

# INTRODUCTION TO PHILOSOPHY OF SCIENCE

Fall 2013

Instructor: Daniel Lim

Schedule: Mondays, 14:00-16:30 (10/14/2013 – 11/18/2013)

Location: Room 3307

Office Hours: Mondays, 12:45-13:45 (409 Renwen)

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## I. COURSE SYNOPSIS

This course surveys the major issues and positions that have come to define the philosophy of science in the contemporary Western tradition. In trying to answer the broad question: “what is ‘science?’” we will be considering answers to a number of more specific questions including: what is the distinction between science and pseudo-science? What is the nature of scientific theories? Is science objective? Is science deeply influenced by social and cultural factors? What is the nature of scientific knowledge? How are theories confirmed or falsified? What is the nature of scientific explanation? What is causation?

## II. READINGS AND BIBLIOGRAPHY

\* Ladyman, James. *Understanding Philosophy of Science*

\* Losee, John. *A Historical Introduction to the Philosophy of Science*

Godfrey-Smith, Peter. *Theory and Reality: An Introduction to the Philosophy of Science.*

Okasha, Samir. *Philosophy of Science: A Very Short Introduction.*

## III. GENERAL REQUIREMENTS

Most of the lectures will be devoted to a detailed discussion of an assigned article or book chapter. Everyone is expected to study the article assigned for that week and come prepared to discuss and raise questions about them. Active participation will be crucial to your understanding of the issues in the course and for success in the course.

Plagiarism is a serious academic offense and has serious consequences for students’ grades and future careers. Plagiarism or academic dishonesty of any kind is not tolerated and will result in disciplinary action. Instances of academic dishonesty include submitting a paper downloaded from the internet or any work of which you are not the author, copying material from any source without a citation, and using someone else’s language, research or ideas without acknowledgment. If you are unclear as to whether or not something constitutes plagiarism, or if you require assistance properly citing the work of others in your coursework, please do not hesitate to contact me.

## IV. EXAMINATION

You will be examined on the material covered in class at the end of the semester. The exam will consist of questions to be answered in the form of short essays. Student responses will be scored based on clarity, succinctness, accuracy, and grammar.

## V. TENTATIVE COURSE OUTLINE

**Lecture 1: History of Science**

Oct. 14

\* Losee, John. *Historical Introduction to Philosophy of Science*, ch. 1-8

**Lecture 2: Hume and Induction**

Oct. 21

\* Ladyman, James. *Understanding Philosophy of Science*, ch. 2  
Godfrey-Smith, Peter. *Theory and Reality*, ch. 3  
Okasha, Samir. *Philosophy of Science*, ch. 2

**Lecture 3: Popper and Falsification**

Oct. 28

\* Ladyman, James. *Understanding Philosophy of Science*, ch. 3  
Godfrey-Smith, Peter. *Theory and Reality*, ch. 1, 2, 4  
Okasha, Samir. *Philosophy of Science*, ch. 1

**Lecture 4: Kuhn and the Historical Challenge**

Nov. 4

\* Ladyman, James. *Understanding Philosophy of Science*, ch. 4  
Godfrey-Smith, Peter. *Theory and Reality*, chs. 6, 8  
Okasha, Samir. *Philosophy of Science*, ch. 5

**Lecture 5: Scientific Realism and Underdetermination**

Nov. 11

\* Ladyman, James. *Understanding Philosophy of Science*, ch. 5-6  
Godfrey-Smith, Peter. *Theory and Reality*, ch. 12  
Okasha, Samir. *Philosophy of Science*, ch. 4

**Lecture 6: Explanation and Inference**

Nov. 18

\* Ladyman, James. *Understanding Philosophy of Science*, ch. 7-8  
Godfrey-Smith, Peter. *Theory and Reality*, chs. 13, 14  
Okasha, Samir. *Philosophy of Science*, ch. 3