

## Biofluid Mechanics: An Introduction to Fluid Mechanics, Macrocirculation, and Microcirculation (Biomedical Engineering)

*By David Rubenstein Ph.D. Biomedical Engineering Stony Brook University, Wei Yin Ph.D. Biomedical Engineering State University of New York at Stony Brook, Mary D. Frame Ph.D. University of Missouri Columbia*

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Both broad and deep in coverage, Rubenstein shows that fluid mechanics principles can be applied not only to blood circulation, but also to air flow through the lungs, joint lubrication, intraocular fluid movement and renal transport. Each section initiates discussion with governing equations, derives the state equations and then shows examples of their usage. Clinical applications, extensive worked examples, and numerous end of chapter problems clearly show the applications of fluid mechanics to biomedical engineering situations. A section on experimental techniques provides a springboard for future research efforts in the subject area.

- Uses language and math that is appropriate and conducive for undergraduate learning, containing many worked examples and end of chapter problems
- All engineering concepts and equations are developed within a biological context
- Covers topics in the traditional biofluids curriculum, as well as addressing other systems in the body that can be described by biofluid mechanics principles, such as air flow through the lungs, joint lubrication, intraocular fluid movement, and renal transport
- Clinical applications are discussed throughout the book, providing practical applications for the concepts discussed.

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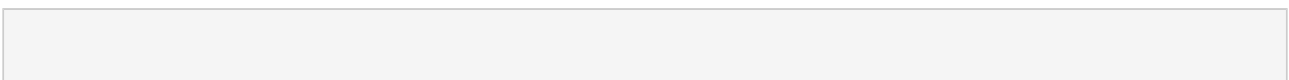
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