1. Record Nr. UNINA9910962184003321

Autore	Rosenberg Alexander <1946->
Titolo	Philosophy of science : a contemporary introduction / / Alex Rosenberg
Pubbl/distr/stampa	New York, : Routledge, 2012
ISBN	1-136-66261-8 1-283-46033-5 9786613460332 1-136-66262-6 0-203-80751-0
Edizione	[3rd ed.]
Descrizione fisica	1 online resource (321 p.)
Collana	Routledge contemporary introductions to philosophy
Classificazione	PHI000000SCI075000
Disciplina	501
Soggetti	Science - Philosophy Science - Methodology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover; Philosophy of Science: A Contemporary Introduction; Copyright; Contents; Preface; 1 Philosophy and Science; Overview; What Is Philosophy?; Philosophy and the Emergence of the Sciences; Science and the Divisions of Philosophy; What if There Are No Questions Left Over when Science Is Finished?; A Short History of Philosophy as the Philosophy of Science; Summary; Study Questions; Suggested Readings; 2 Why Is Philosophy of Science Important?; Overview; Scientific Questions and Questions about Science; Modern Science Has Implications for Philosophy; The Cultural Significance of Science Why Is Science the Only Feature of Western Culture Universally Adopted?Summary; Study Questions; Suggested Readings; 3 Scientific Explanation; Overview; Defining Scientific Explanation; The Role of Laws in Scientific Explanation; The Covering Law Model; Problems for the Covering Law Model; A Competing Conception of Scientific Explanation; Summary; Study Questions; Suggested Readings; 4 Why Do Laws Explain?; Overview; What Is a Law of Nature?; Counterfactual Support as a Symptom of the Necessity of Laws; Counterfactuals and Causation; Coming to Grips with Nomic Necessity; Denying the Obvious? SummaryStudy Questions; Suggested Readings; 5 Causation, Inexact

Laws and Statistical Probabilities; Overview; Causes as Explainers; Ceteris Paribus Laws; Statistical Laws and Probabilistic Causes; Explanation as Unification; Summary; Study Questions; Suggested Readings; 6 Laws and Explanations in Biology and the "Special Sciences"; Overview; Dissatisfaction with Causal Explanations; Proprietary Laws in the "Special Sciences"; Functional Laws and Biological Explanations; Explaining Purposes or Explaining Them Away?; From Intelligibility to Necessity; Summary; Study Questions Suggested Readings7 The Structure of Scientific Theories; Overview; How Do Theories Work? The Example of Newtonian Mechanics; Theories as Explainers: The Hypothetico-Deductive Model; The Philosophical Significance of Newtonian Mechanics and Theories; Summary; Study Questions; Suggested Readings; 8 Epistemic and Metaphysical Issues About Scientific Theories; Overview; Reduction, Replacement and the Progress of Science; The Problem of Theoretical Terms; Scientific Realism vs. Antirealism; Summary; Study Questions; Suggested Readings; 9 Theory Construction vs. Model Building; Overview Theories and ModelsSemantic vs. Syntactic Approaches to Theories and Models; A Case Study: Darwin's Theory of Natural Selection; Models and Theories in Evolutionary Biology; Summary; Study Questions; Suggested Readings; 10 Induction and Probability; Overview; The Problem of Induction; Statistics and Probability to the Rescue?; How Much Can Bayes' Theorem Really Help?; Summary; Study Questions; Suggested Readings; 11 Confirmation, Falsification, Underdetermination; Overview; Epistemological Problems of Hypothesis Testing; Induction as a Pseudo-Problem: Popper's Gambit; Underdetermination Summary

Sommario/riassunto

"Any serious student attempting to better understand the nature, methods, and justification of science will value Alex Rosenberg's updated and substantially revised Third Edition of Philosophy of Science: A Contemporary Introduction. Weaving lucid explanations with clear analyses, the volume is as a much-used, thematically oriented introduction to the field. New features of the Third Edition include more coverage of the history of the philosophy of science, more fully developed material on the metaphysics of causal and physical necessity, more background on the contrast between empiricism and rationalism in science, and new material on the structure of theoretical science (with expanded coverage of Newtonian and Darwinian theories and models) and the realism/antirealism controversy. Rosenberg also divides the Third Edition into fourteen chapters, aligning each chapter with a week in a standard semester-long course. Updated Discussion Questions, Glossary, Bibliography and Suggested Readings lists at the end of each chapter will make the Third Edition indispensable, either as a comprehensive stand-alone text or alongside the many wide ranging collections of articles and book excerpts currently available"--