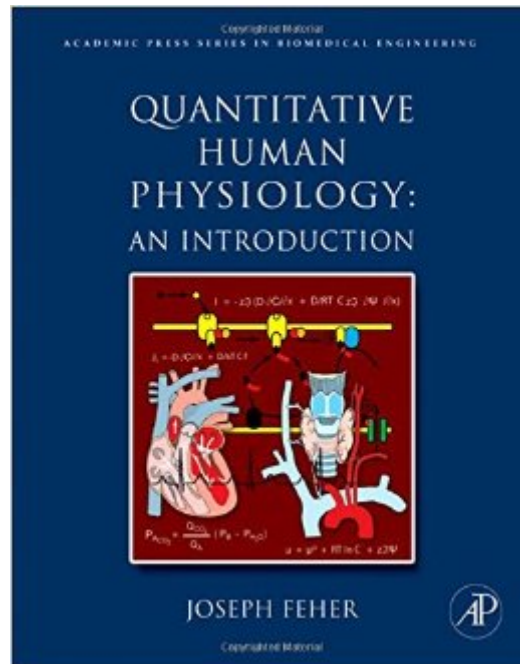


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Quantitative Human Physiology: An Introduction (Academic Press Series In Biomedical Engineering)



Synopsis

Quantitative Human Physiology: An Introduction presents a course in quantitative physiology developed for undergraduate students of Biomedical Engineering at Virginia Commonwealth University. The text covers all the elements of physiology in nine units: (1) physical and chemical foundations; (2) cell physiology; (3) excitable tissue physiology; (4) neurophysiology; (5) cardiovascular physiology; (6) respiratory physiology; (7) renal physiology; (8) gastrointestinal physiology; and (9) endocrinology. The text makes extensive use of mathematics at the level of calculus and elementary differential equations. Examples and problem sets are provided to facilitate quantitative and analytic understanding, while the clinical applications scattered throughout the text illustrate the rationale behind the topics discussed. This text is written for students with no knowledge of physiology but with a solid background in calculus with elementary differential equations. The text is also useful for instructors with less time; each chapter is intended to be a single lecture and can be read in a single sitting. A quantitative approach that includes physical and chemical principles. An integrated approach from first principles, integrating anatomy, molecular biology, biochemistry and physiology. Illustration program reinforces the integrated nature of physiological systems. Pedagogically rich, including chapter objectives, chapter summaries, large number of illustrations, and short chapters suitable for single lectures. Clinical applications relevant to the biomedical engineering student (TENS, cochlear implants, blood substitutes, etc.) Problem sets provide opportunity for practice and assessment throughout the course.

Book Information

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Customer Reviews

I had Dr. Feher as a professor years ago when I took his course in Quant Phys when I was a BME major at VCU. He was and still is one of the best professors I have ever had. His approach to physiology is instantly accessible to the student but he does not shy away from difficult but important concepts. Importantly for the engineer or biophysicist, his book covers mathematical aspects of human physiology that are very important to understand but often ignored by biologists and physicians who have not had mathematical training. His teaching style challenges the student in amazing ways. Even in med school, I have not learned more in a single course. I am a 4th year med student going into Radiation Oncology, a field of medicine very heavy in math and physics, and I still find myself occasionally going back to my notes years ago for reference. I welcome this new book from Dr. Feher and expect to go back to it for years to come as a physician and researcher.

Useless and hard book, information was presented all over the place. Had to read the same part multiple times to even get what the guy was trying to say. Problem set questions are hard to solve since he literally present just equations and no sample problems that even resemble the problem set problems.

The contents of the book are good, but the copy I got has several pages printed so lightly that they're unreadable (occurring randomly throughout the book) and the binding fell apart within a couple months of receiving it.

This is the best book which can quantitative the human physiology. Better than any other book, but it is too expensive.

Required text book for a class so far I like how it breaks down the material for easier understanding

The binding was taped together. It is too loose and the book is going to fall apart.

Content is good. Book condition is terrible; more than 75% of the pages are not even glued to the hardcover.

Overall, a good text, not that I'm an expert. There are however, lots of errors (characteristic of a first edition)

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