
This is a delightful book. It is written for physical educators, coaches of athletic teams, and athletes. In this book the basic concepts are very clearly presented, and then applied to the analysis of sports techniques. Chapter 1 is an introduction (8 pp.) Chapters 2-7 (157 pp.) deal with basic concepts: forms of motion, linear kinematics, angular kinematics, linear kinetics, angular kinetics, and fluid mechanics. Chapters 8-17 are analysis of sports techniques. The successive chapter headings are: Baseball, Basketball, Football, Golf, Gymnastics, Softball, Swimming, Track and Field, Running, Jumping, and Throwing. This part occupies 314 pages, and is quite exhaustive. For each sport, the analysis is divided into two parts: Basic Considerations and Techniques. The former deals with the factors involved. The latter gives details with particular emphasis on those areas where there are known to be disagreements among teachers and coaches.

The new edition incorporates new findings of current research. As the author says: "The techniques employed in sports sometimes change at an almost bewildering rate, so that those concerned have a difficult time keeping abreast of them." For example, in the few years since the text was first published, the grab start has almost universally accepted as the fastest starting technique in swimming; the rotational technique has become accepted as a viable alternative to the long-dominant O'Brien technique in short putting; the standing start, recently thought to be a similarly viable alternative to the traditional crouch start in sprinting, has been outlawed by a rule change; and the somersault long-jumping technique has arrived, been banned, and departed. The new techniques are discussed in the book.

I recommend this book to all people interested in biomechanics, not only athletes and coaches, but also to bioengineers, orthopedic surgeons, physiologists, and general readers. It is easy to read and easy to understand, and will make people enjoy sports more.


This is a textbook for students of physical education, athletic coaching, and dance. It is written in an elementary manner. No prerequisite knowledge of physics or mathematics beyond what is ordinarily taken in high school is necessary. It discusses force, motion, work, energy, and concludes with a chapter on applications to physical education and sports. The treatment is quite brief, with one page on swimming, one page on bowling, one page on diving, one page on gymnastics, etc. Well written and smooth, this book requires little effort on the part of the reader.

Rheological techniques by R. W. Whorlow, 447 pages, $94.95, first published by Ellis Horwood Ltd., Chichester, distributed by Halsted Press, a division of Wiley, New York, 1980.

Biorehology is a bioengineer's intimate concern, and this book is important to bioengineering. In this book various rheological techniques and instruments are discussed in detail. It is written as a textbook, but is also a reference book. At the end of the book there is an Appendix on commercially available apparatus, including a list of addresses of manufacturers. This will be very useful to people who are choosing manufacturers.

The chapters headings are as follows:

1. Deformation and Stress
2. Tube Viscometers
3. Rotational Viscometers
4. Creep and Stress Relaxation
5. Dynamic Tests
6. Wave Propagation
7. Analysis of Viscoelasticity Measurements

The mathematical level is elementary. The text is lucid. The references list is comprehensive and up-to-date. Illustrations are good, well drawn and nicely printed. I strongly recommend this book to bioengineers who are concerned with biorehology.


I was looking for a textbook for the undergraduate course in laboratory experiments in bioengineering, and was delighted to find this book. It is well written, and sufficiently comprehensive and detailed for the students. It will be convenient for the instructor to use.

The book is divided into two parts. Part One, entitled Foundations, contains the following chapters:

1. Basics and Overview
2. DC and AC Theory
3. Principles of Amplification
4. Noise
5. Instruments and Systems
6. Transducers
7. Processing Signals
8. Electric Safety

Part Two, entitled Experiments, contains the following:

1. Membranes, Selective Permeability
2. Frog Sciatic Nerve
Biomechanics in sport incorporates detailed analysis of sport movements in order to minimise the risk of injury and improve sports performance. Sport and exercise biomechanics encompasses the area of science concerned with the analysis of the mechanics of human movement. It refers to the description, detailed analysis and assessment of human movement during sport activities. Mechanics is a branch of Sports Biomechanics is the scientific journal of the International Society of Biomechanics in Sports (ISBS), the only international society dedicated to biomechanics in sports. The journal sets out to generate knowledge to improve sports performance and reduce the incidence of injury, and to communicate this knowledge to sports scientists, coaches, and sports participants. Sports Biomechanics is unique in its emphasis on sports techniques and sports injuries. As well as maintaining scientific rigour, there is a strong editorial emphasis on ‘reader friendliness’. By emphasising the practical application of biomechanics to improve techniques. This is an excerpt from Biomechanics of Sport and Exercise, Third Edition With Web Resource and MaxTRAQ 2D Educational Software Access, by Peter McGinnis. Technique Improvement. The most common method for improving performance in many sports is to improve an athlete’s technique. This is highlighted here as one motivation for studying biomechanics, and it is probably what you thought of when asked how a biomechanist goes about trying to improve an athlete’s performance.