

Science & Society: Values in Science

Course Number: PHIL 3310-090

Semester: Summer 2022

Course Meeting: Online

Instructor Information:

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Office Hours: By Appointment via Zoom

Course Description: Society funds scientists and tells them what sorts of things to study. Scientists then use the methods of science to discover facts about nature. In their research and their communication with the public and policy makers, scientists are unbiased, objective, and are not responsible for how their findings get understood and used by the public and government. This is the standard model of thinking about the relationship between science and society.

In this class we will challenge this standard model and pay special attention to issues in health, disability, mental health, psychiatry, and genetics. Due to the nature of these topics, a lot of our time will be focused on how science has impacted and continues to impact marginalized communities, including women, racial and ethnic minorities, the LGBTQIA+ community, the disabled community, and more. Discussion will be a key part of this class and we will ensure that discussion posts will be an open space for everyone to share their thoughts while also remaining respectful of each other.

There is a rich history within philosophy of science discussing the role of values in science, with thinkers like W. E. B. DuBois, Richard Rudner, Helen Longino, Philip Kitcher, Alison Wylie, and Heather Douglas to name just a few. Questions we will be exploring in this class include: What is objectivity (in science) and how do we achieve it? Should scientists be free to pursue any research project, regardless of the potential dangers of their research? Should scientists strive to be value-free or can scientists incorporate values in an unproblematic way? How do we, as a society, want to use science?

Objectives:

- Learn how to create, assess, and respond to philosophical arguments by participating in collaborative discussions and writing your own research paper.
- Know the difference between epistemic and non-epistemic values and see how they influence science in general and any specific area of science you are interested in.
- Learn the history and different meanings behind the concept of 'objectivity', and how these different accounts of objectivity impact scientific practice and communication.
- Learn some history and science of psychiatry and genetics and how values in those fields have affected, and continue to affect, people in both positive and negative ways.

Reading Materials:

All readings will be made digitally available on Canvas. No need to purchase anything!

Grading:

Grades will be based on the following criteria:

1. Weekly Discussion posts and replies (10 total: 5 posts & 5 replies): 40%
2. Quizzes (4 quizzes, 10 questions each): 20%
3. Final Exam (consisting of 12 questions and two short essays): 20%

4. One 4-6-page (double-spaced) paper: 20%

Grade scale:

A+ = 100-97	C+ = 79-77
A = 96-93	C = 76-73
A- = 92-90	C- = 72-70
B+ = 89-87	D+ = 69-67
B = 86-83	D = 66-63
B- = 82-80	D- = 62-60
	F = 59-0

Assignments:

Recorded Lectures:

There will be a lecture video (or videos) for each week that will replace in-person lectures. There will be material in the lectures that is not in the readings, so be sure to watch them!

Discussion Posts:

As part of a philosophy course, it is important to have a lively interactive component. Being an online course, that is more difficult. Discussion posts are important towards engaged learning and are good for two reasons. First, obviously they give students the chance to interact, and second, it is important for effectively communicating in writing. That is why these make up the majority of your grade for this course. There will be one discussion question every week, except for the last week, so 11 total. But you only have to respond to 10 of them. Out of those 10, 5 must be an original post in response to the discussion prompt, and 5 must be a reply to a fellow student. We encourage you to post and reply as much as you would like to! To get credit for a post or reply, you need to engage with the material or the person you are replying to in a meaningful way. This should be at least a few sentences or a short paragraph. Discussion questions will be posted every week on Monday at 12pm and due Sunday by 11:59pm.

Quizzes:

Quizzes are designed to be a small content round-up directly following each unit. Students will complete four quizzes on Canvas throughout the course of the semester. Quizzes will be posted Monday at 12pm and due Sunday by 11:59pm on the weeks that have them. Each quiz will consist of 10 questions, including multiple choice, true/false, and short answer questions.

Paper:

This is a thesis-driven, research paper in which you will argue for a specific claim relating to some aspect of class. The paper will be 4-6 pages (typed, double-spaced, 12-point font) and turned in on Canvas. Sample topics include: public trust in science, inductive risk in science, research funding, and case studies of any area of science, like biology, chemistry, psychiatry, psychology, sociology, physics, health sciences, environmental sciences, etc. There will be some prompts provided but you can also pick your own topic. If you choose your own topic, please discuss your paper idea with one of the instructors before you start to make sure that your idea will work. You can complete your paper at any time, and will be due at the end of the semester, August 5th by 11:59pm.

