PHIL 2301: Introduction to the Philosophy of Science

Summer 2018
Carleton University
Department of Philosophy

Instructor: Dr. Kevin deLaplante
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Meeting Dates: May 07, 2018 - June 19, 2018
Days: Mon Wed
Time: 11:35am - 2:25pm
Classroom: Azrieli Pavilion 132
Office Hours: Wed 3:00 - 4:00 PM
Office: 3A38 Patterson Hall

Texts: All assignments, readings and other course materials will be made available in class. There is no textbook to purchase. Details can be found at https://kevindelaplante.com/philsci

Prerequisite: a course in philosophy or second-year standing

Catalog Description:

Students in this course will be introduced to main questions, problems, and approaches that philosophers of science have raised about science, as analytical philosophy of science took its present shape (from roughly 1950 to present). Thus, while important historical figures may be discussed incidentally, readings will be drawn primarily from contemporary philosophy of science. Key concepts to be discussed include theory, inference, and explanation. Central philosophical questions will be about science, its aims, and methods, such as, 'How are theories evaluated?' 'How does science explain anything?' 'Does science aim for truth?' The goal of the course is to stimulate students' thinking about the chosen questions and provoke them to form views about them. The objective is not merely for them to understand how philosophers and others have answered these questions, but to understand and evaluate their arguments, recognizing their strengths and weaknesses, possibly trying to improve upon them. Students should be encouraged to formulate their own arguments and defend them, as far as they are able.

Organizing themes for this course:

The course is broken into three units:

1. the **VOCABULARY** of science
2. the **LOGIC** of science
3. the **LIMITS** of science

1. The Vocabulary of Science. This unit will introduce key concepts in the philosophy of science through examination of debates over the meanings of key scientific terms, such as **theory**, **fact**, **hypothesis**, **law**, and **model.**

2. The Logic of Science. This unit will give an historical introduction to the various ways that scientists and philosophers have attempted to describe the fundamental **l**ogical features of scientific reasoning. Through this topic we'll examine the relationship between the *scientific virtues* of a theory and the *truth* of a theory.

3. The Limits of Science. Is all knowledge worthy of the name *scientific* knowledge? Or are there legitimate domains of knowledge that are beyond the reach of science?
In this unit we'll examine this debate, and look at some case studies where the issue is important (such as the relationship between religious and scientific belief, and the debate over the scientific status of "intelligent design").

Evaluation Components and Grading Scheme: Summary

Attendance:	5%
In-class Tests: 2 x 20% =	40%
In-Class Quizzes:	20%
Writing Assignments:	15%
Final Exam (cumulative):	20%
Total:	100%

Number to Letter Transfer

All final grades at Carleton are letter grades. I will be issuing numerical grades on course elements, and calculating a final grade out of 100. Here is the standard conversion used at Carleton.

A+	90-100
A	85-89
A-	80-84
B+	77-79
B	73-76
B-	70-72
C+	67-69
C	63-66
C-	60-62
D+	57-59
D	53-56

D-	50-52
F	0-49