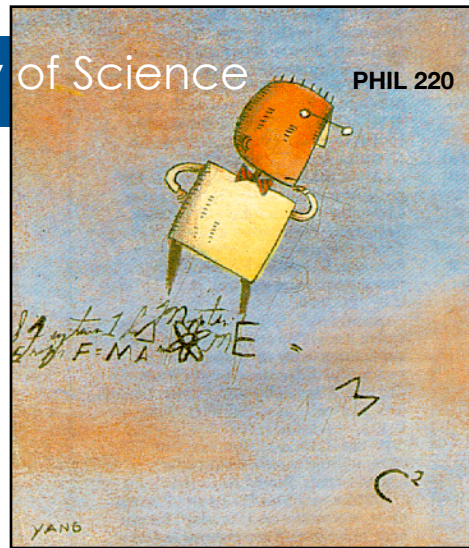


Instructor: Karen Brown
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Office: Clearihue B314
Office Hours: Wednesdays 2:00 - 3:00
 and by appointment



Course Description

Science is widely revered as a seemingly endless source of reliable, objective knowledge about the world we live in. But philosophers have a lot of questions about the nature of science, its concepts, its methods, its goals and its role in our society. This course takes a philosophical look at science starting with the fundamental question, what exactly is science? What is the difference between science and pseudo science? Are scientific observations ever purely objective? What counts as a scientific explanation of a phenomenon? What does it take to confirm a theory? Does science succeed by giving us a true account of how the world really is or is it just a collection of useful ways of thinking about the world? What is a natural law; what is evidence; how are data and theories related? How does science change over time? What counts as scientific progress? How do the values and politics of scientists and the society at large influence scientific practice and results? What's the relationship between religion and science?

Throughout the course we will practice applying the accounts and critiques of science we're encountering to cases from the history of science. The aim will be both to develop a better understanding of scientific work and to evaluate the theories we have been exploring.

Texts

James Ladyman. **Understanding Philosophy of Science.** Routledge. 2002.
 [UPS on the course schedule]

All additional readings, course materials, information and updates will be available on the Coursespaces page.

To access Coursespaces, go to coursespaces.uvic.ca and log in with your regular network ID.

Course Work

Group Case Study I	10%
Exam One	25%
Group Case Study II	10%
Group Case Study III	15%
Exam Two	15%
Take Home Final Exam	25%

Introduction to Philosophy of Science

Exams One and Two will be in-class exams covering material from the readings, lectures and class discussion. Exam One will be a combination of short answer questions and essay questions. Exam Two will be all short answer questions. The take home Final Exam will consist of essay questions and one case study.

The Group Case Studies will give you an opportunity to apply and evaluate the theories of science that we have been reading about. Each one will focus on the case of one shift in our scientific understanding of the world. Each group will produce one short document using a wiki on the Coursespaces page. Detailed instructions can be found on Coursespaces.

Missed Exams

If you miss an exam due to a documented illness or accident contact me immediately to schedule a make-up. If you miss an exam without a documented illness or accident you will receive a score of 0.

Missed Group Case Study Days

If you miss one of the days when we are working on the case studies contact YOUR GROUP immediately to determine how you can still contribute.

Grading

Grades for the course will be assigned using the standard university scheme:

Percentage	Grade
90 - 100	A+
85 - 89	A
80 - 84	A-
77 - 79	B+
73 - 76	B
70 - 72	B-
65 - 69	C+
60 - 64	C
50 - 59	D
Below 50	F

For N and DEF status, please see Department of Philosophy Policies posted in glass cabinets adjacent to CLE B315.

Information regarding accommodation of religious observance can be located in the UVIC Calendar at <http://web.uvic.ca/calendar2017-01/general/policies.html#pageTop>

Academic Integrity

Violations of academic integrity, including plagiarism, cheating on exams and aiding others to cheat, will be taken very seriously in this course. Students are responsible for making themselves familiar with the university policy on academic integrity which you can read here: <http://web.uvic.ca/calendar2017-01/undergrad/info/regulations/academic-integrity.html#>

Introduction to Philosophy of Science

Course Schedule

January 4, 6	UPS Introduction Cox and Forshaw "Quantum Physics is not Difficult"
January 10, 11, 13	Einstein "On the Method of Theoretical Physics" UPS Chapter 1: Induction and Inductivism
January 17, 18	UPS Chapter 2: The Problem of Induction and Other Problems with Inductivism
January 20, 24, 25	UPS Chapter 3: Falsificationism
January 27, 31	Group Case Study — Spontaneous Generation
February 1	E X A M O N E
February 3, 7, 8	UPS Chapter 4: Revolutions and Rationality
February 10	Lakatos "The Methodology of Scientific Research Programmes"
<i>Reading Break — 13 February through 17 February</i>	
February 21, 22	Laudan "Science at the Bar" Ruse "Pro Judice" Behe "Reply to My Critics"
February 24, 28	Group Case Study — Phlogiston
March 1	Feyerabend from <i>Against Method</i>
March 3, 7	Hubbard "Science, Facts, and Feminism"
March 8, 10	UPS Chapter 5: Scientific Realism
March 14, 15	UPS Chapter 6: Underdetermination
March 17, 21, 22	UPS Chapter 7: Explanation and Inference
March 24, 28	Group Case Study — Plate Tectonics
March 29, 31	UPS Chapter 8: Realism about What?
April 4	E X A M T W O
April 11	T a k e H o m e F I N A L E X A M due at 5 p.m.

Any changes to the schedule will be announced in class and posted on the Coursespaces page.