

Theories of Science (KULT8850/1)

Everything you need to know

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None

Table of contents

1. Theories of Science - Fall 2026 - All you need to know	3
1.1 Lecturers	3
2. Formalities	4
2.1 Credit points (ECTS)	4
2.2 Required readings	4
3. Where and when	5
4. Course program: Fall 2026	6
4.1 Introduction	6
4.2 Track 1: Theoretical engagements	6
4.3 Track 2: Critical engagements	7

1. Theories of Science - Fall 2026 - All you need to know

You can download a pdf-version of this site with all its information [here](#).

The course provides an introduction to theories of science and relevant social science and humanities scholarship, with an emphasis on the history and philosophy of science and the social organization and dynamics of various academic fields, including their strategies for producing knowledge and the interaction between research and society.

The course engages with issues such as philosophical assumptions underlying high-quality scholarship, making claims about truth and objectivity, professional and societal relevance of science, navigation of academic challenges, and classic and contemporary critiques of science. To contribute to a better understanding of academic work, insights into the history of science and academic scholarship and the key features of the modern university are provided. Moreover, the course is one of the few arenas in which PhD students from a wide variety of disciplines meet and work together, which increases their interdisciplinary sensitivities.

Through the years we have seen that participants differ considerably in their expectations towards a course on theories of science. While some want to engage with theory on a deeper level, others are more interested in practical applications of knowledge about scientific knowledge production. While we are happy when someone chooses to participate in all five course days (in which case the word count of the assignment is reduced), we offer two "tracks" catering to different expectations and needs.

1.1 Lecturers

Professor Thomas Berker (responsible for the course: thomas.berker@ntnu.no), Associate Professor Terje Finstad, Professor Jonathan Knowles, Professor Miriam Kyselo, Associate Professor Sofia Moratti, Associate Professor Rune Nydal, Senior Researcher Kyriaki Papageorgiou, Associate Professor Astrid Rasch, Associate Professor Elisabeth Stubberud, and Research Professor Govert Valkenburg.

2. Formalities

No university course without formalities. We keep it simple and adaptable to your specific circumstances but we are required to demand ca. 25 hours work from you for every credit awarded.

2.1 Credit points (ECTS)

The course consists of lectures, group work, and plenary discussions. To ensure sufficient engagement with the course's content, to enable peer-learning, and to encourage networking across disciplines, **physical attendance** is mandatory and no digital alternatives for participation are provided. We are aware of the fact that PhD students are busy people and will therefore grant shorter leaves of absence. In case you cannot attend a lecture, please contact the course responsible (thomas.berker@ntnu.no) with a very brief description why you cannot participate.

To pass the course, you need to attend **three of the five course days** and deliver a course assignment text. The first course day on Monday is mandatory for all participants. If you cannot or do not want to attend all five days we have created two "tracks", where one consists of the two days labelled "theoretical perspectives" and two days labelled "critical perspectives". But you are free to combine as you wish.

The course is taught in two variants, **KULT8851 and KULT8850**. The variants are identical except that KULT8851 demands a longer assignment text (6000 words) than KULT8850 (4000 words).

If you have attended **all five course days**, the minimal word count for the written assignment is reduced to 3000 words (KULT8851) and 4000 words (KULT8850) respectively.

The deadline for the course assignment is **January 31, 2027**.

2.2 Required readings

Required readings are described in the course program. All the literature is accessible online or is made available to the participants on this site. The readings that are marked as 'essential' must be read before the lectures. Please make sure to prepare some comments/questions.

3. Where and when

All lectures will take place at Dragvoll

The course consists of five meetings. room 8563 (in the back of the library, walk through to the end and then turn to the left).

The dates for Fall 2026 are:

Mandatory introduction

November 30, 9.15-15.00

Track 1: Theoretical engagements

December 01, 09.15-15.00 December 02, 09.15-15.00

Track 2: Critical engagements

December 03, 09.15-15.00 December 04, 09.15-15.00

4. Course program: Fall 2026

4.1 Introduction

4.1.1 Monday, 30 November

0915-1200 Thomas Berker: Welcome, about the course, structure, course assignment, and we get to know each other a little (slides available [here](#))

Reading:

Latour, Bruno (1983) Give me a laboratory and I will raise the world. In: Latour, Bruno, Knorr-Cetina Karin, Mulkay MJ (eds.) Science observed. Perspectives on the social study of science. Sage: London: 141-170. Online: <http://www.bruno-latour.fr/sites/default/files/12-GIVE-ME-A-LAB-GB.pdf>

1300-1500 Hannah Winther: Research ethics ([slides](#))

This session deals with three levels of research ethics:

