines

May 18: Exhibition in the IFI Library

4. exam

Students who have completed the course's mandatory assignments (see **2. mandatory assignments**) can participate in the course exam, which is an oral group exam. The exam will focus on the presentations and zines. There will be group questions and individual questions:

- The examiners will read (not grade) the group presentations and the group project
- The examiners will ask questions about the presentations and the project
- The examiners will ask questions that relate the mandatory literature to the presentations and group project
- There will be individual and group questions
- The date of the exam will be decided with together with you

The grading is an **individual** Pass / Fail. Some examples of exam questions will be provided later in the course.

5. two presentations

Everyone needs to participate in two presentations:

1. Group presentation: Each group will research a controversy related to AI (topics will be provided in class) and present it in class on April 13. Use at least 2-3 articles from the curriculum in the discussion of the controversy. After you have presented, please send your presentation to the lecturers, including the presentation text and a short report on how each group member contributed to its preparation.

2. Individual presentation: Each student/candidate will deliver an AI life cycle concept map. The map will be based on a combination of concepts found in the course literature, discussions, and activities. The map doesn't need to be complete, but should, at a

minimum, reflect the concepts that you consider important, of interest or relevant. The concept map will form the basis of one or more exam questions, so make sure you know your map and its concepts.

6. group project

The presentation of the *ZINE* project will take place on **May 18 in the IFI Library.** This group project is a mandatory assignment for all students. See the Project Brief in the Document folder on the course web page.

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