PHILOSOPHY 3550 (ONLINE)
PHILOSOPHY OF SCIENCE
SUMMER 2015

Course Description: Science appears to be extraordinarily successful is 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?

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Course Website: https://elearning.wmich.edu/

Texts:
Peter Godfrey-Smith, *Theory and Reality: An Introduction to the Philosophy of Science* (Chicago: University of Chicago Press, 2003).
Timothy McGrew, Marc Alspector-Kelly, and Fritz Allhoff, *Philosophy of Science: An Historical Anthology* (Oxford: Blackwell Publishing, 2009).
Optional: Richard DeWitt, *Worldviews: An Introduction to the History and Philosophy of Science* (Oxford: Blackwell Publishing, 2004).

Overview: This course will be conducted online and has various components; those components will be described in the rest of the syllabus. Each week, students will complete the below-listed reading assignments and then read lectures that have posted about them. Lectures will be posted on Monday and Wednesday at 1200a of each week and will remain visible for the rest of the course. (Students should do the readings first as the lectures will analyze and evaluate them.) Following the assimilation of the readings and lectures, students will take an online quiz. There will also be four writing assignments.

Grading:

Weekly Quizzes	20%
Writing Assignment #1	20%
Writing Assignment #2	20%
Writing Assignment #3	20%
Writing Assignment #4	20%

Weekly Quizzes: Every Monday and Wednesday at 1200a—except for when writing assignments are due—a quiz will be released from the course website. For each student, 10 multiple choice questions will be randomly selected from a bank of questions that have been submitted. These quizzes should be taken without any study materials present, and 15 minutes will be available to complete them. The quizzes released on Monday at 1200a must be completed by Tuesday at 1159p and the quizzes released on Wednesday at 1200a must be completed by Thursday at 1159p; after these times, they will no longer be available. Students should take the quiz after they have read the assigned readings corresponding lectures.

Each student's lowest two quiz grades, including those for missed quizzes, will be dropped. For this reason, no further allowances will be made for personal reasons or computer issues that should arise. (I.e., there are no extensions on quizzes, nor will they be reopened under any circumstances.)

Writing Assignments: The lecture schedule below indicates when the writing assignments are due. Assignments submitted up to 48 hours late will be penalized one letter grade (e.g., A to BA). Assignments submitted at any later time will be penalized two letter grades (e.g., A to B). (The last paper cannot be submitted late.) Extensions will not be offered, nor should they be requested.

You are allowed to use your course notes as well as your course readings in the development of your answers. No other sources—including collaboration with others—should be incorporated into this assignment; the incorporation of any uncited sources will be considered plagiarism. Citations should be made to course readings as appropriate, with citations given to the author and original page of publication.

Technical Support: For any technical support pertaining to the course (including course readings), contact EUP by phone at (269) 387-2847 or by email at atis-support@wmich.edu. Neither the professor nor graduate assistant is able to provide technical support.

Email: All correspondence regarding this course will either be sent to WMU email accounts (from GoWMU) or else posted to the e-learning environment. Students are required to regularly check their WMU accounts, and all correspondence from them should be sent from those accounts (per university policy). Emails to the instructor or GA should be sent to them directly and not posted as mail through e-learning; this will ensure a faster response since e-learning mail has to be checked separately from university email.

Statement on Academic Honesty: You are responsible for making yourself aware of and understanding the policies and procedures in the Undergraduate Catalog that pertain to Academic Honesty (pp. 274-276). 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.

TOPICS AND READING ASSIGNMENTS

MODULE	TOPIC	READING	OPEN	CLOSE
1	Introduction to the Philosophy of Science	*Theory and Reality* (*T&R*): chapter 1 *Philosophy of Science* (*PS)*: Volume Introduction, Part II Introduction	5/11	5/12
2	Logic Plus Empiricism	*T&R*: chapter 2 *PS*: Unit 5 Introduction (§§1-2), Unit 6 Introduction (§§4-6), §4.13 (Duhem)	5/13	5/14
3	Induction and Confirmation	*T&R*: chapter 3 *PS*: Unit 6 Introduction (§§2-3), §6.2 (Hempel), §6.4 (Goodman)	5/18	5/19
4	Popper: Conjecture and Refutation	*T&R*: chapter 4 *PS*: Unit 7 Introduction (§§1-3), §7.1 (Popper)	5/20	5/21
-	**Writing Assignment #1 due May 26 at 1159p**		-	-
5	Kuhn and Normal Science	*T&R*: chapter 5 *PS*: Unit 7 Introduction (§§4-7), §7.2 (Kuhn; pp. 490-501)	5/27	5/28
6	Kuhn and Revolutionary Science	*T&R*: chapter 6 *PS:* §7.2 (Kuhn; pp. 501-509)	6/1	6/2
7	Lakatos, Laudan, and Feyerabend	*T&R*: chapter 7 *PS:* §7.2 (Kuhn; pp. 509-513), Unit 7 Introduction (§§8-9), §7.3 (Lakatos)	6/3	6/4
-	**Writing Assignment #2 due June 9 at 1159p**		-	-
8	Naturalistic Philosophy in Theory and Practice	*T&R*: chapter 10 *PS*: Unit 6 Introduction (§8), §6.6 (Hanson)	6/10	6/11

9	Naturalism and the Social Structure of Science	*T&R*: chapter 11	6/15	6/16
10	Scientific Realism	*T&R*: chapter 12 *PS:* Unit 9 Introduction (§§1-4, 7-10), §9.3 (van Fraaassen)	6/17	6/18
-	**Writing Assignment #3 due June 23 at 1159p**		-	-
11	Explanation	*T&R*: chapter 13 *PS:* Unit 5 Introduction (§§3-4), §5.2, Unit 8 Introduction	6/24	6/25
12	Empiricism, Naturalism, and Scientific Realism?	*T&R*: chapter 15	6/29	6/30
-	**Writing Assignment #4 due July 3 at 1159p**		-	-