- Quality of research – good research conduct and the ethos of science
- Protecting persons and/or groups affected by research
- The social responsibility of research (broad research ethics)

Essential readings:

- Kaiser, M (2014) The integrity of science. Lost in translation? Best practice & Research Clinical Gastroenterology. 28(2):339-347. <https://doi.org/10.1016/j.bpg.2014.03.003>.
- Ruyter, K.W. (2019) The history of research ethics. Available [here](#).
- Guillemin, M & Guillemin, L (2004) Ethics, reflexivity and “ethically important moments” in research. Qualitative Inquiry. 10(2):261-280. ([here](#))
- Sarewitz, D (2016) The pressure to publish pushes down quality. Nature. 533:147 ([here](#))

Additional reading:

Browse through the NESH guidelines, available in both Norwegian: <https://www.forskningsetikk.no/retningslinjer/hum-sam/forskningsetiske-retningslinjer-for-samfunnsvitenskap-og-humaniora/> or English: <https://www.forskningsetikk.no/en/guidelines/social-sciences-humanities-law-and-theology/guidelines-for-research-ethics-in-the-social-sciences-humanities-law-and-theology/>

4.2 Track 1: Theoretical engagements

4.2.1 Tuesday, 01 December

0915-1200 Jonathan Knowles: Philosophy of Science: Objectivity, Method, and Truth ([slides](#))

This session introduces some of the classical issues of the philosophy of science, framed through the lens of the nature and possibility of objectivity in science more generally.

Essential readings:

- Gaukroger, St. 2012. Objectivity: A Very Short Introduction. Oxford: Oxford University Press, Chapter 1. (available [here](#))
- Popper, K. 1972. The Bucket and the Searchlight: Two Theories of Knowledge. Appendix to Objective Knowledge. An Evolutionary Approach. Oxford: Oxford University Press. ([here](#))
- Kuhn, T. 'Objectivity, Value Judgment, and Theory Choice' i The essential tension: Selected Studies in Scientific Tradition and Change. Chicago UP 1977, 435-450. ([here](#))
- Gadamer, H.G. 'The universality of the hermeneutical problem' in his Philosophical Hermeneutics, ed. D. Linge, California UP 1976. ([here](#))
- Koskinen, I. 'Values and objectivity'. In The Routledge Handbook of Values and Science, edited by Kevin C. Elliott, Ted Richard, 2026, 42-51. ([here](#))
- Harding, S. "Strong objectivity" and socially situated knowledge' Chapter 6 of her Whose Science? Whose Knowledge? Cornell UP 1991. ([here](#))

Additional readings:

- Anderson, E. 'Knowledge, Human Interests, and Objectivity' Philosophical topics, 23(2), 27-58, 1995. ([here](#))
- Jonathan Knowles, Theory of science: A Short Introduction: 'Logical Positivism' (p. 21-30). and Ch. 4: Further Developments in Philosophy of Science: Lakatos, Feyerabend, Laudan, The Sociology of Scientific Knowledge. (Whole book [here](#))
- Foucault, M. 'The Discourse on Language' Appendix to The Archaeology of Knowledge. New York, Pantheon Books 1972, <https://commons.princeton.edu/shakespeares-language/wp-content/uploads/sites/41/2017/09/Foucault-The-Discourse-on-Language.pdf> (and [here](#))
- Rorty, R. "Solidarity or objectivity?", in R. Talisse & S. Aikin The Pragmatism Reader (Princeton UP 2011), 367-380. ([here](#))

1200-1300 Lunch

1300-1500 Miriam Kyselo: TBA

4.2.2 Wednesday, 02 December

0915-1000: Rune Nydal: What makes a social theory right? ([slides](#))

Reading:

Taylor, Charles. 1983. Social Theory as Practice. New York: Oxford University Press. (available [here](#))

1015-1200: NN: TBA

1300-1500 Govert Valkenburg: Science as practice ([slides](#))

Essential readings:

- H.M. Collins and Steven Yearly (1992). Epistemological Chicken, pp. 301-326 in Andrew Pickering (ed.): Science as Practice and Culture, Chicago: University of Chicago Press ([here](#))
- Michel Callon and Bruno Latour (1992). Don't throw the baby out with the Bath School! A reply to Collins and Yearley, pp. 343-368 in Andrew Pickering (ed.): Science as Practice and Culture, Chicago: University of Chicago Press ([here](#))
- Noortje Marres (2018). Why We Can't Have Our Facts Back. Engaging Science, Technology and Society, vol. 4, 2018. ([here](#))

4.3 Track 2: Critical engagements

4.3.1 Thursday, 03 December

0915-1000 Terje Finstad: History of science and changes in scientific life. Situating and exploring the history of your own discipline/subject. ([slides](#))

