



METADATA

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Abstract

"Physics of life" is a review of the basic theory of physics with an emphasis on the principles of modern physics and their applications in describing the properties of the microcosm and macroscopic matter in biomedical sciences. The basic theory is supplemented by the presentation of specific innovative methods for studying living matter. Learning objectives: - To provide a concise and comprehensive introduction and review of the general and fundamental concepts of physics necessary for understanding the phenomena and mechanisms involved in chemistry, biochemistry, molecular biology, and medicine. - To describe the physical principles of natural phenomena on which the technological tools used to study living matter

are based. - Make an introductory reference to philosophical issues related to physics and life (phenomena of self-organization, complexity, thermodynamics of evolution, etc.). - Demonstrate the scientific method and introduce concepts and best practices for managing scientific knowledge. Each chapter contains bibliographic sources and recommended reading for further study. Beyond the logical order in which the chapters are presented, the book is structured as a hypertext, with pointers/hyperlinks between related concepts presented in different chapters. This creates alternative learning paths based on the personal needs of each reader. The book is aimed at undergraduate and graduate students of life sciences.

