Science, Technology, and Values

This course is about the relationship between the three things mentioned in the title. Many philosophers have argued that value judgments are intimately connected to scientific endeavor and technological development. Scientists employ them in choosing between different theories, they affect which research projects scientists pursue and which methods they use to pursue them, they can themselves be shaped by the kind of technology and scientific knowledge available to a society, and they help determine what kinds of practical use we make of scientific discoveries and technological advancements. We will study these relationships in this class, ultimately with the aim of better understanding how science and technology might be forces for good.

Tentative Course Outline (remember, often you will only be asked to read part of a piece):

I.   **Values in Science**

Selections from *Science as Social Knowledge*, Helen Longino
Selections from *Merchants of Doubt*, Naomi Oreskes and Erik Conway
"Why the Reward Structure of Science Makes Reproducibility Problems Inevitable," Remco Heesen
"Socially Responsible Science and the Unity of Values," Miriam Solomon
"The Idea of Socially Responsible Science," Janet Kourany

II.   **Research Ethics**

"The Helsinki Declaration," World Medical Association
"The Ethics of Clinical Research," David Wendler
"The Morality of A/B Testing," John Constine
"Will Tech Companies Ever Take Ethics Seriously?," Evan Sellinger
"All Animals are Equal" and "Tools for Research," Peter Singer

III.   **Technological Determinism?**

"Once More into the Stirrups," Alex Roland
"What Fuels Technology Change?", Lelia Green
"Democratic Rationalization: Technology, Power, and Freedom," Andrew Feenberg

III.   **Using Science**

Many technological and scientific advancements raise specific ethical questions about how they should be used, and if they should be used at all. In the third section of the class, we'll do a series of units focusing on these questions as they relate to specific technologies. I'll solicit

feedback from the class, and will incorporate this into choosing exactly which topics we discuss. Possible options include such diverse issues as the morality of drone warfare, whether it's okay to act out morally bad actions in video games, whether human cloning is morally permissible, whether we should use technology to improve the natural capacities of human beings, whose survival self-driving cars should prioritize in an accident, how we can protect personal privacy in a technological age, whether a sophisticated artificial intelligence would have moral rights, and whether you should have your brain cryonically preserved when you die, among others.

Texts:

Readings for this class will be posted on Sakai. Oftentimes, you will not be responsible for the entire piece; this is both because I want to keep the length of your readings manageable and because many texts include parts which aren't too important for our purposes (for instance, those parts may address objections which we won't focus on, or attack a view which we won't discuss.) However, I will usually post the whole thing in case anyone is interested in reading non-assigned parts of it, or in case anyone would find having the entire piece helpful when writing their papers. (E.g., I may post an entire article, but you may only need to read one or two sections of it.) I will post "reading instructions" on Sakai which will tell you which parts of the assigned materials are required reading. In the case of difficult pieces, these instructions may also include a brief explanation to help you understand what the author is arguing for, some definitions, and so on. Doing the readings ahead of time will help you understand the material better and participate in class more fully.

Assignments and rubric:

Your grade will be calculated as follows:

Participation: 12.5%
Reading quizzes: 12.5%
First exam: 16.75%
Second exam: 20.75%
First paper: 16.75%
Second paper: 20.75%

Participation: A major part of your participation grade will just be showing up. After two unexcused absences, your participation grade will seriously suffer. However, to get an A in participation, you should also (naturally) participate in class. A big part of philosophy is just *talking* to people. You understand your own views better by learning to articulate them to other people; you get a sense of alternatives by listening to other people articulate their views to you; you refine your views by listening to how people who disagree with you respond to them, and by responding to their responses; and so on. Each of you has different skills, different perspectives, and a different set of life experiences, and so has unique things to contribute to our investigation of philosophical issues.

During discussions, you should also practice good classroom etiquette. We will talk about some sensitive and controversial topics in this class. Some of the authors we read, and some of the students in the class, might hold views which other students find silly, morally wrong, offensive, and possibly hurtful. It is fine to disagree, and to *passionately* disagree, with the authors we read, or other students, or me; the fact that people disagree about philosophical questions is why we have to work so hard on them. But it's important, insofar as it's feasible, to state one's own views, and to express one's disagreements with others, in a way that's considerate and respectful towards the other participants in the conversation. At the same, if something happens in class that makes you uncomfortable, let me know and I'll see what can be done about it.

Reading Quizzes: At random, you'll be given brief pop quizzes to see whether you did the reading. The point is not to trick you, and I understand that when you come to class, you won't necessarily have understood everything in the reading. The questions you'll be asked will be things that should be fairly clear to someone who did the reading and made an honest effort to pay attention.

Exams: You will have two exams, each of which will consist of a combination of multiple choice, short answer, and short essay questions. The exams exist to test your knowledge of the material we've read.

Papers: You'll also have two papers due, each of which should be about 1800 words long. The papers exist to give you a chance to *do* philosophy. You'll be asked to select an author we've read whose position you disagree with, argue against their position, and anticipate and argue against the response they might give to your objection. At least two weeks before the papers are due, you'll be given a more specific prompt with guidelines about how to write the paper and the criteria I'll use when grading it. If you have questions during the paper writing process, or if you want feedback on a draft, I'll be happy to answer any questions you have during my office hours.