[PDF] Biomechanics Of Sport And Exercise With Web Resource And MaxTRAQ 2D Software Access-3rd Edition

Peter McGinnis - pdf download free book



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Author: Peter McGinnis

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Description:

Taking a unique approach to the presentation of mechanical concepts, *Biomechanics of Sport and Exercise*, *Third Edition With Web Resource and MaxTRAQ Educational 2D Software Access*,

introduces exercise and sport biomechanics in simple terms. By providing mechanics before functional anatomy, the book helps students understand forces and their effects before studying how body structures deal with forces. Students will learn to appreciate the consequences of external forces, how the body generates internal forces to maintain position, and how forces create movement in physical activities.

Rather than presenting the principles as isolated and abstract, the text enables students to discover the principles of biomechanics for themselves through observation. By examining ordinary activities firsthand, students will develop meaningful explanations resulting in a deeper understanding of the underlying mechanical concepts. This practical approach combines striking visual elements with clear and concise language to encourage active learning and improved comprehension.

This updated edition maintains the organization and features that made previous editions user friendly, such as a quick reference guide of frequently used equations printed on the inside cover and review questions at the end of each chapter to test students' understanding of important concepts. The third edition also incorporates new features to facilitate learning:

- Access to MaxTRAQ Educational 2D software allows students to analyze real-world sport movements through video.
- The new web resource guides students step by step through the process of solving 10 sample problems.
- New art and diagrams enhance problem sets and help students visualize the mechanics of realworld scenarios.
- Increased number of review questions (200) and problem sets (120) provide an opportunity for practical application of concepts.
- Greater emphasis on the basics, including improved descriptions of conversions and an expanded explanation of the assumption of point mass when modeling objects, provides a stronger foundation for understanding.
- New content on deriving kinematic data from video or film and the use of accelerometers in monitoring physical activity keeps students informed of technological advances in the field.

Biomechanics of Sport and Exercise, Third Edition With Web Resource and MaxTRAQ Educational 2D Software Access, is supplemented with two companion resources that will help students better comprehend the material. The web resource includes all of the problems from the book, separated by chapter, plus 18 sample problems that guide students step by step through the process of solving. This text is also enhanced with access to MaxTRAQ Educational 2D software for Windows. MaxTRAQ Educational 2D software enables students to analyze and quantify real-world sport movements in video clips and upload their own video content for analysis. The software supplements the final section of the text that bridges the concepts of internal and external forces with the application of biomechanics; it also provides an overview of the technology used in conducting quantitative biomechanical analyses. Access to both online resources is included with new print books. To purchase the components separately, click on the web resource under "Related Products" in the right column.

Instructors will benefit from an updated ancillary package. An instructor guide outlines each chapter and offers step-by-step solutions to the quantitative problems presented, as well as sample lecture topics, student activities, and teaching tips. A test package makes it easy to prepare quizzes and tests, and an image bank contains most of the figures and tables from the text for use in developing

course presentations.

Biomechanics of Sport and Exercise, Third Edition, is ideal for those needing a deeper understanding of biomechanics from a qualitative perspective. Thoroughly updated and expanded, this text makes the biomechanics of physical activity easy to understand and apply.