PHIL 220A01 - Fall 2019
Introduction to Philosophy of Science

Instructor: Eric Hochstein
CRN: 12534
Time: Tuesday/Wednesday/Friday 1:30 PM – 2:20 PM
Place: TBD
Office Hours (in Clearihue B330): Wednesday, 3:00-5:00 pm; and by appointment
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Description: Science is considered to be our best and most effective way of learning about the world. But what exactly differentiates science from non-science, and what are its limits? In this course, we will explore fundamental philosophical questions regarding the nature of science, and how it relates to more traditional philosophical questions regarding metaphysics and epistemology. More specifically, we will explore topics like: what is the demarcation between science from non-science? Does science get closer to truth as it progresses? Can the theories of one science (e.g. psychology) be reduced to theories of another (e.g. neuroscience)?

Structure: The course comprises three lectures (50 min) per week, the contents of which will be based on the course readings. The course will proceed primarily through lectures and discussions.

Readings for the class will all be uploaded onto the course website.

Evaluation: The course will be graded as follows:

- 2 mid-terms, worth 15% and 25%
- A term paper 25% (~10 double-spaced pages);
- A final examination worth 35%.

Policy on assignments, tests, and term papers: The term papers are due in class, in hard copy, on the announced deadline. Late papers will receive a deduction of 5% per day until handed in. Any exam missed without documentation of illness or family emergency will receive a 0.

Important to Note:

80 – 84	A-	7

An A+, A, or A- is earned by work which is technically superior, shows mastery of the subject matter, and in the case of an A+ offers original insight and/or goes beyond course expectations. Normally achieved by a minority of students

77 – 79	B+	6
73 – 76	B	5
70 – 72	B-	4

A B+, B, or B- is earned by work that indicates a good comprehension of the course material, a good command of the skills needed to work with the course material, and the student's full engagement with the course requirements and activities. A B represents a more complex understanding and/or application of the course material. Normally achieved by the largest number of students.

65 – 69	C+	3
60 – 64	C	2

A C+ or C is earned by work that indicates an adequate comprehension of the course material and the skills needed to work with the course material and that indicates the student has met the basic requirements for completing assigned work and/or participating in class activities

50 – 59	D	1

A D is earned by work that indicates minimal command of the course materials and/or minimal participation in class activities that is worthy of course credit toward the degree.

0 – 49	F	0

F is earned by work, which after the completion of course requirements, is inadequate and unworthy of course credit towards the degree.

Interpretation of these grade definitions is up to the discretion of the instructor. If you receive a grade during the course that you believe is unfair, please begin by discussing the matter with the instructor (or TA) in a respectful, open-minded manner. Rest assured that if you still believe the grade you received is unfair you can appeal the matter to the chair of the depar(w)9 (p)5 (r)-2B1 (ha)-1 (- (us)-1 (s)( )Tj g3)961 (t)-3 (e6de)-1 (you 4)-2 (i)3 (e)-1

Final examinations are the property of Uvic and are not returned. They are available for viewing at the Records Office according to Uvic procedures and regulations (pp. 49-51 of the calendar).

Uvic is committed to providing a safe, supportive learning environment for all members. Further information regarding Uvic policies on human rights, equity, discrimination and harassment are located in the Uvic calendar (p. 15), but if you have any particular concerns in our course please do not hesitate to contact me.

Tentative Schedule of Readings:

Week 1 (Sep 8 & 10): Introduction and Basics
No Readings for This Week

Week 2 (Sep 14, 15 & 17): Demarcating Science from Non-Science
Readings
- Popper, K. "Science: Conjectures and Refutations", Read Section 1 & 2 (pages 1-10)
- Thagard, P. "Why Astrology Is a Pseudoscience",

Week 3: (Sep 21, 22 & 24): Scientific Explanation & The D-N Account
Readings:
- Hempel, C. & Oppenheim, P. "Studies in The Logic of Explanation", Read Part I (pages 135-146)

Week 4 (Sep 28, 29 & Oct 1): Scientific Explanation & The Mechanist Account
Readings:
- Craver (2006) "When Mechanistic Models Explain"

Week 5 (Oct 5, 6 & 8): Scientific Realism vs Scientific Anti-Realism (Part 1)
Midterm 1: Oct 5th
Readings:
- Okasha, "Realism & Anti-Realism"
- Hacking, I. "What is Scientific Realism?"

Week 6 (Oct 12, 13 & 15): Scientific Realism vs Scientific Anti-Realism (Part 2)
Readings:
- Van Fraassen, B. "Arguments Concerning Scientific Realism"

Week 7 (Oct 19, 20 & 22): Reductionism vs Anti-Reductionism (Part 1)
Term Paper Assigned: Oct 15
Readings:
- Churchlands, "Intertheoretic Reduction: A Neuroscientist's Field Guide"

Week 8 (Oct 26, 27 & 29): Reductionism vs Anti-Reductionism (Part 2)

Readings:

- Fodor, J.“Special Sciences”

Week 9 (Nov 2, 3 & 5):Science and the Search for Laws

Readings:

- Cartwright, N. “Do the Laws of Physics State the Facts?”