Essential reading:

- William Clark. 2008. Academic charisma and the origins of the research university. University of Chicago Press, p. 183-238 (chapter 6: The doctor of philosophy). ([here](#))

Additional readings:

- Lorraine Daston and Peter Galison. 1992. The image of objectivity. In: Representations 40, p. 81-128 ([here](#))
- Steven Shapin. 2010. Never pure. Historical studies of science as if it was produced by people with bodies, situated in time, space, culture, and society, and struggling for credibility and authority. The Johns Hopkins University Press, p. 1-15. ([here](#))

1015-1200: Kyriaki Papageorgiou: Universities: Spaces of Epistemic Living, Frustration and Hope ([slides](#))

Reading:

Knut H. Sørensen and Sharon Traweek: Questing Excellence in Academia: A Tale of Two Universities (Routledge 2022). Chapter 3. In the Shadows of Excellence and Neoliberal Interventions: Enactments of Academic Autonomy and Strained Collegiality (33 p.) The whole book is available here: <https://www.taylorfrancis.com/books/9780367259334>

1315-1500: Sofia Moratti: Situated knowledge and feminist critiques of universality in science ([slides](#))

In this session, we will revisit the concept of “objectivity” through feminist critiques of the idea of universality in science. We will discuss the relevance and significance of acknowledging researcher positionalities.

Essential readings:

- Rolin, K. "Situated knowledge and objectivity." In The Routledge Handbook of Feminist Philosophy of Science, pp. 216-224. Routledge, 2020. ([here](#))
- Ashton, N. A., & McKenna, R. (2020). Situating feminist epistemology. Episteme, 17(1), 28-47. ([here](#))
- Olmos-Vega, Francisco M., Renée E. Stalmeijer, Lara Varpio, and Renate Kahlke. "A practical guide to reflexivity in qualitative research: AMEE Guide No. 149." Medical teacher 45, no. 3 (2023): 241-251. ([here](#))

Additional reading:

- Collins, Patricia Hill 1986. Learning from the outsider within: the sociological significance of black feminist thought i Social Problems 33(6): 14-32 ([here](#))
- Haraway, Donna 1988. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective" Feminist Studies, 14(3): 575-599 (24 s) ([here](#))
- Harding, Sandra, 2001 "Feminist Standpoint Epistemology" in Lederman, M. & Bartsch, i The Gender and Science Reader, London: Routledge: 145-165 ([here](#))

4.3.2 Friday, 04 December

0915-1200 Elisabeth Stubberud: Decolonizing knowledge production and objectivity ([slides](#))

Essential readings:

- Fjellheim, Eva Maria (2020) 'Through our stories we resist', <https://www.taylorfrancis.com/chapters/oa-edit/10.4324/9780367853785-12/stories-resist-eva-maria-fjellheim>
- Kuokkanen, Rauna (2008) 'What is hospitality in the Academy? Epistemic Ignorance and the (Im)Possible Gift' in Review of Education, Pedagogy, and Cultural Studies vol. 30(1), pp. 60-82. ([here](#))
- SAIH: An introduction to decolonization [here](#)
- Bhambra, Gurinder K. (2014) 'Postcolonial and decolonial dialogues' in Postcolonial Studies Vol. 17(2), pp. 115-121. <https://doi.org/10.1080/13688790.2014.966414>

Additional reading:

- Dankertsen, Astrid (2022) 'Avkolonisering av akademia fra et samisk perspektiv' ([here](#))

1300-1500 Astrid Rasch: Decolonising academia ([slides](#))

In this session, we will explore the historical entanglement of science and colonialism and consider the enduring legacies of this entanglement. We will discuss whether and how these considerations affect our own research practice.

Essential readings:

- Gopal, Priyamvada. 2021. 'On Decolonisation and the University'. *Textual Practice* 35 (6): 873–99. ([here](#))
- Mott, Carrie, and Daniel Cockayne. 2017. 'Citation Matters: Mobilizing the Politics of Citation toward a Practice of "Conscientious Engagement"'. *Gender, Place and Culture: A Journal of Feminist Geography* 24 (7): 954–73. ([here](#))
- Murrey, A., & Daley, P. 2023. 'Introduction: Learning Disobedience from the Heart of Empire'. In *Learning Disobedience: Decolonizing Development Studies*, London: Pluto Press, pp. 9-28. ([here](#))

Additional readings:

- Ndlovu-Gatsheni, Sabelo J. 2021. 'The Cognitive Empire, Politics of Knowledge and African Intellectual Productions: Reflections on Struggles for Epistemic Freedom and Resurgence of Decolonisation in the Twenty-First Century'. *Third World Quarterly* 42 (5): 882–901. ([here](#))