Final Exam: There will be two components to the final exam for this class. The first will be 12 questions, including multiple choice, true/false, and short answer questions. The second will involve essay questions; students will choose two questions to answer from a list of four questions and will be required to write 1-2-pages (roughly 500 words) for both questions. The four essay questions will be posted on the Monday of the final week of class. The exam will be untimed, so you should be able to save your answers and return to it later if needed. The final exam is due on August 5th by 11:59pm.

Class Policies

Dates/Deadlines & Extensions: All assignments should be completed on time. For each day that an assignment is late, 5% will be taken off. If, due to an extenuating circumstance – illness, family emergency, etc., you think you will be unable to complete an assignment on time, get in contact with us BEFORE the assignment is due so that we can discuss your particular circumstance with you and whether an extension will be given. We will do our best to be as accommodating as possible.

Cheating/Plagiarism: Anyone caught cheating during an assignment will have the test confiscated, a zero will be given to the work, and the student's action will be reported to the Dean. Students are responsible for knowing and understanding the University's Code of Conduct as it pertains to plagiarism: <http://www.admin.utah.edu/ppmanual/8/8-10.html>. In short, when you draw upon any source (class notes, an article, a website, a textbook, etc.), you must cite that source whether you are quoting from it directly or only paraphrasing it. The basic idea here is that you can draw on someone else's idea(s), but you cannot spin someone else's idea(s) as your own. Any assignment with evidence of plagiarism will be assigned a zero, and the student's action will be reported to the Dean.

Classroom Civility Statement: We will be discussing some controversial topics in the class, including the concept of mental disorders, eugenics, and more. Even though this class is entirely online, it is essential that we maintain a safe and constructive classroom environment, where students with a variety of different perspectives can feel comfortable sharing their ideas and reasons for those ideas. So, when writing and replying to each other in discussion posts, be respectful.

University Safety Statement: The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit safeu.utah.edu.

Disability Services: The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability and Access, 162 Olpin Union Building, 801.581.5020 (V/TDD). CDA will work with you and the professor to make arrangements for accommodations. All written information in this course can be made available in alternative format with prior notification to the CDA.

Addressing Sexual Misconduct: Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS).

Class Schedule

Unit I: Intro to Science & Society

Week 1: May 16th-20th: Critical Thinking & Seismology

Readings

- Carolina Flores (2021) Critical Thinking: What is it to be a critical Thinker? <https://1000wordphilosophy.com/2021/09/28/critical-thinking/>
- Lucy Jones (2018) *The Big Ones: How Natural Disasters Have Shaped Us (and What We Can Do About Them)* – Chapters 7 & 10 [pp. 117-134 & 169-186]

Assignments

- Watch the recorded lectures.
- Discussion Post #1 – Due May 22nd by 11:59pm

Week 2: May 23rd-27th: Philosophical Arguments & Climate Science

Readings

- Steven Cahn, Patricia Kitcher, and George Sher (2017) *The Elements of Argument*. [pp. 45-53]
- Evelyn Fox Keller (2017) *Climate Science, Truth, and Democracy*, Sections 6-12 [pp. 114-121]

Assignments

- Watch the recorded lectures.
- Discussion Post #2 – Due May 29th by 11:59pm
- Quiz #1 – Due May 29th by 11:59pm

Unit II: Values in Science

Week 3: May 30th - June 3rd: Kuhn & Scientific Revolutions

Readings

- Thomas Kuhn (1962) *The Structure of Scientific Revolutions*, Chapter 9: The Nature and Necessity of Scientific Revolutions [pp. 92-110]
- Thomas Kuhn (1973/1977) Objectivity, Value Judgment, and Theory Choice [pp. 102-118]

Assignments

- Watch the recorded lectures.
- Discussion Post #3 – Due June 5th by 11:59pm

Week 4: June 6th-10th: The Value-Free Ideal

Readings

- Liam K. Bright (2018) Du Bois' democratic defence of the value free ideal [pp. 2227-2244]
- Heather Douglas (2000) Inductive Risk and Values in Science [pp. 559-578]

Assignments

- Watch the recorded lectures.
- Discussion Post #4 – Due June 12th by 11:59pm

Week 5: June 13th-17th: Objectivity & Feminist Philosophy of Science

Readings

- Sandra Harding (1995) "Strong Objectivity": A Response to the New Objectivity Question [pp. 331-349]
- Kristen Intemann (2010) 25 Years of Feminist Empiricism and Standpoint Theory: Where Are We Now? [pp. 778-796]

Assignments

- Watch the recorded lectures.

