

Biomechanics: A Case-Based Approach concentrates on the comprehension, retention, and application of the core concepts surrounding biomechanics through the use of problem-based learning strategies. This text focuses on the fundamental building blocks of biomechanics instead of straight computations through the conveyance of conceptual information and detailed explanations. This book is suitable for both undergraduate- and graduate-level study programs.

This text offers a unique approach to understanding biomechanics through the presentation of concepts physically, mathematically, and graphically to accommodate various learning styles. A conversational writing style engages students while maintaining the rigor of the content. Students are introduced to the logic behind the equations, and detailed explanations connect conceptual information and mathematical equations. Case studies and real-world examples drawn from the areas of sports and exercise help reinforce important concepts and allow students the opportunity to apply what they learn in the classroom to real-life, on-the-job situations.

KEY FEATURES

- **Presentation of concepts** in an easy-to-read, engaging writing style and visual layout
- **Learning Objectives** located at the beginning of each chapter address the comprehension goals for each lesson
- **Definitions** presented in the margins define crucial words at their initial appearance for optimal comprehension
- **Important Points** provide a quick reference to the key concepts in each section
- **Essential Math boxes** provide a review of mathematical concepts before they are presented in the text
- **Applied Research** illustrates biomechanical concepts from other credited sources in the field
- **Competency Checks** found at the conclusion of major sections ask conceptual and quantitative questions to foster critical thinking and further student comprehension
- **End-of-chapter material** includes a Summary, Review Questions, and References

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BIOMECHANICS

A CASE-BASED APPROACH

INSTRUCTOR RESOURCES

This comprehensive overview of biomechanics is packaged with a variety of instructor support materials, including an Instructor's Manual, Test Bank, PowerPoint, Lecture Outlines, and downloadable PowerPoint Image and Table Bank.

STUDENT RESOURCES

Student Resources include a companion website, go.jblearning.com/biomechanics, that presents additional material for learning, exploration, study, and research through downloadable Practice Problems, an Interactive Glossary, Web Links, and more.



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978-443-5000 | www.jblearning.com

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ISBN: 978-1-4496-9792-1



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