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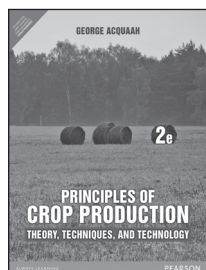
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## Agriculture



### Principles of Crop Production: Theory, Techniques, and Technology, 2e

George Acquaah

ISBN: 9789332555181

© 2015

Pages: 768



#### About the Book

For undergraduate courses in Crop Science. May also be appropriate for Plant Science, and Horticulture courses.

This book provides the most comprehensive, detailed coverage of crop production issues in the United States.

#### Features

- **NEW**—Significantly expanded content, with 12 new chapters—Provides crop-specific information for 10 selected field crops and essential coverage of latest developments.
- Makes text suitable for use in preparing for the Crop Certification exams.
- Allows students to understand the distinct techniques and technology associated with production of each crop.
- **NEW**—Over 50 new figures and 40 new charts.
- Enhances the presentation and student comprehension of the text.
- Emphasis on the underlying science of crop production—Views the crop producer as a manager of resources.
- Recognizes the varying backgrounds and geography of students taking this course, provides the “how and why” things are the way they are, and recognizes the business of crop production. Basic principles presented are applicable to anywhere in the world.
- Coverage of latest trends impacting crop production—i.e., sustainable agriculture, organic farming, environmental safety consciousness, etc.
- Gives students an understanding of how crop production is evolving and arms them with information for solid decision making on the job.

#### Contents

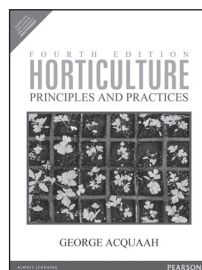
##### Part I. UNDERLYING PRINCIPLES.

1. Crop Production and Society.
2. Plant Morphology.
3. Fundamental Plant Growth Processes.
4. Plant Growth and Development.
5. Crop Improvement.
6. Climate and Weather.
7. Soil and Land.
8. Plant Nutrients and Fertilizers.
9. Plant and Soil Water.
10. Pests in Crop Production.
11. Agricultural Production Systems.
12. Organic Crop Production.
13. Transgenics in Crop Production.
14. Rangeland and Pastures and Their Management.
15. Tillage Systems and Farm Energy.
16. Seed, Seedling, and Seeding.
17. Harvesting and Storage of Crops.
18. Marketing and Handling Grain Crops.

##### Part II. COMMERCIAL PRODUCTION OF SELECTED FIELD CROPS.

19. Wheat (Common).
20. Rice.
21. Corn.

22. Sorghum.
23. Barley.
24. Soybean.
25. Peanut.
26. Cotton.
27. Potato.
28. Alfalfa.



### Horticulture: Principles and Practices, 4e

George Acquaah

ISBN: 9789332556942

© 2015

Pages: 816



#### About the Book

For undergraduate courses in Introduction to Horticulture, Introduction to Plant Science, and Principles of Crop Production.

This comprehensive introduction to horticulture as a science, art, and business covers all the essential principles and practices of the field. It discusses aspects pertaining to both indoor and outdoor production and provides sound scientific background of modern horticulture. Vividly illustrated throughout, the emphasis is on the underlying science—including current technology—and how it is applied in practical horticulture. This edition has been significantly revised to include four new chapters, a reorganized Part 7 and contributions from leading industry professionals.

#### Features

- **Hallmark Features**
- Discusses the science, art, and business of horticulture.
- Helps students develop a broad understanding of all the dimensions of the field, showing how they are interconnected, and expanding their view of the opportunities available.
- Provides a broad overview of basic principles and practices.
- Minimizes regional and national biases and gives consistent treatment to the basics of horticulture.
- Presents materials that are appropriate for both small- and large-scale production.
- Includes coverage of indoor and outdoor production—see Part IV and Part V.
- Familiarizes students with all aspects of horticultural production.
- Blends both science and practice—by discussing plant taxonomy, anatomy, growth environment, physiology, and genetics.
- Introduces students to the role of these disciplines and how they are applied to increase performance.
- Offers an extensive illustration program—featuring 600 photographs and line drawings with comprehensive captions, and numerous detailed tables.
- Provides students with visual reinforcement of concepts that facilitate learning.
- Gives instructors sufficient visuals to support their lectures.

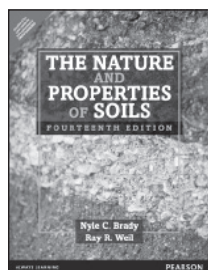
#### Contents

##### I. THE UNDERLYING SCIENCE.

1. What Is Horticulture?
2. Classifying and Naming Horticultural Products.
3. Plant Anatomy.
4. Plant Growth Environment.
5. Plant Physiology.
6. Breeding Horticultural Plants

##### II. PROTECTING HORTICULTURAL PLANTS.

7. Biological Enemies of Horticultural Plants.
8. Principles and Methods of Disease and Pest Control.
- III. PROPAGATING HORTICULTURAL PLANTS.**
9. Sexual Propagation.
10. Asexual Propagation.
- IV. GROWING PLANTS INDOORS.**
11. Growing Houseplants.
12. Controlled-Environment Horticulture.
13. Greenhouse Production
14. Growing Succulents.
- V. GROWING PLANTS OUTDOORS: ORNAMENTALS.**
15. Principles of Landscaping.
16. Nursery Production.
17. Installation of the Landscape
18. Turf Production and Use.
19. Pruning.
- VI. GROWING PLANTS OUTDOORS: VEGETABLES, FRUITS, AND NUTS.**
20. Growing Vegetables Outdoors.
21. Herb Gardening.
22. Organic Farming.
23. Establishment and Management of an Orchard
- VII. SPECIAL TECHNIQUES AND HANDLING OF HORTICULTURAL PRODUCTS.**
24. Floral Design.
25. Terrarium Culture
26. Bonsai: The Art of Miniature Plant Culture
27. Post-Harvest Handling of Horticultural Products



## The Nature and Properties of Soils, 14/e

Nyle C. Brady

ISBN: 9789332519107

© 2014

Pages: 922

### About the Book

The Nature and Properties of Soils, 14e can be used in courses such as Soil Fertility, Land Resources, Earth Science and Soil Geography. Now in its 14th edition, this text is designed to help make students study of soils a fascinating and intellectually satisfying experience. Written for both majors and non-majors, this text highlights the many interactions between the soil and other components of forest, range, agricultural, wetland and constructed ecosystems.

### Features

- New section on septic tank drain fields
- Expanded and totally revised section on irrigation management
- Updated section on engineering properties of soils which includes consistence, consistency, soil strength and sudden failure in cohesive and non-cohesive soils
- Text is organized with several cross referencing chapters
- Special topics are treated in boxes
- Study questions have been added to the end of each chapter to help students think and review the topics and their interactions

### Contents

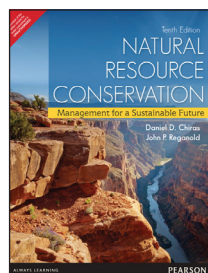
1. Glossary of Soil Science Terms
2. The Soils Around Us
3. Formation of Soils from Parent Materials
4. Soil Classification

5. Soil Architecture and Physical Properties
  6. Soil Water: Characteristics and Behavior
  7. Soil and the Hydrologic Cycle
  8. Soil Aeration and Temperature
  9. The Colloids Fraction: Seat of Soil Chemical and Physical Activity
  10. Soil Acidity
  11. Soils of Dry Regions: Alkalinity, Salinity, and Sodicty
  12. Organisms and Ecology of the Soil
  13. Soil Organic Matter
  14. Nitrogen and Sulfur Economy of Soils
  15. Soil Phosphorus and Potassium
  16. Calcium, Magnesium and Trace Elements
  17. Practical Nutrient Management
  18. Soil Erosion and Its Control
  19. Soils and Chemical Pollution
  20. Geographic Soils Information
  21. Prospects for Global Soil Quality as Affected by Human Activities
- Appendix: SI Units, Conversion Factors, Periodic Table of the Elements and Scientific Names of Plants Mentioned
- Appendix: World Reference Base, Canadian, and Australian Soil Classification Systems

### About the Authors

Nyle C. Brady, Emeritus Professor, Cornell University

Raymond C. Weil, Professor, University of Maryland College Park



## Natural Resource Conservation: Management for a Sustainable, 10/e

Daniel D. Chiras

John P. Reganold

ISBN: 9789332536685

© 2014

Pages: 664

### About the Book

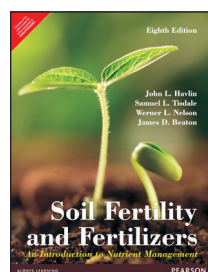
This comprehensive text describes the ecological principles, policies, and practices required to create a sustainable future. It emphasizes practical, cost-effective, sustainable solutions to these problems that make sense from social, economic, and environmental perspectives.

### Features

- **A focus on sustainable development** puts students in touch with one of the most significant shifts in thinking and action in the environmental and resource management arenas. A variety of lasting solutions are provided that make sense from social, economic, and environmental viewpoints.
- **Critical thinking and ethics are stressed throughout** and teach students to question and analyze issues from a variety of perspectives and to distinguish good information from bad.
- **“Case Study,” “A Closer Look,” and “Ethics in Resource Conservation”** boxes delve into the heart of controversial issues and provide a look at some career opportunities in natural resource conservation.
- **Updated material throughout** incorporates the latest statistics and includes a new chapter on global warming and climate change.
- **Expanded coverage of social and policy issues** includes coverage of environmental justice, free trade, and the impacts of globalization.
- **International examples** provide a broader scope of coverage and includes environmental and resource issues from around the globe.
- **New “Go Green!” feature** gives students tips and suggestions on reducing their carbon footprint.

## Contents

1. Natural Resource Conservation and Management: Past, Present and Future
2. Economics, Ethics, and Critical Thinking: Tools for Creating a Sustainable Future
3. Lessons from Ecology
4. The Human Population Challenge
5. World Hunger: Solving the Problem Sustainably
6. The Nature of Soils
7. Soil Conservation and Sustainable Agriculture
8. Integrated Pest Management
9. Aquatic Environments
10. Managing Water Resources Sustainability
11. Water Pollution
12. Fisheries Conservation
13. Rangeland Management
14. Forest Management
15. Plant and Animal Extinction
16. Wildlife Management
17. Sustainable Waste Management
18. Air Pollution
19. Global Warming and Climate Change
20. Acid Deposition and Stratospheric Ozone Depletion
21. Minerals, Mining, and a Sustainable Society
22. Nonrenewable Energy Resources: Issues and Options
23. Creating a Sustainable System of Energy



## Soil Fertility and Fertilizers, 8/e

**John L. Havlin**  
**Samuel L. Tisdale**  
**Werner L. Nelson**  
**James D. Beaton**

ISBN: 9789332570344  
 © 2015  
 Pages: 536



## About the Book

Soil Fertility and Fertilizers: An Introduction to Nutrient Management, Eighth Edition, provides a thorough understanding of the biological, chemical, and physical properties affecting soil fertility and plant nutrition. Covering all aspects of nutrient management for profitable crop production, the text pays particular attention to minimizing the environmental impact of soil and fertilizer management. The eighth edition of this proven text has been substantially revised to reflect rapidly advancing knowledge and technologies in both plant nutrition and nutrient management.

