# Philosophy of Science
## Fall 2000

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<tr>
<th>Date</th>
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<th>Readings and References</th>
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<td>August 31</td>
<td><em>An Experiment and its Consequences</em></td>
<td>Klotz “The N-Ray Affair” <em>Scientific American</em></td>
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| September 7| *Confirmation, Refutation and Theory Choice*| Popper “The Problem of Induction”  
Goodman “The New Riddle of Induction”  
Earman and Salmon “The Confirmation of Scientific Hypotheses” parts I and II (from *Introduction to the Philosophy of Science* edited by Salmon et. al., 1992) |
| September 14|                                            | Kuhn: Readings from *The Structure of Scientific Revolutions* and “Objectivity, Value Judgment, and Theory Choice” |
| September 21|                                            | Earman and Salmon “The Confirmation of Scientific Hypotheses” parts III and IV  
Salmon “Rationality and Objectivity in Science or Tom Kuhn Meets Tom Bayes” |
| September 28| *Underdetermination and Objectivity*       | Duhem “Physical Theory and Experiment”, *Aim and Structure of Physical Theory*  
Quine “Two Dogmas of Empiricism” |
| October 5   |                                            | Woodward and Bogen “Saving the Phenomena”                                                |
| October 12  | *Realism*                                   | Hempel “The Theoretician’s Dilemma”                                                     |
| October 19  |                                            | Van Fraassen “Arguments Concerning Scientific Realism”                                   |
| October 26  |                                            | Hacking “Experimentation and Scientific Realism”  
Fine “The Natural Ontological Attitude”                                                   |
| November 2  |                                            | **No Class – PSA Meeting in Vancouver**                                                   |
| November 9  | *Explanation*                              | Wesley Salmon “Explanation” (from *Introduction to the Philosophy of Science* edited by Salmon et. al., 1992)  
Hempel “Laws and Their Role in Scientific Explanation”                                     |
| November 16 |                                            | Scriven “Explanations, Predictions, and Laws”  
Cartwright “The Truth Doesn’t Explain Much”                                               |
| November 23 |                                            | **Thanksgiving**                                                                          |
### November 30

**Laws**

Dretske “Laws of Nature”
Mellor “Necessities and Universals in Natural Laws”
Cartwright “Do the Laws of Physics State the Facts?”

### December 7

**Is there more to science than reason and experience? N-rays revisited**

Ashmore “The Theatre of the Blind: Starring a Promethean Prankster, a Phoney Phenomenon, a Prism, a Pocket, and a Piece of Wood”, *Social Studies of Science* Vol. 23 (1993) 67-106,

### December 14

In-class Final Exam

The readings will appear in the seminar box in CL 1017. You might want to look through *Introduction to the Philosophy of Science* edited by Salmon et. al., 1992, and *Philosophy of Science The Central Issues*, edited by Curd and Cover 1998 from which a number of the readings are drawn.

You will be required to write 6 short essays (3 pages or so) on the readings every other week (beginning September 7). The class will be arbitrarily divided into two and ½ will write essays for each week. There is also an in-class Final Exam.