HPS 83100
HPS Colloquium  T  4:15pm–5:30pm (Howard)
1 Credit Hour
Graduate Students Only
Required course for HPS students in first and second years of the HPS Program.
Group discussion by the HPS faculty and students of a prominent recent work in the
history and philosophy of science and research presentation by visiting scholars.

HPS 83801
Philosophy of Science  TR  2:00pm–3:15pm (Howard)
3 Credit Hours
Graduate Students Only
A survey of major problems, movements, and thinkers in twentieth-century philosophy
of science. The course begins with a look at the historical background to logical
empiricism, its rise to prominence, and its early critics, such as Popper. After a study of
major problems in the neo-positivist tradition, such as confirmation, explanation, and
the nature of scientific laws, historicist critiques of neo-positivism, chiefly Kuhn’s will be
studied next, followed by a consideration of the realism-instrumentalism debate. The
course concludes with a brief look at new perspectives, such as social constructivism and
feminist philosophy of science. Readings: Thomas S. Kuhn, The Structure of Scientific
Revolutions, 2nd ed. Chicago: University of Chicago Press, 1970. Additional readings will
be made available on e-Reserve. Requirements: Students will write midterm and final
essay examinations and a fifteen-page term paper on a topic to be chosen in consultation
with the instructor.

HPS 93713
History of Optics  T  10:00pm–12:30pm (Goulding)
3 Credit Hours
Crosslist: HIST 93986, MI 60293
Graduate Students Only
This course concerns the history of optics from antiquity to the early modern period. The
term "optics" will be taken in the broadest possible sense. As well as studying
mathematical optics, catoptrics (mirrors, plane and curved), dioptrics (refraction), and
related disciplines through history, we will also look at such subjects as: illusion and
"natural magic," theories of perception and philosophies of light, the technology of lenses
and mirrors and their uses, astrology, natural philosophy, and theories of radial
influence, optics as a paradigmatic example of both continuity and revolutionary change
in the development of science, and modern scholarship on the changing role of the
observer.

HPS 93742
History of Economic Thought  MW  3:00pm–4:15pm (Mirowski)
Graduate Students Only

This course intends to ask how it is that we have arrived at this curious configuration of doctrines now called "economics" and, importantly, how differing modes of historical discourse tend to ratify us in our prejudices about our own possible involvement in this project. The course will begin in the eighteenth century with the rise of a self-conscious discipline, and take us through the stabilization of the modern orthodoxy in WWII. Effort will be made to discuss the shifting relationship of economics to the other sciences, natural and social. **Requirements:** A basic knowledge of economics (including introductory economics and preferably intermediate economics) will be required.

**HPS 93811**

**History of Philosophy of Science to 1750**  
**MW 1:30pm–2:45pm (Joy)**  
3  
Graduate Students Only  
This seminar focuses on changing conceptions of nature and of scientific knowledge from the Presocratics to the Enlightenment. It examines the origins of these conceptions in ancient Greek and Hellenistic thought and asks what happened to them in medieval and modern natural philosophy. Besides the earlier texts, we will discuss works by Descartes, Boyle, Newton, and Hume. **Requirements:** Seminar requirements include class presentations and two medium-length papers.

**HPS 93871**

**Historical & Conceptional Foundation of SpaceTime Theory**  
**MW 11:45am–1:00pm**  
3  
**Crosslist: PHIL 93871**  
Graduate Students Only  
This seminar is an historically organized examination of major issues in the philosophical foundations of space-time theory. The roots of many contemporary debates are found in the spatial and temporal framework introduced by Newton to solve problems in the Cartesian theory of motion and the newly emerging theory of dynamics. We begin with a brief review of this historical background, before turning our attention to the main topics of this course: Einstein’s special and general theories of relativity. We consider the advent of these in their historical context, the contemporary reaction to both theories, and the present day situation. Key conceptual issues, such as conventionality of simultaneity, the ‘hole argument’, and the significance of general covariance, will be considered from both a historical and a modern-day perspective. Reading will include both primary and secondary sources. The course will not assume advanced training in physics. Each member of the seminar will be expected to present material to the seminar and to write a term paper on some topic arising from the readings or seminar discussions.

**HPS 78599**

**Thesis Direction**  
(Howard)

Thesis direction for terminating Master’s students.

**HPS 98699**

**Research and Dissertation**  
(Howard)
Dissertation research for Ph.D. students.

HPS 98700

Nonresident Dissertation Research (Howard)

HPS 78600

Non-resident Thesis Direction (Howard)

HPS 96697

Directed Readings

Section Professor
01 Sloan, P.
02 Crowe, M.
03 Jauernig, A.
04 Shrader-Frechette, K.
05 Manier, A. E.
06 Goulding, R.
07 Mirowski, P.
08 Hamlin, C.
09 Stapleford, T.
10 Ramsey, G.
11 Joy, L.
12 Turner, J.
13 Howard, D.
14 Bigi, I.
15 Ashley, J. M.
16 Fox, C.
17 Gutting, G.
18 Kourany, J.
19 Brading, K.
20 McKim, V.
21 Coleman
22 Staff