## Features

- Illustrates critical quantitative skills essential to professional success in nutrient management and related disciplines.
- Increased number of photographs, diagrams, and other visuals illustrating nutrient response in crops, soil management effects on crop growth, nutrient application equipment, and more.
- Covers a wide diversity of plants and cropping systems.
- Increased emphasis on alternative nutrient sources to the most common fertilizers.
- Substantially enhanced focus on environmental impacts of nutrient use.

## Contents

1. Introduction
2. Basic Soil-Plant Relationships
3. Soil Acidity and Alkalinity
4. Nitrogen
5. Phosphorus

6. Potassium
7. Sulfur, Calcium, and Magnesium
8. Micronutrients
9. Soil Fertility Evaluation
10. Basics of Nutrient Management
11. Nutrients Interactions and Economics
12. Agricultural Productivity and Environmental Quality

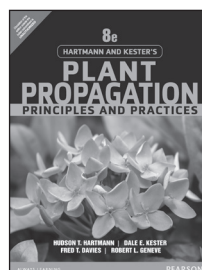
## About the Authors

**John L. Havlin**, North Carolina State University

**Samuel L. Tisdale**

**Werner L. Nelson**

**James D. Beaton**, Potash and Phosphate Institute of Canada



## Hartmann & Kester's Plant Propagation: Principles and Practices, 8/e

**Hudson T. Hartmann**  
**Dale E. Kester**  
**Fred T. Davies**  
**Robert Geneve**

ISBN: 9789332550025

© 2015

Pages: 928



## About the Book

The world standard for plant propagation and horticulture for over 50 years, *Hartmann and Kester's Plant Propagation* continues to be the field's most complete, up-to-date text on plant propagation. It now contains color figures throughout, promoting learning and making it an even more useful working text and reference. It also contains extensive updates reflecting the latest commercial techniques and understanding of propagation biology. Like previous editions, it is organized into paired chapters on principles and practices, so it can easily be adapted for teaching courses that cover only practical topics, and for courses that also cover conceptual issues.

## Features

- Paired practical and conceptual chapters—alternate the principles underlying the science of propagation alternate with the technical practices and skills used for commercial plant propagation
- Clear chapter introductions and objectives—help students understand exactly what they will learn in each chapter, and why it is important
- Discussion items, keyword lists, in-depth boxed features, and extensive references—promote a deeper and more thorough understanding of the entire field
- Comprehensive coverage—from historical background and basic plant biology concepts through environmental impact and both seed (sexual) and vegetative (clonal) propagation
- Thorough reference chapters on specific propagation methods—for fruit, herbaceous annual and perennials, and woody plants, respectively

## Contents

### PART I. GENERAL ASPECTS OF PROPAGATION

1. How Plant Propagation Evolved In Human Society
2. Biology of Plant Propagation
3. The Propagation Environment

### PART II. SEED PROPAGATION

4. Seed Development
5. Principles and Practices of Seed Selection
6. Techniques of Seed Production and Handling
7. Principles of Propagation from Seeds

8. Techniques of Propagation by Seed  
**PART III. VEGETATIVE PROPAGATION**

9. Principles of Propagation by Cuttings
10. Techniques of Propagation by Cuttings
11. Principles of Grafting and Budding
12. Techniques of Grafting
13. Techniques of Budding
14. Layering and Its Natural Modifications
15. Principles and Practices of Clonal Selection
16. Propagation by Specialized Stems and Roots

**PART IV. CELL AND TISSUE CULTURE PROPAGATION**

17. Principles of Tissue Culture and Micropropagation
18. Techniques for Micropropagation

**PART V. PROPAGATION OF SELECTED PLANT SPECIES**

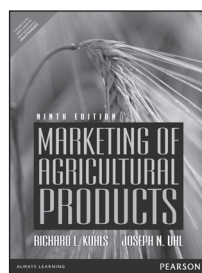
19. Propagation Methods and Rootstocks for Fruit and Nut Species
20. Propagation of Ornamental Trees, Shrubs, and Woody Vines
21. Propagation of Selected Annuals and Herbaceous Perennials Used As Ornamentals

**About the Authors**

**Dale E. Kester** is Professor of Pomology emeritus at the University of California, Davis. During his 40 years at the University of California he taught courses in plant propagation and pomology. He has been a member of the American Society of Horticultural Science, becoming a Fellow in 1977. He received jointly the Stark Award in 1980. He has published over 100 research and popular publications in plant propagation and pomology. He has had a lifelong collaboration with Dr. Hudson T. Hartmann which resulted in the publication of the first edition of Plant Propagation: Principles and Practices in 1959, followed by other editions in 1968, 1975, 1983, and 1990. One of the founders of the Western Region of the International Plant Propagators' Society (1960), he has served the society in various capacities including Vice-President, program chair (1996) and President (1997). He received the Curtis J. Alley Achievement Award in 1999.

**Fred T. Davies, Jr.**, Professor of Horticultural Sciences, and Molecular and Environmental Plant Sciences, Texas A&M University, has taught courses in plant propagation and nursery production and management since 1979. He has co-authored over 100 research and technical publications. He was a Fulbright Senior Fellow to Mexico (1993) and Peru (1999), and a J.S. Guggenheim Fellow (1999). He received the Distinguished Achievement Award for Nursery Crops from the American Society of Horticultural Sciences (1989), L.M. Ware Distinguished Research Award-ASHS-SR (1995), and S.B. Meadows Award of Merit-International Plant Propagator's Society-SR (1994). He is a recipient of the Association of Former Students Distinguished Achievement Award for Teaching-TAMU (1997), Chancellor of Agriculture's Award in Excellence in Undergraduate Teaching-TAMU (1998), L.M. Ware Distinguished Teaching Award, ASHS-SR (1998), and L.C. Chadwick Educator's Award, American Nursery and Landscape Association (1999). He is the International Division Vice-President-ASHS. He was President, and is currently Editor, of the IPPS-SR.

**Robert L. Geneve** is a Professor in the Department of Horticulture at the University of Kentucky. He teaches courses in plant propagation and seed biology. He has co-authored over 70 scientific and technical articles in seed biology, cutting propagation, and tissue culture. He is also the co-editor of the book Biotechnology of Ornamental Plants and author of A Book of Blue Flowers. He has served as a board member for the International Plant Propagators' Society-Eastern Region and serves on the Editor for the international horticulture journal, *Scientia Horticulturae*.



**Marketing of Agricultural Products, 9e**

**Richard Kohls**  
**Joe Uhl**

ISBN: 9789332556966  
 © 2015  
 Pages: 544



**About the Book**

For beginning-level food marketing courses in departments of agricultural economics.

Marketing of Agricultural Products has provided instructors a comprehensive and balanced treatment of food marketing systems since its introduction in 1955. It blends marketing and economic theory with real world analytical tools in order to assist students in better understanding the food system and making profitable marketing decisions.

**Features**

- NEW - Completely updated content, tables, figures, and references—Uses 1997 Census of Agriculture and Business, Trade data, and U.S. Department of Agriculture studies.
- Gives students the most up-to-date information on the changing structure of the food industry.
- NEW - New mini-cases dramatizing food marketing situations and problems.
- Assists students in understanding and appreciating the real world of food marketing problem solving and applying text materials to real life situations.
- NEW - New educational objectives/expected outcomes and quotations at the beginning of each chapter, and questions for discussion at the end of chapters.
- Provides students with a preview of the most important chapter material and a post-test for checking their understanding.
- NEW - Added information on career opportunities in food marketing.
- Helps students explore their career interests and encourages them to explore career opportunities in food marketing.
- NEW - Increased treatment of food value-adding and marketing management—including advertising, new product development, sales promotion, pricing, and logistics.

**Contents**

**I. THE FRAMEWORK OF THE MARKETING PROBLEM.**

1. Introduction to Food Marketing.
2. Analyzing Agricultural and Food Markets.
3. Agricultural Production and Marketing.

**II. FOOD MARKETS AND INSTITUTIONS.**

4. Food Consumption and Marketing.
5. Food Processing and Manufacturing.
6. Food Wholesaling and Retailing.
7. The International Food Market.

**III. PRICES AND MARKETING COSTS.**

8. Price Analysis and the Exchange Function.
9. Competition in Food Markets.
10. Farm and Food Prices.
11. Food Marketing Costs.

**IV. FUNCTIONAL AND ORGANIZATIONAL ISSUES.**

12. The Changing Organization of Food Markets.
13. Cooperatives in the Food Industry.
14. Market Development and Demand Expansion.
15. Market and Bargaining Power.
16. Market Information.
17. Standardization and Grading.
18. Transportation.

19. Storage.
20. Risk Management and the Futures Market.

#### **V. THE GOVERNMENT AND FOOD MARKETING.**

21. Government, Price, Income and Marketing Programs.
22. Food Marketing Regulations.

#### **VI. COMMODITY MARKETING.**

23. Livestock and Meat Marketing.
24. Milk and Dairy Product Marketing.
25. Poultry and Egg Marketing.
26. Grain Marketing.
27. Cotton and Textile Marketing.
28. Tobacco and Tobacco Product Marketing.
29. Fruit and Vegetable Marketing.

#### **About the Authors**

**Richard Kohls**, a pioneer in agricultural marketing, is Emeritus Professor of Agricultural Economics at Purdue University. Born in 1921 in Kentland, Indiana, he received his degrees in Agricultural Economics from the University of Missouri and Purdue. He wrote the first edition of this pathbreaking book in 1955, when interest in agricultural marketing was beginning to increase. After teaching agricultural marketing for several years and conducting research and extension programs in the area, he served as Dean of Agriculture at Purdue from 1968 to 1980. Professor Kohls was awarded the American Agricultural Economics Association Outstanding Teacher Award in 1966.

