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# **Biomedical Applications For** Introductory Physics





### Synopsis

\* Can be utilized in either Algebra or Calculus-based courses and is available either as a standalone text or as a supplement for books like Cutnell PHYSICS, 5e or Halliday, Resnick, & Walker FUNDAMENTALS OF PHYSICS, 6e. \* Math level is Algebra & Trigonometry; however, a few examples require the use of integration and differentiation. \* Unlike competing supplements, Tuszinski offers both a wealth of engaging biomedical applications as well as quantitative problem-solving. The quantitative problem-solving is presented in the form of worked examples and homework problems. \* The quantitative problem-solving is presented in the form of worked examples and homework problems. \* The standard organization facilitates the integration of the material into most introductory courses.

#### **Book Information**

Paperback: 368 pages Publisher: Wiley; 1 edition (December 21, 2001) Language: English ISBN-10: 0471412953 ISBN-13: 978-0471412953 Product Dimensions:  $6.7 \times 0.7 \times 9.9$  inches Shipping Weight: 1.2 pounds (View shipping rates and policies) Average Customer Review: 3.4 out of 5 stars 4 customer reviews Best Sellers Rank: #985,921 in Books (See Top 100 in Books) #44 inà Â Books > Medical Books > Medicine > Internal Medicine > Radiology > Nuclear Medicine #353 inà Â Books > Engineering & Transportation > Engineering > Bioengineering > Biomedical Engineering #1520 inà Â Books > Textbooks > Science & Mathematics > Biology & Life Sciences > Anatomy & Physiology

#### **Customer Reviews**

Reflecting the authors' view that students should be exposed to physics as an applied science, the purpose of this book is two-fold: (1) to demonstrate to students of introductory physics the importance of elementary physical concepts in explaining biomedical phenomena and (2) to provide the physics instructors with a resource of biomedical examples, solved problems, and unsolved exercises. Designed as a supplement to any two-semester introductory physics textbook, its examples range from the structure of DNA to the effects of biological radiation on the human body. Related topics include such high-interest topics as energy requirements during strenuous exercise or the hydrodynamics of the blood circulation in the body.

This book represents a noble attempt to put together biological and medical applications for introductory physics courses. This is not just a good idea but really a necessity now that many students in these classes are pre-medical (at least in the US). Certainly it represents an excellent source of problem material for those who want to create an intro physics course that has relevance to future doctors and biologists.Unfortunately, most of the examples are "set-ups" in which a biological system is used as a wrapper for an equation the students are expected to have memorized. For example, when discussing gravity, the book has a problem on a diving hawk (hawks dive by essentially going into free-fall), in which the students are expected to use (1/2) a t-squared, but for which the students are not expected to estimate the effects of air resistance or assess the realism of the physical situation. I.e., the book contains standard plug-and-chug physics problems in biomedical clothing.It would be nice to see a book that helps students to learn, on their own, how to identify the relevant physics in a biomedical situation. I can't fault this book overly, since there are essentially no examples of what I am looking for, in either the physics or the bio textbook worlds, save for Steven Vogel's outstanding Biomechanics book (highly recommended).

Nice book with lots of examples

Great and affordable product. Good weight which means less pressure while cutting. Excellent ergonomic. Sharp. Cutting tomatoes and onions was a pleasant experience. I bought this product to replace a old one. my sister, Cheap yet works perfectly. very good. great.

This book has a good content structure for anyone who want to study biomedical applications of physics. For biophysics and first year medical students, this book used in conjunction with a standard calculus or algebra physics book, will be a big help on a better understanding and application of Physics.

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