

Historical & Philosophical Perspectives on Science

Phil 541S | Hist 577S | Lit 521S | Womenst 541S

Topic: The Invention of the Scientific Revolution



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TEXTS

1. Descartes, selections from Principles of Philosophy
2. Newton, Philosophical Writings
3. Ariew, editor, Correspondence: Leibniz-Clarke
4. Janiak, Newton as Philosopher
5. Châtelet, Selected Philosophical and Scientific Writings
6. Kuhn, Structure of Scientific Revolutions
7. Various excerpts posted online

REQUIREMENTS

Each student participates weekly in discussions; we may also have student presentations, depending on the size of the class and on student interest. Each student must submit a brief proposal for the research paper one month before the end of the semester (see below).

Lecture 1 Introduction: three conceptions of the Scientific Revolution

PART ONE: THE SCIENTIFIC REVOLUTION – 17TH CENTURY PHYSICS & PHILOSOPHY

Lecture 2 Cartesian metaphysical physics—Principles of Philosophy,
review part one, read part two

Lecture 3 Newton: Criticisms of Descartes—De Gravitatione; Janiak,
optional

Lecture 4 Newton: Physics & philosophy—excerpts from Principia;
Janiak, optional

Lecture 5 Leibniz: Criticisms of Descartes & metaphysical foundations
for physics

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Lecture 6 Leibniz-Newton debate: read the Leibniz-Clarke
correspondence

PART TWO: THE INVENTION OF THE SCIENTIFIC REVOLUTION – THE ENLIGHTENMENT

Lecture 7 Châtelet on unifying Leibniz & Newton; Karen Detlefsen,
Stanford Encyclopedia of Philosophy entry on Châtelet

Lecture 8 Châtelet's system: physics and metaphysics

Lecture 9 Enlightenment conceptions: Kant, preface & introduction,
Critique of Pure Reason; excerpts from Voltaire; etc.

Lecture 10 Hatfield, "Was the Scientific Revolution a revolution in
philosophy?" etc.

PART THREE: THE GENERALIZATION OF THE SCIENTIFIC REVOLUTION – THE 20TH CENTURY

Lecture 11 Research paper proposals due

Lecture 12 Kuhn, Structure of Scientific Revolutions, roughly first half

Lecture 13 Kuhn, Structure of Scientific Revolutions, roughly second half

Lecture 14 Make-up class

Lecture 15 Make-up class

Lecture 16 ALL PAPERS DUE