**Joe Uhl** has been a professor of food marketing at Purdue University since 1966. He was born in Lima, Ohio in 1939. He teaches agricultural and food marketing classes, including the class that uses this text. He also counsels students and does research in food marketing. He served on the staff of the National Commission of Food Marketing in 1966, and he has lectured widely in Eastern Europe. He began collaborating with R. L. Kohls on this book in 1980. Professor Uhl has won both student counseling and teaching awards, the most recent for Distinguished Undergraduate Teaching from the American Agricultural Economics Association in 1989.

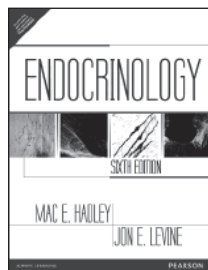
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# Anatomy & Physiology



## Endocrinology, 6/e

**Mac E. Hadley**  
**Jonathan Levine**

ISBN: 9788131726105  
© 2009  
Pages: 608

### About the Book

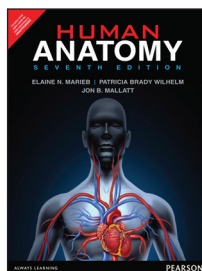
Appropriate for one-semester junior-graduate level courses in Endocrinology, Endocrine Physiology, as well as courses in medicine, dentistry, pharmacology, nutrition, nursing and other related medical or animal sciences where endocrinology is the focus. Hadley provides comprehensive coverage of endocrinology, centralizing on the critical roles of glands, hormones, receptors, and molecular signaling pathways in the control of physiological processes. This up-to-date Sixth Edition reviews the basic concepts, research methodologies, and the scientific understanding of each of the major endocrine systems, in examples designed specifically for premedical and related professional courses.

### Features

- Emphasizes that all aspects of hormone function synthesis, secretion, delivery, action and disposal are of great physiological significance.
- Special reference to the roles of chemical messengers in the control of homeostatic systems In the overall discussion of homeostasis.
- Coverage of the most recent molecular, genetic, and physiological As well as the more classical methodologies.
- Traces the evolution of hormone structure In relation to the comparative endocrinology of neurohypophysial hormones.

### Contents

1. Introduction to Endocrinology.
2. The Vertebrate Endocrine System.
3. General Mechanisms of Hormone Action.
4. Endocrine Methodologies.
5. Pituitary Hormones.
6. The Endocrine Hypothalamus.
7. Neurohypophysial Hormones.
8. Melanotropic Hormones.
9. Hormonal Control of Calcium Homeostasis.
10. Gastrointestinal Hormones.
11. Pancreatic Hormones and Metabolic Regulation.
12. Growth Hormones.
13. Thyroid Hormones.
14. Catecholamines and the Sympathoadrenal System.
15. Adrenal Steroid Hormones.
16. Endocrinology of Sex Differentiation and Development.
17. Hormones and Male Reproductive Physiology.
18. Hormones and Female Reproductive Physiology.
19. Endocrinology of Pregnancy, Parturition and Lactation.
20. Endocrine Role of the Pineal Gland.



## Human Anatomy, 7/e

**Elaine N Marieb**

ISBN: 9789332570993  
© 2016  
Pages: 888



### About the Book

The #1 best-selling textbook for the human anatomy course, Human Anatomy, Seventh Edition is widely regarded as the most readable and visually accessible book on the market. The new edition builds on the book's hallmark strengths—art that teaches better; a student-friendly narrative, and easy-to-use media and assessment tools—and improves on them with new and updated Focus Figures and new in-text media references. This edition also features vivid new clinical photos that reinforce real-world applications, and new cadaver photos and micrographs that appear side-by-side with art—all to increase students' ability to more accurately visualize key anatomical structures.

### Features

- Unique Focus Figure helps students grasp tough topics in anatomy by walking them through carefully developed illustrations that teach key concepts using large and dramatic layouts.
- Clear and concise tables, including many hallmark illustrated tables, condense relevant information into one place to facilitate the student's learning experience.
- Realistic bone art is consistent, three-dimensional, and incredibly life-like.
- Author-voice blue step text aids students in walking through a process or pathway for select gures.

### Contents

1. The Human Body: An Orientation
2. Cells: The Living Units
3. Basic Embryology
4. Tissues
5. The Integumentary System
6. Bones and Skeletal Tissues
7. Bones, Part 1: The Axial Skeleton
8. Bones, Part 2: The Appendicular Skeleton
9. Joints
10. Skeletal Muscle Tissue
11. Muscles of the Body
12. Fundamentals of the Nervous System and Nervous Tissue
13. The Central Nervous System
14. The Peripheral Nervous System
15. The Autonomic Nervous System and Visceral Sensory Neurons
16. The Special Senses
17. The Endocrine System
18. Blood
19. The Heart
20. Blood Vessels
21. The Lymphatic and Immune Systems
22. The Digestive System
23. The Respiratory System
24. The Urinary System
25. The Reproductive System

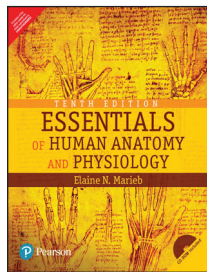
### About the Authors

Elaine Marieb began her teaching career at Springfield College, where she taught anatomy and physiology to physical education majors. She then joined the faculty of the Biological Science Division of Holyoke Community College

after receiving her Ph.D. in zoology from the University of Massachusetts at Amherst.

Patricia Brady Wilhelm received her Ph.D. in Biological and Medical Sciences from Brown University and is currently Professor of Biology at the Community College of Rhode Island. She has been teaching anatomy to undergraduates for more than 12 years at Brown University, Rhode Island College, and the Community College of Rhode Island.

Jon Mallatt earned his Ph.D. in Anatomy from the University of Chicago. Dr. Mallatt is currently an Associate Professor of Biological Sciences at Washington State University, where he has been teaching human anatomy to undergraduates of all backgrounds for 24 years.



## Essentials of Human Anatomy & Physiology, 10e

Elaine N. Marieb

ISBN: 9789332578548

© 2016

Pages: 648



### About the Book

With the Ninth Edition of Human Anatomy & Physiology, trusted authors Elaine N. Marieb and Katja Hoehn have produced the most accessible, comprehensive, up-to-date and visually stunning anatomy & physiology textbook on the market. Marieb draws on her career as an A&P professor and her experience completing her nursing education; Hoehn relies on her medical education and award-winning classroom instruction—together, they explain anatomy & physiology concepts and processes in a meaningful and memorable way.

In the most extensive revision to date—the Ninth Edition presents information in smaller and more digestible bites, making it easier to read and navigate.

### Features

- The clear and inviting writing style engages students with everyday analogies that explain difficult concepts and hold students' attention.
- Check Your Understanding concept check questions, which are tied to section.
- The enhanced art program accelerates the learning process with large, clear anatomical figures, handy illustrated tables, color-coded flow charts, and realistic illustrations of microscopic structures.
- Muscle art features realistic, natural-looking colors and textures that are consistent in style from figure-to-figure.
- Blue text acts as the author's voice and explains processes. In some figures the text is broken into numbered steps to help students more easily understand processes one step at a time.
- Comprehensive clinical applications appear in numerous Homeostatic Imbalance examples throughout every chapter, Closer Look enrichment essays, and the new At the Clinic section, which offers End-of-Chapter Case Studies for 24 of the 29 chapters. Critical Thinking and Clinical Application Questions help students further apply their knowledge.

### Contents

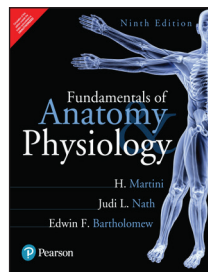
1. The Human Body: An Orientation
2. Chemistry Comes Alive
3. Cells: The Living Units
4. Tissue: The Living Fabric
5. The Integumentary System
6. Bones and Skeletal Tissues
7. The Skeleton

8. Joints
9. Muscles and Muscle Tissue
10. The Muscular System
11. Fundamentals of the Nervous System and Nervous Tissue
12. The Central Nervous System
13. The Peripheral Nervous System and Reflex Activity
14. The Autonomic Nervous System
15. The Special Senses
16. The Endocrine System
17. Blood
18. The Cardiovascular System: The Heart
19. The Cardiovascular System: Blood Vessels
20. The Lymphatic System and Lymphoid Organs and Tissues
21. The Immune System: Innate and Adaptive Body Defensives
22. The Respiratory System
23. The Digestive System
24. Nutrition, Metabolism, and Body Temperature Regulation
25. The Urinary System
26. Fluid, Electrolyte, and Acid-Base Balance
27. The Reproductive System
28. Pregnancy and Human Development
29. Heredity

### About the Author

For Elaine N. Marieb, taking the student's perspective into account has always been an integral part of her teaching style. Dr. Marieb began her teaching career at Springfield College, where she taught anatomy and physiology to physical education majors. She then joined the faculty of the Biological Science Division of Holyoke Community College after receiving her Ph.D. in zoology from the University of Massachusetts at Amherst.

While teaching at Holyoke Community College, where many of her students were pursuing nursing degrees, she developed a desire to better understand the relationship between the scientific study of the human body and the clinical aspects of the nursing practice. To that end, while continuing to teach full time, Dr. Marieb pursued her nursing education, which culminated in a Master of Science degree with a clinical specialization in gerontology from the University of Massachusetts. It is this experience, along with stories from the field—including those of former students, now in health careers—that has informed the development of the unique perspective and accessibility for which her texts and laboratory manuals are known.



## Fundamentals of Anatomy & Physiology, 9e

Frederic H. Martini

Judi L. Nath

Edwin F. Bartholomew

ISBN: 9789332578579

© 2016

Pages: 1280



### About the Book

Frederic ("Ric") Martini, joined by accomplished educator, award-winning teacher, and co-author Judi Nath, has substantially revised Fundamentals of Anatomy & Physiology to make the Ninth Edition the most readable and visually effective edition to date. New Spotlight figures integrate brief text and visuals for easy reading.

### Features

- Spotlight Figures provide highly visual one- and two-page presentations of tough topics in the book, with a particular focus on physiology.
- Clinical Notes appear within every chapter, expand upon topics just discussed, and present diseases and pathologies along with their relationship to normal function. These Clinical Notes relate directly to what students will encounter in their future careers.

