

**Department of Philosophy
University of British Columbia**

**PHIL 337 001 Ethics for the Sciences
Winter 2022 Term 1 – September-December 2022**

Instructor: Professor Alison Wylie
Class meetings: T/TH 2:00-3:30
Office hours: W 3:00-5:00 and by appointment

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LAND ACKNOWLEDGEMENT

UBC's Point Grey Campus is located on the traditional, ancestral, and unceded territory of the xwməθkwəyəm (Musqueam) people. The land on which it is situated has always been a place of learning for the Musqueam people, who for millennia have passed on their culture, history, and traditions from one generation to the next on this site.

COURSE OVERVIEW

Scientific research has an impact on all of us, and on every aspect of our lives. Most of us will be research subjects at one time or another; all of us are affected by science-based policies; our everyday-lives have been transformed by the results of scientific research – in good and bad ways. Scientific research raises ethics issues that have never been more pressing or more consequential than now. This course is designed to explore these issues, primarily with reference to the non-medical sciences. It is intended for students from across the social and natural sciences, as well as in Philosophy.

We will focus on three clusters of ethics issues that arise in, and are raised by, the non-medical sciences. First are the issues typically addressed by guidelines for the 'responsible conduct of research' (RCR): research integrity, professional conduct in training and collaboration, appropriate attributions of credit and authorship, safety and confidentiality. Second are issues of accountability for the social and environmental impacts of research. And the third are broader questions about the social values that are served by and embedded in scientific practice, and whether or how science should inform public policy. The syllabus is organized around questions like these:

- What counts as research misconduct? Outright fraud is clearly unacceptable, but what about more subtle forms of error and misrepresentation?
- Is it justified to put human or animal subjects at risk of harm in the name of science?
- What responsibility do scientists have for the impact of their research, including both positive and negative outcomes, as well as unintended and unforeseen consequences?
- Are there lines of inquiry scientists should not pursue?
- Should scientists play an active role in policy debates that are about, or are informed by, their science?

We begin with a set of readings on the role of values in science and ethical obligations that are specific to the sciences; these will provide a framework for analyzing a selection of case studies that raise the questions noted above. The cases we will consider include high profile examples of fraud and error that have resulted in the retraction of a growing number of published results; controversy about 'gain of function' influenza research; longstanding debates about deception research in experimental psychology; obligations to human and non-human research subjects as well as to diverse stakeholders affected by science. In the final section of the course we turn to current debates about the consequences of scientific progress and about science-based policy that raise broad questions about the role of scientists in society.

Texts: Kevin Elliott, *A Tapestry of Values: An Introduction to Values in Science* (Oxford U Press, 2017). All other assigned readings will be available through library reserves and web links on Canvas.

Requirement: discussion posts (25%); a "concept work" essay (15%); a case study project that includes a group presentation (10%) and an individual essay (25%); a take-home exam (25%).

SYLLABUS

This is a list of topics and readings we will be discussing through the term. A weekly schedule of readings and assignments will be posted on Canvas for the first week of classes

Introduction:

U.S. Office of Research Integrity video, [The Lab](#).
Merton, "The Ethos of Science" (1996/1942).

Ethical theory and practical decision making

Shamoo and Resnik, "Ethical Decision Making." In *Responsible Conduct of Research* (2009).
Wylie, "On Ethics." In *Ethical Issues in Archaeology* (2003).
Elliott, "Introduction to Values in Science." In *A Tapestry of Values* (2017).

Ethics standards and guidelines

Rotblat, "A Hippocratic Oath for Scientists." *Science* 286 (1999).
Shamoo and Resnik, "Principles for Ethical Conduct in Science (2009).
Canadian Tri-Council Policy Statement (CIHR, NSERC, SSHRC): selections from Ethical Conduct for Research Involving Humans (2018).

A philosophical framework for reasoning about ethics issues in the sciences

Douglas, "The Moral Terrain of Science." *Erkenntnis* (2014).

