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Fall 9-1-2007

PHIL 240H.01 History and Philosophy of Science

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PHIL 240H/ HIST 240H: History & Philosophy of Science
Fall 2007
Prof. Stephen R. Grimm

SYLLABUS

COURSE DESCRIPTION

This course introduces students to issues in the philosophy of science via (a) a selection of readings from scientists' original works, and (b) contemporary reflections on the nature of science and scientific inquiry.

We will discuss issues such as the justification of scientific knowledge claims, relativism, and scientific progress. Our readings from the history of science will come mainly from the ancient world (esp. Aristotle) and from crucial early modern figures (such as Galileo, Bacon, Newton, and Descartes).

Examining the history of science provides material to test the general claims that philosophers make about the aims and methods of science. We will consider whether these aims and methods have changed throughout history. The course material will be accessible to non-scientists and scientific examples will be introduced in non-technical vocabulary.

TEXTS

The Scientific Background to Modern Philosophy, ed. Michael Matthews

The Scientific Revolution, Steven Shapin

The Structure of Scientific Revolutions, Thomas Kuhn

The Empirical Stance, Bas van Fraassen

various works on reserve

REQUIREMENTS

Regular quizzes; a midterm exam; a final exam

COURSE SCHEDULE

Weeks 1-2: Science in the Ancient World (Plato, Aristotle, Ptolemy)

Weeks 3-6: Crucial Figures in Early Modern Science (Galileo, Bacon, Newton, Descartes, etc.)

Weeks 7-8: Was There Really a Scientific Revolution? (Shapin)

Weeks 9-11: Kuhn on the Nature of Scientific Progress (Kuhn)

Weeks 12-14: Issues in Science and Religion (Van Fraassen)

Final Exam