- Checkpoints ask students to pause and check their understanding of facts and concepts. They are located at predictable points throughout the chapter, at the end of each major topic, and the answers are at the back of the book.
- Tips & Tricks boxes are brief and concrete learning tools that give students simple analogies and easy memory devices to help them remember facts and concepts.
- Important topics coverage such as The Endocrine System, The Lymphatic System and Immunity, The Respiratory System, The Digestive System, The Urinary System, The Reproductive System

## Contents

1. An Introduction to Anatomy and Physiology
2. The Chemical Level of Organization
3. The Cellular Level of Organization
4. The Tissue Level of Organization
5. The Integumentary System
6. Osseous Tissue and Bone Structure
7. The Axial Skeleton
8. The Appendicular Skeleton
9. Articulations
10. Muscle Tissue
11. The Muscular System
12. Neural Tissue
13. The Spinal Cord, Spinal Nerves, and Spinal Reflexes
14. The Brain and Cranial Nerves
15. Neural Integration I: Sensory Pathways and the Somatic Nervous System
16. Neural Integration II: The Autonomic Nervous System and Higher-Order Functions
17. The Special Senses
18. The Endocrine System
19. Blood
20. The Heart
21. Blood Vessels and Circulation
22. The Lymphatic System and Immunity
23. The Digestive System
24. The Respiratory System
25. Metabolism and Energetics
26. The Urinary System
27. Fluid, Electrolyte, and Acid-Base Balance
28. The Reproductive System
29. Development and Inheritance

## About the Authors

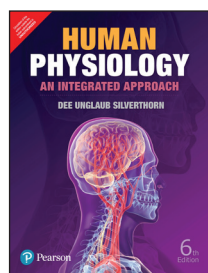
Dr. Frederic ("Ric") Martini received his Ph.D. from Cornell University in comparative and functional anatomy for work on the pathophysiology of stress.

Dr. Judi L. Nath is a biology professor at Lourdes College, where she teaches anatomy and physiology, pathophysiology, medical terminology, and pharmacology.

Ed Bartholomew received his undergraduate degree from Bowling Green State University and his M.S. from the University of Hawaii.

Bill Ober is the lead illustrator on all Martini titles. Bill is an Affiliate Professor of Biology at Washington and Lee University (Lexington, VA) and is part of the Core Faculty at Shoals Marine Laboratory (Portsmouth, NH), where he teaches Biological Illustration most summers.

Claire E. Ober is an illustrator who works closely with Bill Ober.



## Human Physiology, An Integrated Approach, 6e

Dee Unglaub Silverthorn

ISBN: 9789332577541

© 2016

Pages: 1032



## About the Book

Human Physiology: An Integrated Approach broke ground with its thorough coverage of molecular physiology seamlessly integrated into a traditional homeostasis-based systems approach. The newly revised Sixth Edition introduces a major reorganization of the early chapters to provide the best foundation for the course and new art features that streamline review and essential topics so that students can access them more easily on an as-needed basis.

## Features

- Four chapters on Integrative Physiology (chapters 6, 13, 20, and 25) demonstrate how physiological processes work together in an integrated system. These chapters also explore how body systems influence each other and show that overall systems are often more complicated than the sum of their component parts.
- Interactive pedagogy encourages students to assess their knowledge as they read rather than waiting until the end of the chapter:
- Background Basics sections at the beginning of each chapter encourage students to revisit and review topics for the upcoming chapter.
- Concept Links (signaled with white and blue chain link symbols) help students locate material they need to review.
- Concept Checks are placed at intervals throughout the chapters and ask students to test their understanding before continuing to the next topic.
- Figure and graph questions promote analytical skills by encouraging students to interpret data and information.
- Running Problems appear in segments throughout each chapter and require students to apply what they have learned to a real life pathophysiology case study.
- The end-of-chapter, four-level learning system helps build student confidence and understanding by progressing from factual questions to conceptual problems, and from these, to analytical exercises to quantitative questions.

## Contents

### I. BASIC CELL PROCESSES: INTEGRATION AND COORDINATION

1. Introduction to Physiology
2. Molecular Interactions
3. Compartmentation: Cells and Tissues
4. Energy and Cellular Metabolism
5. Membrane Dynamics
6. Communication, Integration, and Homeostasis

### II. HOMEOSTASIS AND CONTROL

7. Introduction to the Endocrine System
8. Neurons: Cellular and Network Properties
9. The Central Nervous System
10. Sensory Physiology
11. Efferent Division: Autonomic and Somatic Motor Control
12. Muscles
13. Integrative Physiology I: Control of Body Movement

### III. INTEGRATION OF FUNCTION

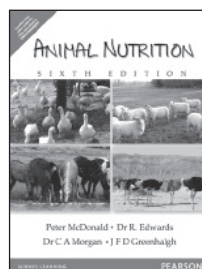
14. Cardiovascular Physiology
15. Blood
16. Blood Flow and the Control of Blood Pressure
17. Mechanics of Breathing
18. Gas Exchange and Transport

19. The Kidneys
20. Integrative Physiology II: Fluid and Electrolyte Balance
- IV. METABOLISM, GROWTH, AND AGING
21. Digestion
22. Metabolism and Energy Balance
23. Endocrine Control of Growth and Metabolism
24. The Immune System
25. Integrative Physiology III: Exercise
26. Reproduction and Development

### About the Authors

**Dee Unglaub Silverthorn** studied biology as an undergraduate at Tulane University and received a Ph.D. in marine science from the University of South Carolina. Her research interest is epithelial transport, and recent work in her laboratory has focused on transport properties of the chick allantoic membrane. She began her teaching career in the Physiology Department at the Medical University of South Carolina but over the years has taught a wide range of students, from medical and college students to those still preparing for higher education. At the University of Texas-Austin she teaches physiology in both lecture and laboratory settings, and instructs graduate students on developing teaching skills in the life sciences. She has received numerous teaching awards and honors, including the 2009 Outstanding Undergraduate Science Teacher Award from the Society for College Science Teachers, the American Physiological Society's Claude Bernard Distinguished Lecturer and Arthur C. Guyton Physiology Educator of the Year, UT System Regents' Outstanding Teaching Award, and multiple awards from UT-Austin, including the Burnt Orange Apple Award. The first edition of her textbook won the 1998 Robert W. Hamilton Author Award for best textbook published in 1997–98 by a University of Texas faculty member.

## Animal Science/Zoology



### Animal Nutrition 6/e

**Peter McDonald**  
**Dr R. Edwards**  
**Dr C A Morgan**  
**Professor J F D Greenhalgh**

ISBN: 9788131717608

© 2002

Pages: 708

### About the Book

The latest edition of this classic text, now in a larger format with improved artwork, continues to provide a clear and comprehensive introduction to the science and practice of animal nutrition.

### Features

- New chapter on Animal Nutrition and the Consumers of Animal Products addressing contemporary concerns for safety in human diets.
- New chapter on Feed Additives.
- Major revisions of chapters on food analysis, lipids, metabolism, energy systems and protein evaluation.
- Now includes comments on the nutrition of the horse and feeding standards for this species.
- New chapter summaries and problems and solutions to aid student learning.
- Updated suggestions for further reading

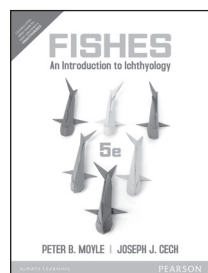
### Contents

1. The animal and its food
2. Carbohydrates
3. Lipids
4. Proteins, nucleic acids and other nitrogenous compounds
5. Vitamins
6. Minerals
7. Enzymes
8. Digestion
9. Metabolism
10. Evaluation of foods (A) Digestibility
11. Evaluation of foods (B) Energy content of foods and the partition of food within the animal
12. Evaluation of foods (C) Systems for expressing the energy value of foods
13. Evaluation of foods (D) Protein
14. Feeding standards for maintenance and growth
15. Feeding standards for reproduction
16. Lactation
17. Voluntary intake of food
18. Animal nutrition and the consumers of animal products
19. Grass and forage crops
20. Silage
21. Hay, artificially dried forages straws and chaff
22. Roots, tubers and related by-products
23. Cereal grains and cereal by-products
24. Protein concentrates
25. Food additives

### About the Author

**P McDonald** was formerly Head of the Department of Agricultural Biochemistry at Edinburgh School of Agriculture. **RA Edwards** was formerly Head of the Department of Animal Nutrition at Edinburgh School of Agriculture. **JFD Greenhalgh** is Emeritus Professor of Animal Production

and Health at the University of Aberdeen. **CA Morgan** is an animal nutritionist at the Scottish Agricultural College, Edinburgh.



## Fishes: An Introduction to Ichthyology, 5/e

**Peter B. Moyle**

**Joseph J. Cech**

ISBN: 9789332556935

© 2015

Pages: 744



### About the Book

One of the most comprehensive and current general sources of information on fishes, this text covers a broad number of topics such as including the structure and physiology, evolution, otaxonomy, zoogeography, ecology, and conservation of fishes. While providing the basic background of fish biology, the conservation approach and up-to-date coverage conveys the excitement being generated by recent research on fishes.

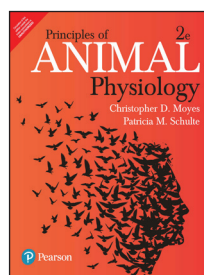
### Features

- Provides more global comprehensive examples for a broader perspective of fishes.
- Conservation orientation—Includes references to applied problems in all chapters that reflect the interests of the authors in real-world issues.
- Sustains students' interest and takes the subject matter beyond the classroom.
- "Lessons" from the chapter—Appear in the text at the end of each chapter.
- Provides students with the most important concepts and key ideas from the chapter. Offers instructors a good basis for essay-type questions.
- Unique system-by-system coverage of ecology—Provides detailed examinations of specific habitats, their fish assemblages, and the special physical, chemical, and biological factors that characterize them.
- Gives students solid, thorough coverage of the unique ecologies of many different fish habitats.
- Updated fish classification system.
- Provides students with the latest version of Nelson's book on fish classification.

### Contents

1. Introduction.
2. Form and Movement.
3. Respiration.
4. Blood and its Circulation.
5. Buoyancy and Thermal Regulation.
6. Hydronuneral Balance.
7. Feeding, Nutrition, Digestion, and Excretion.
8. Growth.
9. Reproduction.
10. Sensory Perception.
11. Behavior and Communication.
12. Systematics, Genetics and Speciation.
13. Evolution.
14. Hagfishes and Lampreys.
15. Sharks, Rays and Chimaeras.
16. Relict Bony Fishes.
17. Bonytongues, Eels and Herrings.
18. Minnows, Characins, and Catfishes.
19. Smelt, Salmon and Pike.
20. Angler Fish, Barracudinas, Cods, and Dragonfishes.

