

Book review

Fundamentals of Biomechanics

Editor: Duane Knudson

Bibliographic Data: ISBN-10: 0387493115, ISBN-13: 978-0387493114; Springer-Verlag New York Inc. Publishing, 2007, £47.02, 356 pages, hardcover.

Subjects: Biomechanics, human movement, applied kinetics.

DESCRIPTION: This book provides a broad and in-depth theoretical and practical description of the fundamental concepts in understanding biomechanics in the qualitative analysis of human movement.

PURPOSE: The aim is to bring together up-to-date biomechanical knowledge with expert application knowledge. Extensive referencing for students is also provided.

FEATURES: This textbook is divided into 12 chapters within four parts, including a lab activities section at the end. The division is as follows: *Part 1 Introduction:* 1.Introduction to biomechanics of human movement; 2.Fundamentals of biomechanics and qualitative analysis; *Part 2 Biological/Structural Bases:* 3.Anatomical description and its limitations; 4.Mechanics of the musculoskeletal system; *Part 3 Mechanical Bases:* 5.Linear and angular kinematics; 6.Linear kinetics; 7.Angular kinetics;

8.Fluid mechanics; *Part 4 Application of Biomechanics in Qualitative Analysis :*9.Applying biomechanics in physical education; 10.Applying biomechanics in coaching; 11.Applying biomechanics in strength and conditioning; 12.Applying biomechanics in sports medicine and rehabilitation.

AUDIENCE: This is an important reading for both student and educators in the medicine, sport and exercise-related fields. For the researcher and lecturer it would be a helpful guide to plan and prepare more detailed experimental designs or lecture and/or laboratory classes in exercise and sport biomechanics.

ASSESSMENT: The text provides a constructive fundamental resource for biomechanics, exercise and sport-related students, teachers and researchers as well as anyone interested in understanding motion. It is also very useful since being clearly written and presenting several ways of examples of the application of biomechanics to help teach and apply biomechanical variables and concepts, including sport-related ones.

Reviewed by: *Fadil Ozyener MD, PhD, Uludag University Medical School, Bursa, Turkey.*