Research Integrity

Fraud and Error

Canadian Tri-Council policy on Responsible Conduct of Research.
U.S. Office of Research Integrity policy on "Research Misconduct"
Macrina, "Responsible Conduct of Research." In *Scientific Integrity* (ASM 2014).
Data fabrication: Diederich Stapel / social psychology

Publication: credit, authority, and impact

Lewontin, "Dishonesty In Science." *New York Review of Books*, 18 November 2004.
Biagioli, "Recycling Texts." *International Journal of Cultural Property* 19 (2012).
H5N1 Virus Research: Osterholme (2012) 'Letter to NIH Associate Director for Science Policy'
Lipsitch & Galvani, "Ethical Alternatives to Experiments with Novel Potential Pandemic Pathogens." *PLOS Medicine* 11.5 (2014).

Responsibility to/for research subjects

Human Subjects

Nuremberg Code (1947) & Declaration of Helsinki (1964): [The Belmont Report](#).
Skloot, "The Immortal Life of Henrietta Lacks." *New York Times*, 23 March 2013.
Deception research: the Milgram obedience experiments – video and film; assessments
Bok, "Deceptive Social Science Research." In *Lying* (1979).

Animal Subjects

Singer, "All Animals Are Equal." In *Animal Rights and Human Obligations* (1989).
Gruen, "The Failure of Traditional Ethics." In *Entangled Empathy: An Alternative Ethics for Our Relationships with Animals* (2015).
Gluck, "Regretting My Animal Research." *New York Times*, 24 September 2016.
UAR, "[Animal Welfare & the Three Rs: Replacement, Refinement and Reduction](#)" (2011).

Science, Society and Social Responsibility

Misinformation and uncertainty

Oreskes & Conway, selections from *Merchants of Doubt*, and the film.
O'Connor and Weatherall, selections from *The Misinformation Age* (2019).
D'Ignazio and Klein, selections from *Data Feminism* (2020).
Elliott, "What If We Are Uncertain?" In *A Tapestry of Values* (Oxford, 2017).

Citizen science and collaborative practice

Ottinger, "Changing Knowledge, Local Knowledge." *STHM* 38(2012): 250-270.
SSHRC "[Guidelines for the Review of Indigenous Research](#)."
Wylie, "Community-based Collaborative Archaeology." In *Philosophy of Social Science* (2014).

Scientists and science policy

Physics & Astronomy Equity and Inclusion Group, "[Open Letter to SCOTUS](#)."
Beckwith and Huang, "Should We Make a Fuss?" *Nature Biotechnology* 23 (2005): 1479-1480.
Elliott, "How Can We Engage Values?" In *A Tapestry of Values* (2017), pp. 137-162.
Oreskes, "The Scientist as Sentinel." [AAAS Plenary Address](#) (2017).

COURSE POLICIES

Mandatory syllabus statement about UBC's values and policies

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 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.

UBC's policy on plagiarism

Plagiarism, which is intellectual theft, occurs where an individual submits or presents the oral or written work of another person as his or her own. Scholarship quite properly rests upon examining and referring to the thoughts and writings of others. However, when another person's words (i.e. phrases, sentences, or paragraphs), ideas, or entire works are used, the author must be acknowledged in the text, in footnotes, in endnotes, or in another accepted form of academic citation. Where direct quotations are made, they must be clearly delineated (for example, within quotation marks or separately indented). Failure to provide proper attribution is plagiarism because it represents someone else's work as one's own. Plagiarism should not occur in submitted drafts or final works. A student who seeks assistance from a tutor or other scholastic aids must ensure that the work submitted is the student's own. Students are responsible for ensuring that any work submitted does not constitute plagiarism. Students who are in any doubt as to what constitutes plagiarism should consult their instructor before handing in any assignments.

Academic Misconduct: <http://www.calendar.ubc.ca/Vancouver/index.cfm?tree=3,54,111,959>

Grading policies

Assignments will be assessed on the UBC mark-to-grade conversion scheme outlined in the UBC Calendar:

UBC grading scheme: <http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,42,96,0#217>

Specific to this course: low stakes assignments will be graded on a 5-point scale

Percentage (%)	Letter Grade	Check / Check +/-
90-100	A+	√++ 95-100
85-89	A	√+ 85-90
80-84	A-	
76-79	B+	√ 75-85
72-75	B	
68-71	B-	√- 65-75
64-67	C+	
60-63	C	√-- 55-65
55-59	C-	
50-54	D	-