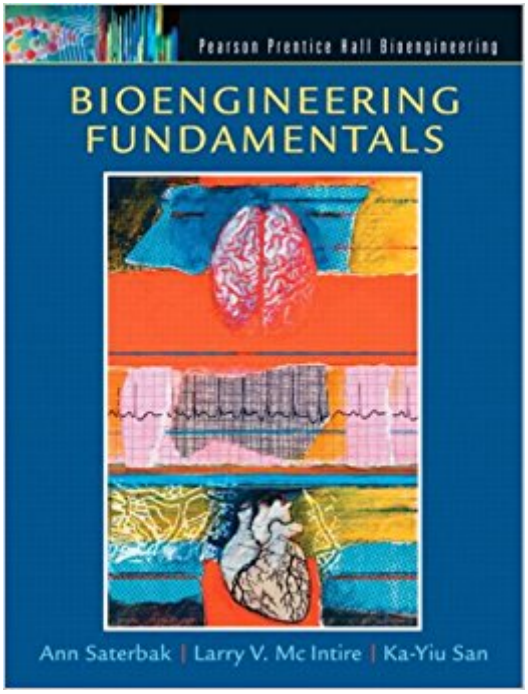
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Bioengineering Fundamentals



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Synopsis

Combining engineering principles with technical rigor and a problem-solving focus, this guide takes an interdisciplinary approach to the conservation laws that form the foundation of bioengineering: mass, energy, charge, and momentum. Demonstrates how conservation laws (including conservation of mass and energy, momentum, and charge) apply to biological and medical systems to lay a foundation for beginning bioengineers. Allows readers to build a mental model of how key concepts in engineering, chemistry, and physics are interrelated. Emphasizes how accounting and conservation equations are used to derive familiar laws, such as KirchhoffÃ¢â ¬â„¢s current and voltage laws, NewtonÃ¢â ¬â„¢s laws of motions, BernoulliÃ¢â ¬â„¢s equation, and others. Extensive examples span the breadth of modern bioengineering, including physiology, biochemistry, tissue engineering, biotechnology, and instrumentation. For anyone interested in learning more about bioengineering.

Book Information

Hardcover: 552 pages

Publisher: Pearson; 1 edition (January 15, 2007)

Language: English

ISBN-10: 0130938386

ISBN-13: 978-0130938381

Product Dimensions: 8.2 x 1.3 x 10.1 inches

Shipping Weight: 2.4 pounds

Average Customer Review: 3.2 out of 5 stars 9 customer reviews

Best Sellers Rank: #44,199 in Books (See Top 100 in Books) #2 inÃ Â Books > Textbooks > Medicine & Health Sciences > Medicine > Biotechnology #5 inÃ Â Books > Science & Math > Biological Sciences > Biophysics #7 inÃ Â Books > Engineering & Transportation > Engineering > Bioengineering > Biomedical Engineering

Customer Reviews

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Treatment of material was adequate, not great. Examples in the chapters are often either too easy as to make them trivial, or too long as to make them extremely difficult to follow.Although the problems at the end of each chapter are interesting and challenging, the expectations are often unclear. This results in difficulty for the students (which is not always a bad thing). Where it goes wrong is that the solutions manual is horrible, which makes the life of the professor and graders extremely difficult.For a first edition textbook, it is okay/adequate. Improvements could make this textbook the standard for intro bioe courses, but it has a ways to go

Required textbook for college, reasonable rental price but it is really worn out and looks almost broke

Examples were relatively helpful, but overall important information isn't exactly obvious to find, and some overall concepts are unclear, but for the price of renting if you really need the book for your class this isn't a bad choice.

Looks great. Came quickly.

I found that many problems were badly worded and in some, the objectives were made clear enough. Don't expect to learn much from just reading the chapters alone.

I enjoyed Saterbak's investigation of fundamentals of engineering, especially since our instructor was very young (maybe a little green) -- he made great use of the text, relying on Saterbak's organization and strategic presentation of the work to lead the class from day 1 thru finals :)An example of synergy, thank you Bill (ASU) and Ann (Rice).

The book is ripping apart. It's almost unusable because all the binding is coming off.

Worth the price. Had some wear on the outside (like it was handled a lot), but inside was in great

shape.

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