

History / Philosophy 4320

History of Scientific Thought
Spring, 2000

In this course we will study the development of scientific thought from Plato to Planck. The focus is on cosmology, physics, and evolution. The course is concerned chiefly with episodes in the history of science which raise philosophical questions.

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Books: Daniel Dennett, *Darwin's Dangerous Idea* (Simon & Schuster); Timothy Ferris, *Coming of Age in the Milky Way* (Anchor); Thomas Kuhn, *The Copernican Revolution* (Harvard); *Readings*, available on reserve at the Merrill Library. All are required.

Work: You are expected to write 2-page summaries of each week. Each summary is due on Monday of the following week (except for 1/17 and 2/21, which are holidays; in those weeks the summaries are due on 1/19 and 2/23, respectively). The summaries count equally toward your final grade. Late work will not receive a grade better than a "C". No tests.

Syllabus (tentative):

1. The ancient world.

Read Ferris, pp. 19-45, Kuhn pp. 1-99, and Plato and Aristotle in *Readings*. (1112 - 1128)

2. The Copernican revolution.

Read Ferris, pp. 61-82, and Kuhn, pp. 100-228. (1131 - 2111)

3. Newton and the mechanical universe.

Read Ferris, pp. 88-159, Kuhn, pp. 229-265, Galileo, Descartes, and Newton in *Readings*. (2114 - 313)

4. Einstein and relativity.

Read Ferris, pp. 177-204 and Einstein in *Readings*. (3/6 - 3/24)

5. Darwin.

Read Dennett. (3127 - 4121)

6. Quantum mechanics.

Read Ferris, pp. 285-366. (4124 - 4/28)