Course Description
This course examines central philosophical issues generated from the intersection of science, human values, and public welfare. Examples include public participation in science, special-interest science, and neglected diseases.

Texts

The Kourany and Steel books are available at the Student Book Store.

All other readings will be posted on the course website.

Course Objectives
A successful student in this course will:
- Gain knowledge of major positions, arguments, and approaches in the field of socially relevant philosophy of science.
- Improve critical reasoning and writing abilities, and especially the ability to write a research paper in philosophy.
- Appreciate the relevance of philosophy of science to important issues outside of class.

Grades
Grades in this class will be based upon two regular presentations (10% each), an outreach presentation (5%) with an associated short essay (15%), a research paper presentation (10%), and a research paper (50%). Prior meeting with me is a required part of all class presentations; class presentations without a prior meeting will not be permitted. Please see the Presentations module on the course website for a detailed grading rubric for all presentations.

- **Two Regular Presentations (10% each):** Each student will be required to give two regular presentations, each of which will focus on one article or book chapter assigned for class on that day. Regular presentations should have two chief components: (1) an exposition of the central argument (or arguments) of the target article, and (2) a critical analysis of that argument. Both parts should be equally significant aspects of your presentation. In developing a critical analysis of the focus article, presenters are encouraged to make connections with earlier readings from class or with materials not assigned in the course (such as articles listed as “further readings” for that week). Presenters should avoid giving a section-by-section summary of the focus article or chapter (assume that your fellow students
have done the reading). A number of presentation formats are acceptable, including power point and handouts. Whatever their format, presentations should be designed to generate discussion among the seminar participants, and interactive approaches are encouraged. The minimum length of a presentation is 30 minutes, while the maximum is 1 hour. How long each presentation lasts will depend to a large extent on how much discussion it generates. Plan on a presentation interspersed with discussion rather than a block of uninterrupted speaking (so a 1 hour lecture would not be an appropriate presentation format!).

- Outreach Presentation (5%) and Short Essay (15%): The outreach presentation is an exercise in making a connection between philosophical issues discussed in class and important real world concerns. The “outreach” component of the exercise means that you are required to interview a person who is directly involved with or affected by the issue. Examples could include a scientist who does research in a field related topics discussed in class, or representative of an organization that engages in activism on some issue in which science and public welfare intersect. The outreach presentation should have two main components (not necessarily in this order). First, there should be a description of the interview: who you talked to, what you discussed, etc. And secondly, the presentation should specify a philosophical issue from class and explain how it is related to the topic of your interview. Be as specific as possible on this part of the presentation. For example, don’t just say, “This is about values and science.” Indicate the positions relating to the topic, which authors discussed them, and how they are relevant. The short essay is a write up of the outreach presentation, and should be between 2,000 and 3,000 words. Outreach presentations can be scheduled for any week of the semester prior to Weeks 12 and 13 (which will be devoted to presentations of research projects). Short essays will be due in the class following the presentation (e.g., if your outreach presentation is in Week 10, then your short essay is due in Week 11), and should be submitted via the Short Essay drop box on the course website. Group collaboration is encouraged for outreach presentations, but the short essays must be submitted individually. See the course website for a grading rubric for the short essay.

- Research Paper Presentation (10%): The last two classes of the semester will be devoted to presentations in which students describe the project that will be the basis of their research paper for the course. The format of the research paper presentations will mimic that of a conference presentation. Each presentation will be allotted 30 minutes in total. The first 20 minutes should consist of a presentation in which only the presenter speaks (I encourage the use of power point here), followed by 10 minutes of Q&A. See the Research Paper Presentation rubric document on the course website for further details about the expectations for a research paper presentation.

- Research Paper (50%): The final assignment for the class is a research paper. Research papers can be on any topic addressed in the course, and should be between 5,000 to 7,500 words in length. Research papers must be submitted to the Research Paper drop box on the course website by 9 am, Friday December 11. See the Research Paper module on the course website for guidelines and a grading rubric.
Course Schedule
Section 1: Introduction

Week 1: What is Socially Relevant Philosophy of Science?
• Kourany, Philosophy of Science After Feminism, chapter 1.

Further Reading:

Section 2: Science and Marginalized Voices

Week: Objectivity and Criticism from Diverse Perspectives
• Harding, “A Socially Relevant Philosophy of Science? Resources from Standpoint Theory’s Controversiality.”
• Longino, “Values and Objectivity.”
• Kourany, Philosophy of Science After Feminism, chapters 2 and 3.

Week 4: Social Justice as an Aim of Science
• Kourany, Philosophy of Science After Feminism, chapters 4 and 5.
• Rolin, “A Feminist Approach to Values in Science.”
• Kourany, “The Ideal of Socially Responsible Science: A Reply to Dupré, Rolin, Solomon, and Giere.”

Week 5: Science and Public Participation
• Douglas, “Inserting the Public into Science.”
• Werkheiser, “Community Epistemic Capacity.”
• Jasanoff, “Constitutional Moments in Governing Science and Technology.”

Further Reading:
Section 3: Public Welfare and Scientific Research Priorities

Week 6: Well-Ordered Science

- Kitcher, “Well-Ordered Science.”
- Keren, “‘Kitcher on Well-Ordered Science: Should Science Be Measured against the Outcomes of Ideal Democratic Deliberation?’”

Week 6: Biomedical Research and Neglected Diseases

- Reiss and Kitcher, “Biomedical Research, Neglected Diseases, and Well-Ordered Science.”
- Sonderholm, “Advance Monopoly Commitment?”

Further Readings


Section 4: Special Interest/Bent/Politicized Science

**Week 7: Challenging the Value-Free Ideal**
- Betz, “In Defence of the Value Free Ideal.”

**Week 8: Scientific Integrity without Value-Freedom**
- Douglas, “The Structure of Values in Science.”
- Elliott and McKaughan, “Nonepistemic Values and the Multiple Goals of Science.”

**Week 9: Policy Proposals**
- Brown, “Politics, Method, and Medical Research.”
- Biddle, “Lessons from the Vioxx Debacle: What the Privatization of Science Can Teach Us About Social Epistemology.”
- Voltz and Elliott, “Mitigating Conflicts of Interest in Chemical Safety Testing.”
- Reiss, “In Favour of a Millian Proposal to Reform Biomedical Research.”

Further Reading:

**Section 6: How Should Science Inform Policy Decisions?**

**Week 10: Debating the Precautionary Principle**
- Steel, *Philosophy and the Precautionary Principle*, chapters 1, 2, 3, and 4.

**Week 11: Debating the Precautionary Principle, continued**

**Further Readings:**

**Section 7: Research Presentations**

**Week 12: Research Paper Presentations**
- See sign up sheet for schedule

**Week 13: Research Paper Presentations**
- See sign up sheet for schedule

**Research Paper Due, 9am, Friday, December 11. Papers must be submitted via the drop box on the course website**