

PHILOSOPHY OF SCIENCE

PHILOSOPHY 3550

FALL 2006

Course Description: Science appears to be extraordinarily successful in two crucial respects. First, science apparently serves as an extremely reliable vehicle for arriving at the *truth* (as contrasted with astrology or palm reading). Second, the methodology of science seems eminently *rational* (again as opposed to the methodologies of astrology or palm reading). Philosophers have been quite interested in these two apparent virtues of science. Some philosophers think that the two virtues are illusory and that, upon reflection, science is not significantly superior to astrology or palm reading. Some philosophers even reject concepts like truth and rationality as somehow bogus or illegitimate. Our basic goal in this course is to survey 20th century philosophy of science as centered upon such disputes. To this end, our focus will be upon the following question: are truth and rationality genuine features of scientific inquiry, or are they mere illusions?

Lecture: Tuesday 3:00p-5:30p Knaus 3502

Professor: Dr. Fritz Allhoff
3006 Moore Hall; Tuesday 12:30-3:00 and by appointment
fritz.allhoff@wmich.edu, 387-4503 (w)

T.A.: Mr. Trin Turner
3035 Moore Hall; Thursday 12:30-2:30 and by appointment
trinsturner@gmail.com

Texts: Peter Godfrey-Smith, *Theory and Reality: An Introduction to the Philosophy of Science* (Chicago: University of Chicago Press, 2003).
Thomas S. Kuhn, *The Structure of Scientific Revolutions*, 3rd ed. (Chicago: University of Chicago Press, 1996).
Optional: Richard DeWitt, *Worldviews: An Introduction to the History and Philosophy of Science* (Oxford: Blackwell Publishing, 2004).

Grading:	Take-home Assignment #1	20%	(due in class on October 3)
	Take-home Assignment #2	25%	(due in class on October 24)
	Take-home Assignment #3	25%	(due to T.A.'s mailbox by November 21 at noon)
	Final Exam	30%	(in class Wednesday, December 13, 1230p-230p)

Take-home assignments: There will be three take-home assignments over the course of the semester; the assignments will be distributed one week before they are due. Students may use their class notes and class texts to complete these assignments, *but they may not use other outside sources (including the internet)*. Assignments should be typed for submission.

Final Exam: The final exam will be essay style (there may also be short answer questions) and students should bring a blue book. The final exam will be cumulative, though it is also likely to emphasize material since the third take-home assignment. Exam reviews (either during or outside of class) will be held, and exam review questions will be distributed on the last day of class.

Email: Course announcements (including extra credit opportunities) will be emailed to your *.wmich.edu account; students are requested both to maintain and to monitor such an account.

Statement on Academic Honesty: You are responsible for making yourself aware of and understanding the policies and procedures in the Undergraduate (pp. 274-276) [Graduate (pp. 25-27)] Catalog that pertain to Academic Honesty. These policies include cheating, fabrication, falsification and forgery, multiple submission, plagiarism, complicity and computer misuse. If there is reason to believe you have been involved in academic dishonesty, you will be referred to the Office of Student Conduct. You will be given the opportunity to review the charge(s). If you believe you are not responsible, you will have the opportunity for a hearing. You should consult with me if you are uncertain about an issue of academic honesty prior to the submission of an assignment or test.

TENTATIVE LECTURE SCHEDULE AND READING ASSIGNMENTS

1	9/5	Welcome	
2	9/12	Introduction to the Philosophy of Science	<i>Theory and Reality (T&R)</i> : chapter 1
3	9/19	Logic Plus Empiricism	<i>T&R</i> : chapter 2
4	9/26	Induction and Confirmation Assignment #1 Distributed	<i>T&R</i> : chapter 3
5	10/3	Popper: Conjecture and Refutation Assignment #1 Due	<i>T&R</i> : chapter 4
6	10/10	Kuhn and Normal Science	<i>The Structure of Scientific Revolutions (SSR)</i> : chapters 2-8 <i>T&R</i> : chapter 5
7	10/17	Kuhn and Revolutionary Science Assignment #2 Distributed	<i>SSR</i> : chapters 9-13 <i>T&R</i> : chapter 6
8	10/24	Lakatos, Laudan, and Feyerabend Assignment #2 Due	<i>SSR</i> : postscript <i>T&R</i> : chapter 7
9	10/31	Naturalistic Philosophy in Theory and Practice	<i>T&R</i> : chapter 10
10	11/7	Naturalism and the Social Structure of Science	<i>T&R</i> : chapter 11
11	11/14	Scientific Realism Assignment #3 Distributed	<i>T&R</i> : chapter 12
12	11/21	Thanksgiving Week (no class) Assignment #3 Due (to TA's mailbox by noon)	
13	11/28	Explanation	<i>T&R</i> : chapter 13
14	12/5	Empiricism, Naturalism, and Scientific Realism?	<i>T&R</i> : chapter 15
Final Exam: Wednesday, December 13, 1230p-230p			