Biomedical Device Technology: Principles And Design

Anthony Y. K. Chan
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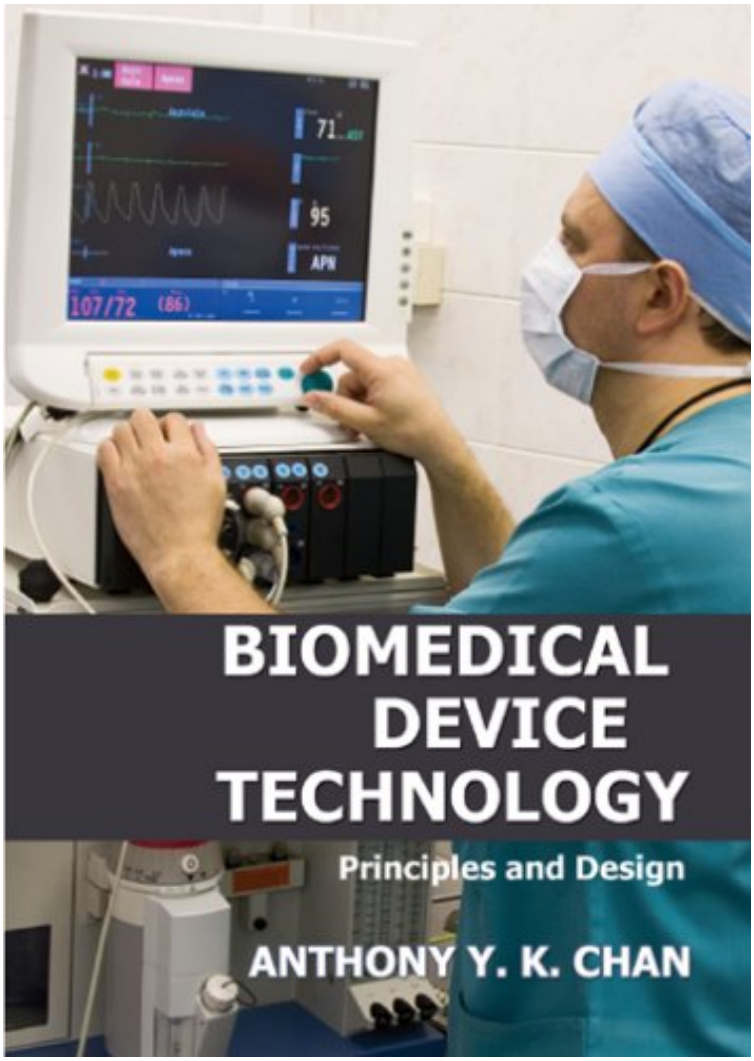

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Anthony Y. K. Chan : Biomedical Device Technology: Principles And Design before purchasing it in order to gage whether or not it would be worth my time, and all praised Biomedical Device Technology: Principles And Design:

6 of 6 people found the following review helpful. Best book currently on the marketBy G. BrickerMost biomedical technology books, geared for a technician or technical overview, do not offer much knowledge of the plethora of biomedical systems currently in use. I have been pleasantly surprised by this book. The first part of this book does a good job of discussing signal measurements, transducers, biopotential amplifiers, and electrical safety. This is fairly standard material which can also be found in other books. The author provides a good overview here.The second part

of the book examines a large number of medical devices. There is very little BMET-oriented material that is not covered. There is just enough information to understand the basic principles involved. This is where the book is a great improvement over the many other books I have read. The author does a good job of keeping most of these chapters short and to the point.One thing noticeably missing from this book is imaging systems (X-ray,CT, MRI, sonography). At over 500 pages, the author was wise enough to not try to include imaging systems. Imaging systems could easily have added another 500 pages.Something else that is, thankfully, missing is any voluminous discussion of pertinent regulations. Too many biomedical books focus far too much on the regulatory aspects. The regulatory aspects belong in a separate book. Chan discusses some of the most important of these, and then moves on. Bravo!This is not a textbook. There are no end-of-chapter questions. It is a good reference book for anyone working with medical equipment. It contains enough breadth and enough depth to be useful to students and to technicians in the field. I hope that AAMI will place this book on their list of suggested books for the CBET certifications. This book is not sufficient for medical equipment designers. For designers, turn to Bronzino.I hope to see a second edition of this book in the future. If a second edition is planned, I would like the author to add a chapter (after electrical safety) on electrical safety analyzers. I would also like to see a bit more included in the mechanical ventilator chapter. But this is minor nitpicking. The book is good as is. For anyone who deals with medical equipment, including the operators, this is a good "keeper" book.0 of 0 people found the following review helpful. the pages come apart so easily and the book is so fragileBy smallsthe pages come apart so easily and the book is so fragile. This book was required for my class as a textbook.It was a easy read overall0 of 0 people found the following review helpful. Great reference text too cheaply made to be a usable reference.By Joseph P. LashwayExcellently laid out, well written, brilliant as a learning text and a reference. That said, after just 4 months of use my binding is failing and I'm losing pages. Another great reference text that seems to cheaply made to be usable as a reference.

For many years, the tools available to physicians were limited to a few simple handpieces such as stethoscopes, thermometers and syringes; medical professionals primarily relied on their senses and skills to perform diagnosis and disease mitigation. Today, diagnosis of medical problems is heavily dependent on the analysis of information made available by sophisticated medical machineries such as electrocardiographs, ultrasound scanners and laboratory analyzers. Patient treatments often involve specialized equipment such as cardiac pacemakers and electrosurgical units. Such biomedical instrumentations play a critical and indispensable role in modern day medicine. In order to design, build, maintain and effectively deploy medical devices, one needs to understand not only their design and construction but also how they interact with the human body. This book provides a comprehensive approach to studying the principles and design of biomedical devices as well as their applications in medicine. It is written for engineers and technologists who are interested in understanding the principles, design and applications of medical device technology. The book is also intended to be used as a textbook or reference for biomedical device technology courses in universities and colleges.