- Discussion Post #5 – Due June 19th by 11:59pm

Week 6: June 20th-24th Pursuit-worthiness (of IQ Research), Science, and Democracy

Readings

- Philip Kitcher (2001) *Science Truth & Democracy*, Chapter 8: Constraints on Free Inquiry [pp. 93-108]
- Noah Carl (2018) How Stifling Debate Around Race, Genes and IQ Can Do Harm [pp. 399-406]
- Dorothy Roberts (2015) Can Research on the Genetics of Intelligence Be “Socially Neutral”? [pp. 50-53]

Assignments

- Watch the recorded lectures.
- Discussion Post #6 – Due June 26th by 11:59pm
- Quiz #2 – Due June 26th by 11:59pm
- Start thinking about ideas for your research paper!

Unit III: Psychiatry

Week 7: June 27th-July 1st: Extraordinary Science & Psychiatric Classification

Readings

- Jeffrey Poland and Şerife Tekin (2017) *Extraordinary Science and Psychiatry: Responses to the Crisis in Mental Health Research*, Introduction: Psychiatric Research and Extraordinary Science [pp. 1-14]
- Kathryn Tabb (2019) Philosophy of Psychiatry After Diagnostic Kinds [pp. 2177-2195]

Assignments

- Watch the recorded lectures.
- Discussion Post #7 – Due July 3rd by 11:59pm

Week 8: July 4th-8th: Social Epistemology & Psychiatry.

Readings

- Anne-Marie Gagné-Julien (2020) Towards and Socially Constructed and Objective Concept of Mental Disorder [pp. 1-26]
- Anke Bueter (2019) Epistemic Injustice and Psychiatric Classification [pp. 1064-1074].

Assignments

- Watch the recorded lectures.
- Discussion Post #8 – Due July 10th by 11:59pm
- Quiz #3 – Due July 10th by 11:59pm

Unit IV: Values in Genetics

Week 9: July 11th-15th: Eugenics & The Concepts of Health and Disease

Readings

- Sara Goering (2014) Eugenics – Introduction and Section 1: Short history of eugenics. <https://plato.stanford.edu/entries/eugenics/>
- Marc Ereshefsky (2009) Defining ‘health’ and ‘disease’ [pp. 221-227]
- Jonathan Anomaly (2018) Defending Eugenics [pp. 24-34]

Assignments

- Watch the recorded lectures.
- Discussion Post #9 – Due July 17th by 11:59pm

Week 10: July 18th-22nd: Contemporary Genetic Technologies

Readings

- Jim Tabery (2019) Genetics - Section 1: The Science of Genetics.
<https://plato.stanford.edu/entries/genetics/#ScieGene>
- Robert Sanders (2021) FDA approves first test of CRISPR to correct genetic defect causing sickle cell disease [watch the video and read the article]
<https://news.berkeley.edu/2021/03/30/fda-approves-first-test-of-crispr-to-correct-genetic-defect-causing-sickle-cell-disease/>
- Julian Savulescu (2001) Procreative Beneficence: Why We Should Select the Best Children [pp. 413-426]

Assignments

- Watch the recorded lectures.
- Discussion Post #10 – Due July 24th by 11:59pm

Week 11: July 25th-29th: Genetics, Disability, and Standpoint Theory

Readings

- Robert A. Wilson (2020) Eugenics, Disability, and Bioethics [pp. 1-13]
- Joseph Stramondo (2017) Disabled by Design: Justifying and Limiting Parental Authority to Choose Future Children with Pre-Implantation Genetic Diagnosis [pp. 475-498]

Assignments

- Watch the recorded lectures.
- Discussion Post #11 – Due July 31st by 11:59pm
- Quiz #4 – Due July 31st by 11:59pm

Finals Week

Week 12: August 1st-5th: Final Exam Prep

Readings

- None!

Assignments

- Submit your research paper if you haven't already. PAPER DUE AUGUST 5th by 11:59pm.
- Prepare for the final exam. FINAL EXAM DUE AUGUST 5th by 11:59pm.