We live in anxious, fractious times. Environmentally and politically, a story of the triumphant progress of science and the benign helpfulness of technology seems scarcely believable anymore. Trust in science is in a strange state—science still ranks very high in surveys of professions people trust but on some crucial public issues, notably climate change and public health, trust in science is harder to secure and seems unable to guide action. People who question the story of triumphant progress of science are now routinely decried as science deniers or “postmodern neo-Marxists.” Meanwhile, some prominent public intellectuals draw science and the liberal order together as somehow intrinsically connected but seem unaware of even the main currents of historical and philosophical thought that have sought to question that claim. My purpose is not to defend truth and science against the barbarians, nor is it to turn you into Marxists or relativists (or both, a neat trick). My purpose is, rather, to give you some background to allow you to take seriously the question of the proper lessons of history and philosophy of science as they bear on questions of secure knowledge, political order, and human progress.

The interdisciplinary project of history and philosophy of science (HPS) became institutionalized in North America around 1960. For much of the remainder of the 20th century, HPS concentrated its attention on how our view of science changes when we see the various ways in which it is not isolated from the rest of culture. Partly due to the influence of other social scientific and humanities-based studies of science and technology, HPS in the 21st century has engaged in something of the contrary of this project, asking what we learn about contemporary culture when we see the various ways in which science and technology are embedded in it.

After a brief introduction to basic issues in history and philosophy of science, we will turn our attention to contemporary issues by looking at some of the places where the authority of science to speak the truth and the claim of technology to improve the human estate are, perhaps surprisingly, controversial. In particular, we will look at issues, in part raised by the pandemic but also by the research role of pharmaceutical companies and by medicalization in general, in medical and public health research and policy, and we will also look at issues of bias in algorithms and artificial intelligence.

**Course Materials**

Most of our readings are available on-line or on Canvas. The following book is required and will be available at the UBC Bookstore:

**Required Work for Assessment**

The course will have three short essays (600 words) that are due on 11 October, 15 November, and 11 December. Each essay is worth 20% (total 60%). There will also be a final exam worth 30%. Attendance and participation are worth 10%.

**Week by Week Order of Things**

**Week One (6, 8 Sept): Introduction to the Issues**
Steven Shapin, “Is there a Crisis of Truth?” (2019)
Maya Goldenberg, “Lack of Trust, not of Science, Behind Vaccine Resistance” (2017)

**Week Two (11, 13, 15 Sept): Historical Excursus: History, Philosophy, Sociology of Science 1970s-1980s**
Thomas Kuhn, “What are Scientific Revolutions?” (1987)

**Week Three (18, 20, 22 Sept): Philosophy of Science in the 21st Century**
Barker and Kitcher, Chapters 1 through 3

**Week Four (25, 27, 29 Sept): History and Philosophy of Science**
Barker and Kitcher, Chapter 4
Peter Galison, “Ten Problems in History and Philosophy of Science” (2008)
Hasok Chang, “Who cares about the history of science?” (2021)

**Week Five (4, 6 Oct): Science, Value, Critique**
Barker and Kitcher, Chapters 5 and 6
Heather Douglas, “Science and Values: The Pervasive Entanglement” (2023)

**Week Six (11, 12, 13 Oct): Medical Topic One: De/Medicalization: Mental/Brain Health**
Charles Rosenberg, “Contested Boundaries: Psychiatry, Disease, and Diagnosis” (2006)

**Week Seven (16, 18, 20 Oct): De/Medicalization: Sexual Health**
Michel Foucault, “Scientia Sexualis” (1976)
Steven Epstein, “A New Definition and the Backstory: Inventing Sexual Health” (2022)
Week Eight (23, 25, 27 Oct): Medical Topic Two: Trust: Research
David Michaels, “Manufactured Uncertainty: Contested Science and the Protection of the Public’s Health and Environment” (2008)

Week Nine (30 Oct, 1, 3 Nov): Trust: Advice/Decision/Treatment
Stephen John, “Epistemic trust and the ethics of science communication: against transparency, openness, sincerity and honesty” (2018)
Maya Goldenberg, “The ‘Ignorant Public’” (2021)

Week Ten (6, 8, 10 Nov): Putting it Together: Covid
Philipa Spoel et al, “Who are ‘we’? Examining relational ethos in British Columbia, Canada’s COVID-19 public health communication” (2023)

Safiya Umoja Noble, “Your Robot Isn’t Neutral” (2021)

Week Twelve (20, 22, 24 Nov): Is you AI I? Is it A?
Robert Sokolowski, “Artificial and Natural Intelligence” (1988)
Sarah T. Roberts, “Your AI is a Human” (2021)

Week Thirteen (27, 29 Nov; 1 Dec): Conditions of Discourse, Power, and Law in Understanding and Engaging in Digital Practices
Kristen Thomasen, “Safety in Artificial Intelligence and Robotics Governance in Canada” (2023)

Week Fourteen (4, 6 December): Critique/Science

Policies
All students must abide by the UBC policy on academic misconduct.

UBC does not have a university-wide policy on the use of Generative AI. No course that takes technology as among its topics should ban the use of such tools. SO, here is the policy for this course. First, please understand that generative AI generates sentences without concern for the truth of or evidence for those sentences. It is often radically wrong and it does not usually provide citations for the claims it makes. Thus, it is a deeply unreliable guide in academic writing. Moreover, any sentence the AI generates that you then make use of is a sentence that you did not generate yourself. Thus, it is a source and must be cited. The way to cite generative AI is to provide the URL of the AI you are using and the date on which you used it. Here is a good template to follow.

The UBC Syllabus Policy mandates that I provide this statement:

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious, spiritual and cultural observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available here.