BRIEF CONTENTS

notic Concepts for Analyzing Human Motion 59

- 1 What Is Biomechanics? 2 Kinematic Concepts for Analyzing Human Motion 27 3 Kinetic Concepts for Analyzing Human Motion 59 4 The Biomechanics of Human Bone Growth and Development 85 5 The Biomechanics of Human Skeletal Articulations 115 6 The Biomechanics of Human Skeletal Muscle 143 7 The Biomechanics of the Human Upper Extremity 179 8 The Biomechanics of the Human Lower Extremity 223
- 9 The Biomechanics of the Human Spine 267
- 10 Linear Kinematics of Human Movement 309
- 11 Angular Kinematics of Human Movement 345
- 12 Linear Kinetics of Human Movement 373
- 13 Equilibrium and Human Movement 409
- 14 Angular Kinetics of Human Movement 443
- 15 Human Movement in a Fluid Medium 469

Appendices

- A Basic Mathematics and Related Skills 499
- **B** Trigonometric Functions 504
- C Common Units of Measurement 507
- D Anthropometric Parameters for the Human Body 508

Glossary 511

Index 519

iii