21. Mulletts, Silversides, Flying Fish, and Killifish.
22. Opahs, Squirrelfish, Dories, Pipefish, and Sculpins.
23. Perciformes: Snooks to Snakeheads.
24. Flounders, Puffers, and Molas.
25. Zoogeography of Freshwater Fishes.
26. Zoogeography of Marine Fishes.
27. Introduction to Ecology.
28. Temperate Streams.
29. Temperate Lakes and Reservoirs.
30. Tropical Freshwater Lakes and Streams.
31. Estuaries.
32. Coastal Habitats.
33. Tropical Reefs.
34. Epipelagic Zone.
35. Deep Sea Habitats.
36. Polar Regions.
37. Conservation.



## Principles of Animal Physiology, 2e

**Christopher D. Moyes**

**Patricia M. Schulte**

ISBN: 9789332577473

© 2016

Pages: 768



### About the Book

Principles of Animal Physiology, Second Edition continues to set a new standard for animal physiology textbooks with its focus on animal diversity, its modern approach and clear foundation in molecular and cell biology, its concrete examples throughout, and its fully integrated coverage of the endocrine system. Carefully designed, full-color artwork guides students through complex systems and processes while in-text pedagogical tools help them learn and remember the material. The book includes the most up-to-date research on animal genetics and genomics, methods and models, and offers a diverse range of vertebrate and invertebrate examples, with a student-friendly writing style that is consistently clear and engaging. Christopher Moyes and Patricia Schulte present animal physiology in a current, balanced, and accessible way that emphasizes the integration of physiological systems, an overarching evolutionary theme, and thorough coverage of the cellular and molecular basis of animal physiology.

### Features

- Applications boxes show students how animal physiology is relevant to a variety of fields.
- Thorough, up-to-date coverage of the cellular and molecular basis of physiology provides a solid introduction to recent research developments.
- Promoting effective learning is a key goal of the text, with several methods to help students get the most out of the course.
- NEW! Concept Check Questions appear throughout each chapter. Answers can be found on the text's Companion Website.
- End-of-chapter Review, Synthesis, and Quantitative (NEW!) Questions provide increasingly sophisticated and challenging ways for students to test their comprehension of important concepts. Answers can be found on the text's Companion Website.
- Overview figures begin each chapter, helping encapsulate the key concepts of the chapter and providing a guide for review and self-study.
- Sentence-format headings enhance student comprehension and allow for efficient review.
- Clear and engaging writing style captures students' attention and

makes complex physiological concepts and processes easy to understand.

## Contents

### Part I. The Cellular Basis of Animal Physiology

1. Introduction to Physiological Principles
2. Chemistry, Biochemistry, and Cell Physiology
3. Cell Signaling and Endocrine Regulation
4. Neuron Structure and Function
5. Cellular Movement and Muscles

### Part II. Integrating Physiological Systems

6. Sensory Systems
7. Functional Organization of Nervous Systems
8. Circulatory Systems
9. Respiratory Systems
10. Ion and Water Balance
11. Digestion
12. Locomotion
13. Thermal Physiology
14. Reproduction

## About the Authors

**Christopher D. Moyes** received his Ph.D. in Zoology from the University of British Columbia in the area of comparative muscle physiology. After postdoctoral fellowships in molecular physiology at the U.S. National Institutes of Health and Simon Fraser University, he took a position at Queen's University, where he is an associate professor in the Department of Biology. He teaches a spectrum of courses in cell biology and animal physiology, while continuing to pursue his research interests in molecular physiology and biochemistry.

**Patricia M. Schulte** received her Ph.D. in Biological Sciences from Stanford University in the area of evolutionary physiology focusing on the role that changes in gene expression play in evolution. She is currently an assistant professor in the Department of Zoology at the University of British Columbia in Vancouver, where she teaches animal physiology and evolutionary physiology and runs an active research program.

- Covers eight primary livestock industries—beef, dairy, sheep, goats, swine, horses, poultry, and aquaculture.
- Gives insight into the societal issues surrounding the livestock industry.
- Includes a separate chapter on Careers—available online.
- Uses numerous photographs and line drawings—throughout the text.

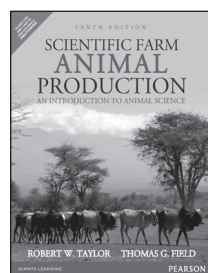
## Contents

1. Animal Contribution to Human Needs
2. Overview of the Livestock and Poultry Industries
3. Red Meat Products
4. Poultry and Egg Products
5. Milk and Milk Products
6. Wool and Mohair
7. By-Products of Meat Animals
8. Market Classes and Grades of Livestock, Poultry, and Eggs
9. Visual Evaluation of Market Animals
10. Reproduction
11. Artificial Insemination, Estrous Synchronization, and Embryo Transfer
12. Genetics
13. Genetic Change through Selection
14. Mating Systems
15. Nutrients and Their Functions
16. Digestion and Absorption of Feed
17. Providing Nutrients for Body Functions
18. Growth and Development
19. Lactation
20. Adaptation to the Environment
21. Animal Health
22. Animal Behavior
23. Beef Cattle Breeds and Breeding
24. Feeding and Managing Beef Cattle
25. Dairy Cattle Breeds and Breeding
26. Feeding and Managing Dairy Cattle
27. Swine Breeds and Breeding
28. Feeding and Managing Swine
29. Sheep and Goat Breeds and Breeding
30. Feeding and Managing Sheep and Goats
31. Horse Breeds and Breeding
32. Feeding and Managing Horses
33. Poultry Breeding, Feeding, and Management
34. Aquaculture

## About the Authors

**Robert E. Taylor** was raised on an Idaho livestock operation where several livestock species were produced. He received a B.S. degree in animal husbandry and a Master's degree in animal production from Utah State University. This background, combined with his Ph.D. work in animal breeding and physiology from Oklahoma State University, provided much depth to his knowledge of livestock production. He has had practical production experience with beef cattle, dairy cattle, horses, poultry, sheep, and swine.

**Thomas G. Field** was raised on a Colorado cow-calf and seedstock enterprise. He managed a seedstock herd of cattle after completing his B.S. degree. A competitive horseman as a youth, he has had practical experience with seedstock cattle, commercial cow-calf production, stockers, and horses. He has a B.S., M.S., and Ph.D. in animal science from Colorado State University.



## Scientific Farm Animal Production, 10/e

**Robert W. Taylor**  
**Tom G. Field**

ISBN: 9789332550049  
© 2015  
Pages: 672



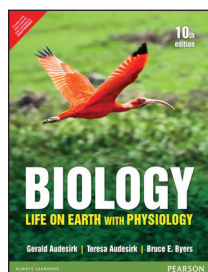
## About the Book

**Scientific Farm Animal Production: An Introduction to Animal Science, Tenth Edition**, offers students a comprehensive, science-based approach to managing livestock for food, fiber, and recreation. This best-selling text examines the biological principles, scientific relationships, and management practices of livestock production, providing students the context and foundation upon which they can determine their academic and career focus. Updated with new figures, color photos, and current demographic data, the tenth edition is the best reference and resource available to teachers and students at the introductory level in animal sciences.

## Features

- Offers both breadth and depth that is unparalleled—making this a best-seller and frequent reference for livestock producers and students.
- Views livestock production from various disciplines—such as growth, genetics, reproduction, nutrition, lactation, animal health, etc.

# General Biology



## Biology: Life on Earth with Physiology, 10/e

Gerald Audesirk  
Teresa Audesirk  
Bruce E. Byers

ISBN: 9789332570986

© 2016

Pages: 1056



### About the Book

Biology: Life on Earth with Physiology, Tenth Edition continues this book's tradition of engaging non-majors biology students with real-world applications, high-interest case studies, and inquiry-based pedagogy that fosters a lifetime of discovery and scientific literacy.

Maintaining the friendly writing style that has made the book a best-seller, the Tenth Edition continues to incorporate true and relevant stories using a chapter-opening Case Study that is revisited throughout the chapter and concluded at the end of the chapter. New to the Tenth Edition are Learning Goals and Check Your Learning questions that help students assess their understanding of the core concepts in biology. To increase the book's focus on health science, additional Health Watch essays are provided throughout units, and more anatomy & physiology content has been incorporated into the main narrative.

### Features

- Case Study features, which open all chapters in the book and draw students in by telling a true yet extraordinary story that relates to the biological theme of the chapter.
- Every chapter uses an inquiry approach, encouraging students to pause, think, and then answer questions as they read.
- Check Your Learning questions now conclude each main section, and encourage students to assess their understanding of recently read material.
- Boxed essays in every chapter expose students to biology that relates to everyday issues and events which they may encounter in their lives or in the news:
- A vibrant and accessible art program visually draws students into learning the material and effectively teaches concepts:
- Numbered steps within the artwork break down complex processes into more manageable chunks.

### Contents

1. An Introduction to Life on Earth

#### I. THE LIFE OF THE CELL

2. Atoms, Molecules, and Life

3. Biological Molecules

4. Cell Structure and Function

5. Cell Membrane Structure and Function

6. Energy Flow in the Life of a Cell

7. Capturing Solar Energy: Photosynthesis

8. Harvesting Energy: Glycolysis and Cellular Respiration

#### II. INHERITANCE

9. The Continuity of Life: Cellular Reproduction

10. Patterns of Inheritance

11. DNA: The Molecule of Heredity

12. Gene Expression and Regulation

#### III. EVOLUTION AND DIVERSITY OF LIFE

14. Principles of Evolution

15. How Populations Evolve

16. The Origin of Species

17. The History of Life

18. Systematics: Seeking Order Amid Diversity

19. The Diversity of Prokaryotes and Viruses

20. The Diversity of Protists

21. The Diversity of Plants

22. The Diversity of Fungi

23. Animal Diversity I: Invertebrates

24. Animal Diversity II: Vertebrates

#### IV. BEHAVIOR AND ECOLOGY

25. Animal Behavior

26. Population Growth and Regulation

27. Community Interactions

28. Energy Flow and Nutrient Cycling in Ecosystems

29. Earth's Diverse Ecosystems

30. Conserving Earth's Biodiversity

#### V. ANIMAL ANATOMY AND PHYSIOLOGY

31. Homeostasis and the Organization of the Animal Body

32. Circulation

33. Respiration

34. Nutrition and Digestion

35. The Urinary System

36. Defense Against Disease

37. Chemical Control of the Animal Body: The Endocrine System

38. The Nervous System

39. The Senses

40. Action and Support: The Muscles and Skeleton

41. Animal Reproduction

42. Animal Development

#### VI. PLANT ANATOMY AND PHYSIOLOGY

43. Plant Anatomy and Nutrient Transport

44. Plant Reproduction and Development

45. Plant Responses to the Environment

46. Biotechnology

### About the Authors

#### TERRY AND GERRY AUDESIRK

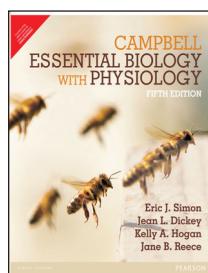
grew up in New Jersey, where they met as undergraduates. After marrying in 1970, they moved to California, where Terry earned her doctorate in marine ecology at the University of Southern California and Gerry earned his doctorate in neurobiology at the California Institute of Technology. As postdoctoral students at the University of Washington's marine laboratories, they worked together on the neural bases of behavior, using a marine mollusk as a model system.

They are now emeritus professors of biology at the University of Colorado Denver, where they taught introductory biology and neurobiology from 1982 through 2006.

#### BRUCE E. BYERS

is a midwesterner transplanted to the hills of western Massachusetts, where he is a professor in the biology department at the University of Massachusetts, Amherst. He's been a member of the faculty at UMass (where he also completed his doctoral degree) since 1993. Bruce teaches introductory biology courses for both nonmajors and majors; he also teaches courses in ornithology and animal behavior.

A lifelong fascination with birds ultimately led Bruce to scientific exploration of avian biology.



## Campbell Essential Biology with Physiology, 5/e

Eric J. Simon  
Jean L. Dickey  
Kelly A. Hogan  
Jane B. Reece

ISBN: 9789332555372

© 2016

Pages: 520



### About the Book

This best-selling textbook, known for its scientific accuracy, clear explanations, and intuitive illustrations, has been revised to further emphasize the relevance of biology to everyday life, using memorable analogies, real-world examples, conversational language, engaging new Why Biology Matters photo essays, and more.

### Features

- **Why Biology Matters** photo essays engage student curiosity about biology through the use of dynamic photographs and intriguing scientific observations. Each intriguing science fact is later revisited in the chapter narrative to help students see the link between the everyday application of biology and the chapter material.
- Analogies and applications to everyday life have been added throughout the prose and the illustrations, making key concepts easier to visualize and to remember for students who are learning the material for the first time.
- **Chapter threads** explore a single high-interest topic throughout each chapter in “Biology and Society” essays, “Process of Science” investigations, and “Evolution Connection” discussions.
- **Interpreting Data** end-of-chapter questions help students learn to use quantitative material by analyzing graphs and interacting with other data.
- **Process of Science** essays appear in every chapter and walk students through each step of the scientific method as it applies to a specific research question.

### Contents

Preface

Acknowledgements

1 Introduction: Biology Today

UNIT 1 Cells

2 Essential Chemistry for Biology

3 The Molecules of Life

4 A Tour of the Cell

5 The Working Cell

6 Cellular Respiration: Obtaining Energy from Food

7 Photosynthesis: Using Light to Make Food

UNIT 2 Genetics

8 Cellular Reproduction: Cells from Cells

9 Patterns of Inheritance

10 The Structure and Function of DNA

11 How Genes Are Controlled

12 DNA Technology

UNIT 3 Animal Structure and Function

13 Unifying Concepts of Animal Structure and Function

14 Nutrition and Digestion

15 Circulation and Respiration

16 The Body's Defenses

17 Hormones

18 Reproduction and Development

19 Nervous, Sensory, and Locomotor Systems

UNIT 4 Plant Structure and Function

20 The Life of a Flowering Plant

21 The Working Plant

Appendices

Credits

Self-Quiz Answers

Glossary

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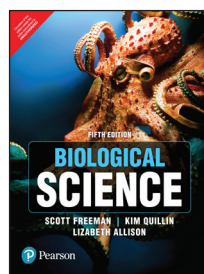
### About the Authors

**Eric Simon**, Department of Biology and Health Science, New England College, Henniker

**Jean Dickey**, Department of Biology, Clemson University, Clemson

**Kelly Hogan**, Department of Biology, University of North Carolina, Chapel Hill

**Jane Reece**, Berkeley, California



## Biological Science, 5e

Scott Freeman  
Kim Quillin  
Lizabeth Allison

ISBN: 9789332575912

© 2016

Pages: 1502



### About the Book

Scott Freeman's Biological Science is beloved for its Socratic narrative style, its emphasis on experimental evidence, and its dedication to active learning. In the Fifth Edition, the author team has expanded to include new members—bringing a fresh focus on accuracy and currency, and multiplying the dedication to active learning by six.

### Features

- Research Boxes and many new in-text discussions highlight the latest research and show students the ongoing nature of scientific discovery.
- Chapter-opening Roadmaps visually group and organize information to help students anticipate key ideas as well as recognize meaningful relationships and connections between the ideas.
- Big Picture concept maps integrate visuals and words to help students synthesize information across chapters and units on challenging topics in biology.
- Quantitative questions are identified throughout the text, helping professors and students engage in computational problem-solving.
- Data sources have been identified for all graphs and charts throughout the text, to emphasize the research process that leads to our understanding of biological ideas.

### Contents

1. Biology and the Tree of Life

**I. THE MOLECULES OF LIFE**

2. Water and Carbon: The Chemical Basis of Life

3. Protein Structure and Function

4. Nucleic Acids and the RNA World

5. An Introduction to Carbohydrates

6. Lipids, Membranes, and the First Cells

**II. CELL STRUCTURE AND FUNCTION**

7. Inside the Cell

8. Cell-Cell Interactions

9. Cellular Respiration and Fermentation

10. Photosynthesis

11. The Cell Cycle

**III. GENE STRUCTURE AND EXPRESSION**

12. Meiosis

13. Mendel and the Gene

14. DNA and the Gene: Synthesis and Repair
15. How Genes Work
16. Transcription, RNA Processing, and Translation
17. Control of Gene Expression in Bacteria
18. Control of Gene Expression in Eukaryotes
19. Analyzing and Engineering Genes
20. Genomics

#### **IV. DEVELOPMENTAL BIOLOGY**

21. Principles of Development
22. An Introduction to Animal Development
23. An Introduction to Plant Development

#### **V. EVOLUTIONARY PROCESSES AND PATTERNS**

24. Evolutionary Processes
25. Evolution by Natural Selection
26. Speciation
27. Bacteria and Archaea

#### **VI. THE DIVERSIFICATION OF LIFE**

28. Phylogenies and the History of Life
29. Protists
30. Green Algae and Land Plants
31. Fungi
32. An Introduction to Animals
33. Protostome Animals
34. Deuterostome Animals
35. Viruses

#### **VII. HOW PLANTS WORK**

36. Plant Form and Function
37. Water and Sugar Transport in Plants
38. Plant Nutrition
39. Plant Sensory Systems, Signals, and Responses
40. Plant Reproduction

#### **VIII. HOW ANIMALS WORK**

41. Animal Form and Function
42. Water and Electrolyte Balance in Animals
43. Animal Nutrition
44. Gas Exchange and Circulation
45. Electrical Signals in Animals
46. Animal Sensory Systems and Movement
47. Chemical Signals in Animals
48. Animal Reproduction
49. The Immune System in Animals

#### **IX. ECOLOGY**

50. An Introduction to Ecology
51. Behavioral Ecology
52. Population Ecology
53. Community Ecology
54. Ecosystems
55. Biodiversity and Conservation

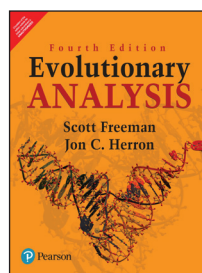
### **About the Authors**

#### **Scott Freeman**

Scott Freeman received his Ph.D. in Zoology from the University of Washington and was subsequently awarded an Alfred P. Sloan Postdoctoral Fellowship in Molecular Evolution at Princeton University. His current research focuses on the scholarship of teaching and learning and he recently published two papers on his work: (1) how active learning and peer teaching techniques increase student learning and improve performance in introductory biology (Freeman, S., E. O'Connor, J.W. Parks, M. Cunningham, D. Hurley, D. Haak, C. Dirks, and M.P. Wenderoth. 2007.

#### **Kim Quillin**

Illustrator, Kim Quillin, combines expertise in biology and information design to create lucid visual representations of biological principles. She received her B.A. in Biology at Oberlin College and her Ph.D. in Integrative Biology from the University of California, Berkeley (as a National Science Foundation Graduate Fellow), and has taught undergraduate biology at both schools.



## **Evolutionary Analysis, 4e**

**Scott Freeman**

**Jon C. Herron**

ISBN: 9789332577459

© 2016

Pages: 856



### **About the Book**

By presenting evolutionary biology as an ongoing research effort, this best-selling text aims to help students think like scientists. The authors convey the excitement and logic of evolutionary science by introducing principles through recent and classical studies, and by emphasizing real-world applications.

### **Features**

- Inquiry-Driven Presentation — Presents basic principles of evolutionary biology through the analysis of new and classical research studies.
- Evolution presented as a process — Enables students to make connections as they see a scientific theory from observation, through testing and data analysis.
- Author-developed illustration program — Includes full-color photographs, diagrams and data-graphics throughout.
- Ties the illustrations closely to the text, making the overall presentation more accessible to students.

### **Contents**

#### **I. INTRODUCTION**

1. A Case for Evolutionary Thinking: Understanding HIV
2. The Evidence for Evolution
3. Darwinian Natural Selection
4. Reconstructing Evolutionary Trees

#### **II. MECHANISMS OF EVOLUTIONARY CHANGE**

5. Mutation and Genetic Variation
6. Mendelian Genetics in Populations I: Selection and Mutation as Mechanisms of Evolution
7. Mendelian Genetics in Populations II: Migration, Genetic Drift, and Nonrandom Mating
8. Evolution at Multiple Loci: Linkage and Sex
9. Evolution at Multiple Loci: Quantitative Genetics

#### **III. ADAPTATION**

10. Studying Adaptation: Evolutionary Analysis of Form and Function
11. Sexual Selection
12. Kin Selection and Social Behavior
13. Aging and Other Life History Characters
14. Evolution and Human Health
15. Phylogenomics and the Molecular Basis of Adaptation

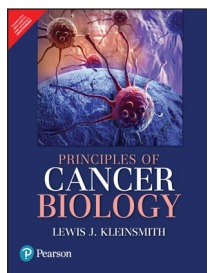
#### **IV. THE HISTORY OF LIFE**

16. Mechanisms of Speciation
17. The Origins of Life and Precambrian Evolution
18. The Cambrian Explosion and Beyond
19. Development and Evolution
20. Human Evolution

### **About the Authors**

#### **Scott Freeman**

Scott Freeman received his Ph.D. in Zoology from the University of Washington and was subsequently awarded an Alfred P. Sloan Postdoctoral Fellowship in Molecular Evolution at Princeton University. His current research focuses on the scholarship of teaching and learning and he recently published two papers on his work: (1) how active learning and peer teaching techniques increase student learning and improve performance in introductory biology (Freeman, S., E. O'Connor, J.W. Parks, M. Cunningham, D. Hurley, D. Haak, C. Dirks, and M.P. Wenderoth. 2007.



## Principles of Cancer Biology, 1e

Lewis J. Kleinsmith

ISBN: 9789332577480

© 2016

Pages: 320



### About the Book

Principles of Cancer Biology, is an engaging book focused on providing students with a “big picture” view of cancer. Author Lewis Kleinsmith has written an instructional text focusing on key concepts for both students and a general audience. For those instructors who wish to delve into particular aspects of cancer biology in greater depth, each chapter contains a list of suggested readings that expand the detail as needed.

The text also emphasizes the scientific evidence that underlies cancer biology, and teaches students to think critically about this evidence- as there are constantly new “breakthroughs” and reports in this field. For students who need the review, there are brief reviews of several topics related to DNA replication and repair, cell division, cell signaling, and inheritance patterns in chapters where these subjects are relevant. By including these reviews, the text is both accessible and engaging to a broad audience of readers who are studying cancer biology for the first time, as well as an interested general audience.

### Features

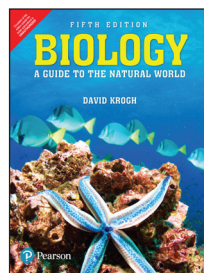
- Focus on the key concepts to help build a foundation for further study.
- Scientifically based. The text teaches students how to read and critically evaluate the current research.
- Every chapter is subdivided into a series of conceptual sections, each introduced by a Sentence Heading that summarizes the Principle being described in that section.
- Art that Teaches. Each piece of art in the text has been carefully considered to ensure that readers can easily absorb the data.
- A bulleted Summary of Main Concepts is found at the end of each chapter helping students review the major principles covered in that chapter.
- Suggested Reading lists are included at the end of each chapter with an emphasis on review articles and carefully selected research publications that students are likely to find especially relevant and understandable.

### Contents

1. What Is Cancer?
2. Profile of a Cancer Cell
3. How Cancers Spread
4. Identifying the Causes of Cancer
5. Chemicals and Cancer
6. Radiation and Cancer
7. Infectious Agents and Cancer
8. Heredity and Cancer
9. Oncogenes
10. Tumor Suppressor Genes and Cancer Overview
11. Cancer Screening, Diagnosis, and Treatment
12. Preventing Cancer
- Appendix A. Main Types of Cancer
- Appendix B. Human Carcinogens
- Glossary
- Index

### About the Authors

Lewis J. Kleinsmith, University of Michigan



## Biology: A Guide to the Natural World, 5e

David Krogh

ISBN: 9789332578562

© 2016

Pages: 824



### About the Book

David Krogh's Biology: A Guide to the Natural World leads readers on a memorable journey through the world of biology, using relevant examples, clearly-developed illustrations, and helpful insights that resonate with today's students.

Widely-recognized as a book that students enjoy reading, the Fifth Edition has been thoroughly updated with new discussions on social concerns and health applications, along with streamlined chapter summaries and expanded review questions. To address different learning styles, the book's clear illustrations and exercises are reinforced with a full suite of instructor resources.

### Features

- Accessible writing style acts as a helpful companion that guides non-majors students through the subject of biology by placing unfamiliar biology topics in context with everyday life.
- The Process of Science essays present scientific research and discovery with contemporary and historical topics of interest to students.
- Strong Illustration Program guides students through structures and processes with clear three-dimensional detail; key information from the text is reinforced in the illustrations.
- “So Far” Questions interspersed throughout each chapter give students a moment to reflect on what they have been reading and check understanding.

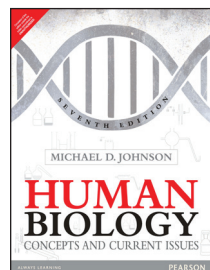
### Contents

1. Science as a Way of Learning: A Guide to the Natural World
2. Fundamental Building Blocks: Chemistry, Water, and pH
3. Life's Components: Biological Molecules
4. Life's Home: The Cell
5. Life's Border: The Plasma Membrane
6. Life's Mainspring: An Introduction to Energy
7. Vital Harvest: Deriving Energy from Food
8. The Green World's Gift: Photosynthesis
9. The Links in Life's Chain: Genetics and Cell Division
10. Preparing for Sexual Reproduction: Meiosis
11. The First Geneticist: Mendel and His Discoveries
12. Units of Heredity: Chromosomes and Inheritance
13. Passing On Life's Information: DNA Structure and Replication
14. How Proteins Are Made: Genetic Transcription, Translation, and Regulation
15. The Future Isn't What It Used to Be: Biotechnology
16. An Introduction to Evolution: Charles Darwin, Evolutionary Thought, and the Evidence for Evolution
17. The Means of Evolution: Microevolution
18. The Outcomes of Evolution: Macroevolution
19. A Slow Unfolding: The History of Life on Earth
20. Arriving Late, Traveling Far: The Evolution of Human Beings
21. Viruses, Bacteria, Archaea, and Protists: The Diversity of Life 1
22. Fungi: The Diversity of Life 2
23. Animals: The Diversity of Life 3
24. Plants: The Diversity of Life 4
25. The Angiosperms: Form and Function in Flowering Plants
26. Body Support and Movement: The Integumentary, Skeletal, and Muscular Systems
27. Communication and Control 1: The Nervous System
28. Communication and Control 2: The Endocrine System

29. Defending the Body: The Immune System
30. Transport and Exchange 1: Blood and Breath
31. Transport and Exchange 2: Digestion, Nutrition, and Elimination
32. An Amazingly Detailed Script: Animal Development
33. How the Baby Came to Be: Human Reproduction
34. An Interactive Living World 1: Populations in Ecology
35. An Interactive Living World 2: Communities in Ecology

### About the Authors

**David Krogh** has been writing about science for 27 years in newspapers, magazines, books, and for educational institutions. He is the author of *Smoking: The Artificial Passion*, an account of the pharmacological and cultural motivations behind the use of tobacco, which was nominated for the Los Angeles Times Book Prize in Science and Technology. In 1994, he began work on what would become *Biology: A Guide to the Natural World*, and in 1999 he completed its first edition. Since then, he has produced three more editions of *A Guide to the Natural World* along with a second textbook, *A Brief Guide to Biology*. He holds bachelor's degrees in journalism and history from the University of Missouri.



## Human Biology: Concepts and Current Issues, 7/e

**Michael D Johnson**

ISBN: 9789332573895

© 2016

Pages: 688



### About the Book

Through his teaching, his textbook, and in his online blog, award-winning teacher Michael D. Johnson sparks the interest of today's science-intimidated student by connecting basic biology to real-world issues relevant to students' own lives. Through a storytelling approach and extensive online support, *Human Biology: Concepts and Current Issues*, Seventh Edition not only demystifies how the human body works but drives students to become better consumers of health and science information. Each chapter opens with Johnson's popular "Current Issues" essays, and *BlogInFocus* references within the chapter direct students to his frequently-updated online blog for breaking human biology-related news.

The Seventh Edition offers stronger student self-assessment tools with new and expanded critical thinking questions throughout each chapter and in the end-of-chapter reviews.

### Features

#### Contents

1. Human Biology, Science, and Society
2. The Chemistry of Living Things
3. Structure and Function of Cells
4. From Cells to Organ Systems
5. The Skeletal System
6. The Muscular System
7. Blood
8. Heart and Blood Vessels
9. The Respiratory System: Exchange of Gases
10. The Immune System and Mechanisms of Defense
11. The Nervous System: Integration and Control
12. Sensory Mechanisms
13. The Endocrine System
14. The Digestive System and Nutrition
15. The Urinary System
16. Reproductive Systems

17. Cell Reproduction and Differentiation
18. Cancer: Uncontrolled Cell Division and Differentiation
19. Genetics and Inheritance
20. DNA Technology and Genetic Engineering
21. Development and Aging
22. Evolution and the Origins of Life
23. Ecosystems and Populations
24. Human Impacts, Biodiversity, and Environmental Issues

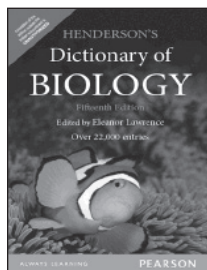
### About the Authors

**Dr. Michael D. Johnson** earned his B.S. degree in Zoology from Washington State University and then moved East to earn a Ph.D. in physiology from the University of Michigan. After completing a Postdoctoral Research Fellowship at Harvard Medical School he joined the faculty of West Virginia University, where he remained for most of his career.

From 2001 to 2006 Dr. Johnson resided in the Sultanate of Oman, where he served as Founding Dean of a new medical school being built in academic partnership with West Virginia University. Following a brief period back home at West Virginia University, in 2008 he moved to Qatar to take the position of Associate Dean for Premedical Education at Weill Cornell Medical College in Qatar. He returned to the United States in 2011 to concentrate on writing and on researching topics of interest in Human Biology.

Dr. Johnson received several teaching awards during his career, including the West Virginia University Foundation Outstanding Teacher award and the Distinguished Teacher Award of the School of Medicine. He is a member of the American Physiological Society, the Human Anatomy and Physiology Society, the National Association of Biology Teachers, and the American Association for the Advancement of Science.

## Dictionary of Biology



### Henderson's Dictionary of Biology, 15/e

Eleanor Lawrence

ISBN: 9789332517400

© 2014

Pages: 776

#### About the Book

With over 22,000 entries, Henderson's Dictionary of Biology continues to be an essential reference for students, teachers and researchers within any of the biological sciences. This fifteenth edition has updated and revised many existing definitions, and has included new terms from exciting areas such as bioinformatics, proteomics, and genomics.

