

Syllabus

Philosophy 471: Contemporary Philosophy of Science

Fall 2006

Description: This course will discuss recent work on the nature of scientific laws, causation, explanation, theories, probability, and confirmation. The works discussed are listed on the reverse of this page.

Prerequisite: Students should have taken a previous course in philosophy but prior knowledge of science or philosophy of science is not required.

Classes: 1:00–1:50 MWF in G30 Foreign Language Building.

Professor: Patrick Maher, e-mail patrick@maher1.net, phone 333–0253, office 219A Gregory Hall, office hours MW 2–3 or by appointment.

Course web site: <http://patrick.maher1.net/471>. Contains a schedule of classes and the lecture notes.

Textbook: None required.

Exams: There will be three 50-minute exams, each one covering only the material since the previous exam. These will be short answer exams and the questions will be taken from the ones discussed in lectures and included in the lecture notes. See the course web site for the dates of the exams and the policy on make-up exams. For undergraduates, each exam counts for 1/3 of the course grade.

Graduate students: You write an essay in addition to doing the three exams. The essay and the exams each count for 1/4 of the grade. Essay instructions are on the course web site.

Grading scale:

A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-
95–100	90–94	85–89	80–84	75–79	70–74	65–69	60–64	55–59	50–54	45–49	40–44

If your answer to an exam question is about 75% complete and accurate, you will get about 75% the points for it, i.e., a B-/B grade. If it is about 50% complete and accurate, you will get about 50% of the points for it, i.e., a D/D+ grade. Similarly in other cases.

Works discussed:

1. Marc Lange, *Natural Laws in Scientific Practice*, Oxford University Press 2000.
2. James Woodward, *Making Things Happen: A Theory of Causal Explanation*, Oxford University Press 2003.
3. A selection of shorter works dealing with theories:
 - (a) Rudolf Carnap, *An Introduction to the Philosophy of Science*, Dover 1995 (first published 1966), Part V.
 - (b) David Lewis, "How to Define Theoretical Terms," *Journal of Philosophy* 67 (1970), 427–446.
 - (c) David Papineau, "Theory-Dependent Terms," *Philosophy of Science* 63 (1996), 1–20.
4. Colin Howson and Peter Urbach, *Scientific Reasoning: The Bayesian Approach*, third edition, Open Court 2006.
5. Patrick Maher, "Confirmation Theory," in *The Encyclopedia of Philosophy*, second edition, Macmillan 2005.