What kind of knowledge, if any, science reveals of the physical world? This question has preoccupied the minds of many eminent thinkers. Answers to it are typically classified as either realist or anti-realist. The aim of the course is to probe some of the most important of these answers. We will be examining a number of positions, e.g. logical positivism, constructive empiricism, entity realism, structural realism, and social constructivism. Among other things, we will be asking: What is the relation between observation and theory? Is the distinction between observables and unobservables warranted? Do we have reason to be selective realists? What is the role of explanation in scientific inferences? Are there always empirically equivalent rivals to any given theory? Does anything survive scientific revolutions? What is the import of history and sociology in the philosophy of science?

Main Textbook

General Surveys:

Coursework:
- One presentation (about 20 minutes) on one of the essential readings. [3 credits]
- One essay (about 2,500 words), deadline 31/01/07. [3 credits]

NB: Presentations will be assigned on the first week. Suggested essay topics will be distributed in December.

WEEK 1: Introduction and Presentation Assignments

WEEK 2: Logical Positivism

Essential Reading:

Further Reading:
WEEK 3: Scientific Revolutions

**Essential Reading:**

**Further Reading:**

WEEK 4: Inference to the Best Explanation

**Essential Reading:**

**Further Reading:**

WEEK 5: Pessimistic Meta-Induction

**Essential Reading:**

**Further Reading:**

WEEK 6: Convergent Realism Revisited

**Essential Reading:**

**Further Reading:**

WEEK 7: Observation and Theory

Essential Reading:

Further Reading:

WEEK 8: Constructive Empiricism I

Essential Reading:

Further Reading:

WEEK 9: Constructive Empiricism II

Essential Reading:

Further Reading:

WEEK 10: Underdetermination of Theories by Evidence

Essential Reading:

Further Reading:

WEEK 11: Entity Realism I

Essential Reading:

Further Reading:

WEEK 12: Entity Realism II

Essential Reading:

Further Reading:

WEEK 13: Structural Realism I

Essential Reading:

Further Reading:
WEEK 14: Structural Realism II

Essential Reading:

Further Reading:

WEEK 15: Social Constructivism

Essential Reading:

Further Reading: