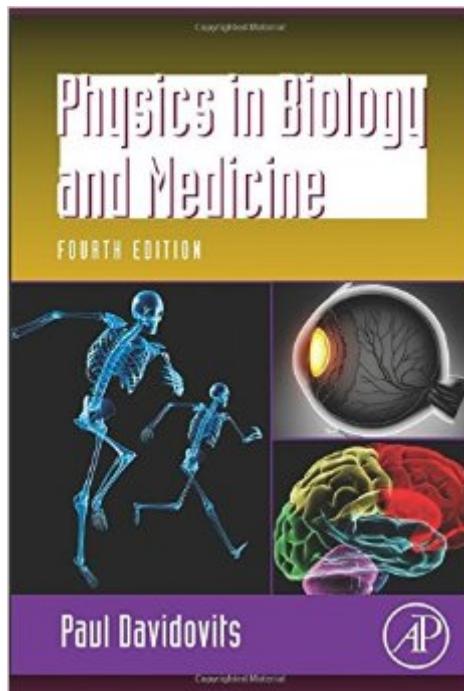


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# Physics In Biology And Medicine, Fourth Edition (Complementary Science)



## Synopsis

Physics in Biology and Medicine, Fourth Edition explores concepts in physics as they apply to living systems. The discussion is organized into 18 chapters encompassing thermodynamics, electricity, optics, sound, solid mechanics, fluid mechanics, and atomic and nuclear physics. Each chapter provides a brief review of the background physics before focusing on the applications of physics to biology and medicine. The book describes biological systems and presents calculations of the forces exerted by muscles, as well as the maximum impact that can be sustained by a body without injury, the height from which a person can jump, the effect of an animal's size on the speed at which it can run, and the circulation of blood in the body. Using the theory of fluids, the role of diffusion in the functioning of cells and the effect of surface tension on the growth of plants in soil are also analyzed. Using the principles of electricity, the conduction of impulses along the nervous system is investigated. Each section contains problems that explore and expand some of the concepts, and some of the techniques of physics and engineering are applied to the study of living systems. Moreover, the use of lasers in medical diagnostics and the applications of nanotechnology in biology and medicine are considered. This book will be a valuable resource for students and professors of physics, biology, and medicine, as well as for applied health workers. Provides practical techniques for applying knowledge of physics to the study of living systems. Presents material in a straight forward manner requiring very little background in physics or biology. Includes many figures, examples and illustrative problems and appendices which provide convenient access to the most important concepts of mechanics, electricity, and optics in the body.

## Book Information

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The descriptions are very clear, and it has helped me a lot to give my first semester Biology students, physics examples truly related with their discipline. Many biology students think that physics is not related with their careers

**PHYSICS IN BIOLOGY AND MEDICINE**, by Professor Paul Davidovits, is an expository masterpiece of admirable didactic value, which has gained additional attractiveness through the myriad of improvements made in the third edition. Reading **PHYSICS IN BIOLOGY AND MEDICINE**, Third Edition, I have been thoroughly impressed by Professor Davidovits scholarly depth and persuasive sincerity. Moreover, his uncanny ability to communicate difficult concepts in surprisingly accessible and yet technically accurate language is certainly rare. The book reviewed here can be profitably employed as a faithful companion to the regular text adopted by any instructor, for a one-year course of general physics to biology and premed students.

Excellent for your MCAT.

The Book is well written, Very clear and presents a great variety of interesting topics on the proposed subject. It provides the reader with a pleasant moment.

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