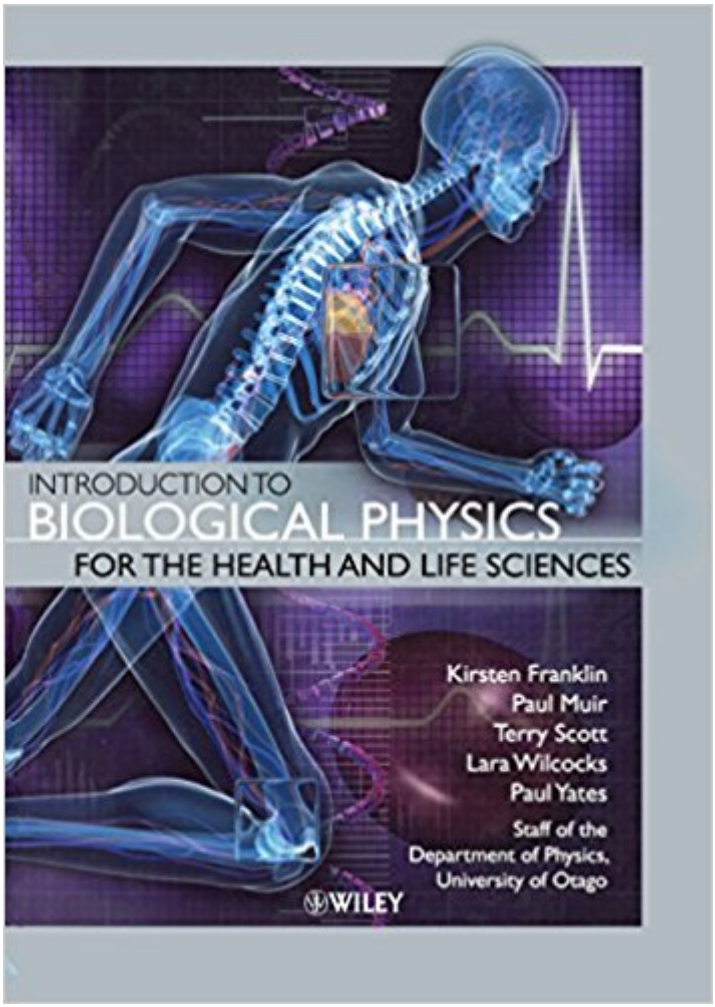
Introduction To Biological Physics For The Health And Life Sciences



Synopsis

This book aims to demystify fundamental biophysics for students in the health and biosciences required to study physics and to understand the mechanistic behaviour of biosystems. The text is well supplemented by worked conceptual examples that will constitute the main source for the students, while combining conceptual examples and practice problems with more quantitative examples and recent technological advances.

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Customer Reviews

"Written with support from health science professionals and students studying physics, this dynamic book follows well-established introductory physics curricula and presents the necessary concepts of physics as clearly and succinctly as possible." (Asiaing.com, 26 November 2010) Ã Â --This text refers to an out of print or unavailable edition of this title.

Physics is central to the study of biomedical science, and in many cases, students are required to have an understanding of basic physics to help appreciate the behaviour of biosystems. Written with support from health science professionals and students studying physics, this dynamic book follows well-established introductory physics curricula and presents the necessary concepts of physics as clearly and succinctly as possible. Aware that an inclination for physics is an issue for many health science students, the authors have featured many applications of physics in the biomedical sciences to encourage the readerÃ¢â ¬â„¢s interest. Each chapter features conceptual examples, diagrams, ideas and challenges, with interspersed problems to assist the reader and concludes with

a summary of key concepts and equations, and further practice problems. The chapters are split into six sections as follows; Mechanics; kinematics, force and NewtonÃ¢â ¬â„¢s Laws of Motion, motion in a circle, statics, energy, momentum, motion, waves, and sound and hearing. Bulk Materials; elasticity, pressure, buoyancy, surface tension, fluid dynamics and molecular transport phenomena. Thermodynamics; temperature, ideal gases, water vapour and the atmosphere, heat transfer, and thermodynamics and the body. Electricity and DC circuits; static, electric force, field, electric potential, energy, capacitance, direct currents and DC circuits and time behaviour of RC circuits. Optics; the nature of light, geometric optics, the eye and vision, and wave optics. Radiation and Health; atoms, the nucleus and nuclear physics, production, interaction and biological effects of Ionizing radiation, medical imaging, and magnetism and MRI. The objective of this textbook is to enhance the studentsÃ¢â ¬â„¢ learning of physics by teaching biological physics effectively, using a technique that has already been proven to be inspiring for those concerned about their education in this field of science. Intended for first and second-year undergraduate students in the health sciences with little background in mathematics or physics, this valuable text can also be used as an introduction to physics for other life science majors who are interested in physics or who wish to gain a broad understanding of the subject. --This text refers to an out of print or unavailable edition of this title.

This book is targeted to Health Sciences. It is clearly written. It covers a broad range of topics. It is committed (nicely) to the use of SI units and has many worked examples. The depth is relatively shallow but it is a good introduction, The book presents important quantification and simplifies the mathematics to algebra (no explicit calculus) from classical physics.The authors chapter on MRI was covered in more detail and was well written. One omission in the section on Safety was the interaction with implantable electronic devices: device malfunction, induced currents in orphan leads etc.

Unbelievable easy to get the gist of the chapters. Big print is geek-friendly.

The book was def. The one requited foe my class.. But it was pretty used.. You can tell this book has def. Been through a few users.. But I’m not complaining. I got a great price and so far the book has done what it was needed for.

Came in time for class. Even though I am not a fan of physics, it helped me get an A in the class.

the book has a bad smell

good

Nice to deal with.

Perfect

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