Unit 1: What Is Philosophy of Science?

“Philosophy of science is about as useful to scientists as ornithology is to birds.” [1]

Of all the intellectual disciplines, the sciences make the strongest claims to provide us with knowledge of the way the world is. But how does science work? What do scientists do that makes their research particularly worthy of our attention? Why do they pursue some inquiries rather than others? And does science really live up to its claims to provide us with objective and rational knowledge? Answering these questions involves attention to scientific practice and the results of scientific research, as well as familiarity with past and present episodes of scientific inquiry. But beyond such sociological and historical information, answering these questions requires subsuming the myriad details of scientific research and practice under general concepts and judging them in light of evaluative norms. These further tasks fall within the province of the philosophy of science.


Unit 1 Time Advisory
This unit should take approximately 7 hours to complete.

☐ Subunit 1.1: 2 hours

☐ Subunit 1.2: 2 hours

☐ Subunit 1.3: 3 hours

☐ Reading: 1 hour

☐ Assessment: 2 hours

Unit 1 Learning Outcomes
Upon completion of this unit, the student will be able to:
• List some standard opinions from scientists about scientific practice and scientific knowledge.
• Summarize and assess some opinions from scientists about the usefulness and relevance of philosophy to scientific practice.
• Distinguish philosophical questions about science from psychological, sociological, and historical questions about science.
• Identify questions about science that fall within the province of philosophy of science.