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Titolo	A Course in Classical Physics 1—Mechanics // by Alessandro Bettini
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ISBN	3-319-29257-9
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (XVIII, 388 p. 239 illus., 2 illus. in color.)
Collana	Undergraduate Lecture Notes in Physics, , 2192-4791
Disciplina	531
Soggetti	Mechanics Gravitation Classical Mechanics Classical and Quantum Gravitation, Relativity Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Kinematics -- Dynamics of the point -- Forces -- Gravity -- Relative motions -- Extended systems -- Special relativity -- Rigid bodies.
Sommario/riassunto	This first volume covers the mechanics of point particles, gravitation, extended systems (starting from the two-body system), the basic concepts of relativistic mechanics and the mechanics of rigid bodies and fluids. The four-volume textbook, which covers electromagnetism, mechanics, fluids and thermodynamics, and waves and light, is designed to reflect the typical syllabus during the first two years of a calculus-based university physics program. Throughout all four volumes, particular attention is paid to in-depth clarification of conceptual aspects, and to this end the historical roots of the principal concepts are traced. Writings by the founders of classical mechanics, G. Galilei and I. Newton, are reproduced, encouraging students to consult them. Emphasis is also consistently placed on the experimental basis of the concepts, highlighting the experimental nature of physics. Whenever feasible at the elementary level, concepts relevant to more advanced courses in modern physics are included. Each chapter begins with an introduction that briefly describes the subjects to be discussed and ends with a summary of the main results. A number of "Questions" are included to help readers check their level of understanding. The

textbook offers an ideal resource for physics students, lecturers and, last but not least, all those seeking a deeper understanding of the experimental basics of physics. .
