

PHL 501 Science, Technology, and Culture

Fall 2016

TR, 9:30 AM – 10:50 AM, LA 146

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(1) INTENT OF THE COURSE

The course is intended to clarify the connections between science, technology, and culture.

We will begin with the cultural ground state of hunting and gathering and its encounter with the culture of technology in James Welch's *Fools Crow*. Next we will turn to the physical ground state of reality, quantum physics, in Cox and Forshaw's *The Quantum Universe*. From there we will go by way of chemistry and computer science to what's most distinctive and powerful in contemporary technology, information and communication technology. Finally, taking our cues from Heidegger's *Bremen Lectures*, we will try to understand the cultural force of technology with its benefits and liabilities and ask whether there's a possibility of a newly grounded culture that can deal constructively with the opportunities and perils of technology.

(2) TEXTS

Welch, *Fools Crow*, all of it.

Cox and Forshaw, *The Quantum Universe*, chs. 1-5.

Heidegger, *The Bremen and Freiburg Lectures*, the Bremen Lectures only.

(3) STRUCTURE OF THE COURSE

There will be three parts to the course:

1. The first two weeks will be devoted to a brief survey of the standard philosophical views of science, technology, and culture.
2. We will then devote a week or two to discuss the cultural significance of *Fools Crow*, in particular the collision between Native American and European culture.
3. In the subsequent four weeks, we will discuss Cox and Forshaw's chs. 1-5 to get a grip on the basic understanding of reality—to see how magic and metaphysics have been succeeded by physics and how physics has informed technology.
4. In the remaining six weeks, we will, responding to Heidegger's lectures, draw our conclusions as to what an incisive view of technology may look like and how that view may help us find a new culture and illuminate the problems of global warming and global justice.

(4) REQUIREMENTS

a. Classroom Performance (one third of the course grade)

1. Toward the end of every other Tuesday, there will be a twenty minute test of three brief questions on the material covered in the preceding two weeks (not including the material of the Tuesday on which the test is given). You can make up a missed test prior to the next test. Otherwise you receive an F.

The first test is on September 13.

2. You can raise (but not lower) the overall test grade through class participation, asking for clarifications, asking questions of any kind, offering objections or comments, or by providing at the beginning of class a ten minute summary of the proceedings of the prior class meeting (give me a heads-up of two days).

b. Final (one sixth of the course grade)

The final is on Monday, December 19 at 10:10 AM.

It will consist of three questions on the material of the four preceding meetings (one third of the final) and an essay question (two thirds of the final).

c. Term Paper (half of the course grade)

Pick a particular issue that concerns you in the fields of science, technology, or culture, e.g., global warming, global justice, conservation, restoration, agriculture, wilderness, the distribution of prosperity, the machinery of the Internet, the status of the arts, the structure of the economy, and the like, and apply significant parts of what we have learned about science, technology, and culture. I'll be glad to help with the formulation of a topic.

The paper should be about 12 pp. long (3000 words), double-spaced, paginated, paper-clipped, the notes at the end of the paper; no outline or bibliography.

Follow any of the standard formats. The paper has to incorporate some secondary material, two or so articles, a book or two, or two or so chapters from a book. The emphasis of the paper, however, has to be on original reflection.

Outline due: October 18

Paper due: November 29

If you have a disability, please let me know so we can provide accommodations.