#### Features

- Over 22,000 entries
- Clear definitions and additional explanations
- Covers a wide range of topics
- Includes simplified, up-to-date classification tables for the kingdoms of living organisms

#### Contents

1. An Outline of the Plant Kingdom (Domain Eukarya)
2. An Outline of the Kingdom Fungi (Domain Eukarya)
3. An Outline of the Animal Kingdom (Domain Eukarya)
4. An Outline of the Kingdoms Protocista and Stramenopila (Domain Eukarya)
5. An Outline of the Domain Bacteria
6. An Outline of the Domain Archaea
7. Virus Families
8. Geological Timescale
9. Etymological Origins of Some Common Word Elements in Biology

#### About the Author

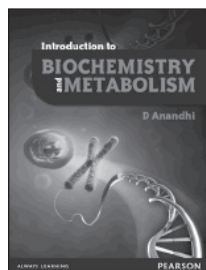
Eleanor Lawrence, Freelance science writer

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$1+1=2$   
 $y=ax+b$   
 $x+y=z$   
 $x \in \mathbb{R}$   
 $e=2.78$   
 $H_2O$   
 $H_2SO_4$   
 $c^2 = \sqrt{a^2 + b^2}$   
 $\pi = 3.14$   
 $\text{apple} + \text{apple} = 2$   
 $E=mc^2$   
 $s=v \cdot t$   
 $\tau = 1939-1945$   
 $S_{\square} = 4 \times a$   
 $OH^-$



## Biochemistry



### Introduction to Biochemistry and Metabolism

**D Anandhi**

ISBN: 9788131774854

© 2014

Pages: 416

#### About the Book

Designed as per the UGC curriculum, Introduction to Biochemistry and Metabolism meets the syllabus requirements of all universities offering a course on biochemistry and metabolism. The subject, a core paper for the students of botany, zoology, biotechnology and bioinformatics, is dealt with in detail across 13 chapters with emphasis on the metabolism of amino acids, carbohydrates, lipids and high energy compounds. Replete with illustrations and schematic representations, the book reinforces theoretical concepts with its concise, easy-to-follow approach making it an ideal textbook on the subject.

#### Features

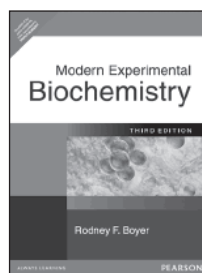
- Comprehensive coverage of free radicals, antioxidation and proteins.
- Focus on enzymes, fatty acids and their metabolic activities.
- Elucidation of the detoxification mechanism.
- Disseminates information on diseases caused due to enzyme deficiencies.
- 150 illustrations and schematics to help readers understand how biochemical reactions and metabolic pathways work
- Includes laboratory techniques for qualitative and quantitative lipid analysis and estimation of proteins in food samples.

#### Contents

1. Cell
2. Carbohydrates
3. Amino acids
4. Lipids
5. Nucleic acid
6. Enzymes
7. High energy compounds
8. Introduction to metabolism
9. Amino acid metabolism
10. Lipid metabolism
11. Nucleotide metabolism
12. Detoxication mechanism
13. Antibiotics

#### About the Author

**D Anandhi** is from the department of biochemistry, D G Vaishnav College, Chennai.



### Modern Experimental Biochemistry, 3/e

**Rodney Boyer**

ISBN: 9788177588842

© 2000

Pages: 475

#### About the Book

*Modern Experimental Biochemistry, Third Edition* offers a unique two-part organization. This provides you with in-depth theoretical discussion organized around important techniques and 15 tested experiments that represent all of the core biochemistry topics.

#### Features

- State-of-the-art theory and procedures are included for each experiment.
- The latest safety and environmental precautions in each experiment inform you of potential hazards and proper disposal of materials.

#### Contents

##### Part I: Theory and Experimental Techniques

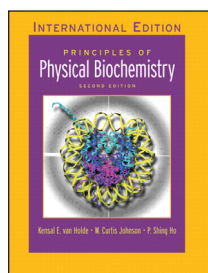
1. Introduction to the Biochemistry Laboratory
2. General Laboratory Procedures
3. Purification and Identification of Biomolecules by Chromatography
4. Characterization of proteins and Nucleic Acids by Electrophoresis
5. Spectroscopic Analysis of Biomolecules
6. Radioisotopes in Biochemical Research
7. Centrifugation in Biochemical Research

##### Part II: Experiments

8. Using the Computer in Biochemical Research
9. Structural Analysis of a Dipeptide
10. Using Gel Filtration to Study Ligand-Protein Interactions
11. Isolation and Characterization of Bovin Milk  $\bar{A}_1$ -Lactalbumin
12. Kinetic Analysis of Tyrosinase
13. Purification and Characterization of Triacylglycerols in Natural Oils
14. Identification of Serum Glycoproteins by SDS-PAGE and Western Blotting
15. Isolation and Characterization of Plant Pigments
16. Photoinduced Proton Transport through Chloroplast Membranes
17. Isolation, Subfractionation, and Enzymatic Analysis of Beef Heart Mitochondria
18. Measurement of Cholesterol and Vitamin C in Biological Samples
19. Activity and Thermal Stability of Gel-immobilized Peroxidase
20. Extraction and Characterization of Bacterial DNA
21. Plasmid DNA Isolation and Characterization by Electrophoresis
22. The Action of Restriction Endonucleases on Plasmid or Viral DNA

#### About the Author

**Rodney F. Boyer** is Professor of Chemistry at Hope College in Holland, Michigan. He received his B.A. in Chemistry and Mathematics from Westmar College, his M.S. in Organic Chemistry and his Ph.D. in Organic Chemistry with a minor in Biochemistry from Colorado State University. Boyer was a Postdoctoral Research Fellow at the University of Michigan Medical School in the Department of Biological Chemistry. He has served as an American Cancer Society Scholar and Visiting Professor in the Department of Chemistry and Biochemistry at the University of Colorado at Boulder.



## Principles of Physical Biochemistry

Kensal E Van Holde  
Curtis Johnson  
Pui Shing Ho

ISBN: 9780132017442

© 2005

Pages: 752

### About the Book

For one- or two-term courses in Biophysical Chemistry. Usually taught at the senior/graduate level. Prerequisite: Introductory Biochemistry, some physical chemistry helpful.

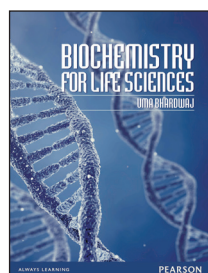
The Second Edition of *Principles of Physical Biochemistry* provides the most current look at the theory and techniques used in the study of the physical chemistry of biological and biochemical molecules including discussion of mass spectrometry and single-molecule methods. Leading experts in biophysical chemistry these well-known authors offer unique insights and coverage not available elsewhere.

### Features

- A true teaching text, this book includes exercises at the end of every chapter along with more expanded solutions to half of the exercises.
- Clear writing by experts in the field makes the subject matter understandable.

### Contents

Chapter 1. Biological Macromolecules  
Chapter 2. Thermodynamics and Biochemistry  
Chapter 3. Molecular Thermodynamics  
Chapter 4. Statistical Thermodynamics  
Chapter 5. Methods for the Separation and Characterization of Macromolecules  
Chapter 6. X-Ray Diffraction  
Chapter 7. Scattering From Solutions of Macromolecules  
Chapter 8. Quantum Mechanics and Spectroscopy  
Chapter 9. Absorption Spectroscopy  
Chapter 10. Linear and Circular Dichroism  
Chapter 11. Emission Spectroscopy  
Chapter 12. Nuclear Magnetic Resonance Spectroscopy  
Chapter 13. Macromolecules in Solution: Thermodynamics and Equilibria  
Chapter 14. Chemical Equilibria Involving Macromolecules  
Chapter 15. Mass Spectrometry of Macromolecules  
Chapter 16. Single-Molecule Methods  
Solutions to Odd-Numbered Problems  
Index



## Biochemistry: for Life Sciences

Uma Bhardwaj

ISBN: 9789332528475

© 2014

Pages: 576

### About the Book

Biochemistry for Life Sciences presents a concise introduction to the subject without compromising on complete coverage as per the Indian curricula.

This book highlights the relationship between molecular construction and the functional properties of biomolecules. Numerous illustrations, figures and tables are used to explain fundamental and advanced topics in an engaging manner.

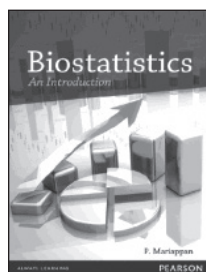
### Features

- Tailor-made for undergraduate life sciences courses offered by Indian universities
- Exclusive chapters on biomolecules and their metabolism, bioenergetics and biological oxidation
- Covers the major biotechniques such as lipid separation and protein separation
- Detailed description of the interpretation and investigation of biomolecules and metabolic disorders
- Colour diagrams at the end of the book for better illustration of concepts.

### Contents

Unit-1 Important properties and chemistry of water, pH and Buffers  
Unit-2 Bioenergetics and Biological Oxidation  
Unit-3 Structure and Composition of Cell and Structure and Function of Cell Membrane  
Unit-4 Composition of Carbohydrates  
Unit -5 Composition of Lipids :  
Unit-6 Composition of Amino Acids:  
Unit-7 Proteins and Peptides:  
Unit-8 Composition of Nucleic Acids  
Unit- 9 Carbohydrate Metabolism:  
Unit-10 Metabolism of fatty acids  
Unit-11 Metabolism of Amino acids and Proteins  
Unit-12 Metabolism of Nucleic Acids:  
Unit-13 Enzymes and Co-Enzymes  
Unit-14 Immunochemistry  
Unit-15 Composition of Vitamins and Minerals  
Unit -16 Photosynthesis  
Unit -17 Hormones

# Biostatistics



## Biostatistics :An Introduction

P Mariappan

ISBN: 9788131775141

© 2013

Pages: 480

### About the Book

This textbook is exclusively designed for the undergraduate students of Botany, Biotechnology and Zoology for gaining fundamental knowledge on biostatistics and its applications. Adequate coverage has been provided to the concepts of biostatistics making this book useful in biological data management.

### Features

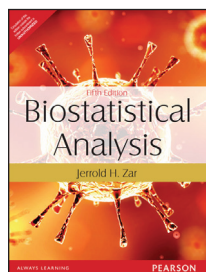
- Indepth coverage of measures of central tendency, hypothesis testing and parametric tests.
- Detailed explanation on probability, random variables and expectation.
- Extensive coverage on correlation and regression analysis.
- Over 200 graphs and schematic illustrations
- Over 250 solved examples and 150 end-of-chapter exercises.

### Contents

Chapter 1 Introduction to statistics and its business applications  
Chapter 2 Data Structures, data sources and data collection  
Chapter 3 Data Presentation  
Chapter 4 Measures of central tendency  
Chapter 5 Dispersion  
Chapter 6 Skewness, moments and kurtosis  
Chapter 7 Correlation and regression analysis  
Chapter 8 Probability  
Chapter 9 Random variables and expectations  
Chapter 10 Discrete probability distribution  
Chapter 11 Continuous probability distribution  
Chapter 12 Theory of sampling  
Chapter 13 Hypothesis testing/Parametric tests/ Distribution tests/ tests of significance

### About the Author

P Mariappan is from the department of mathematics, Bishop Heber College, Tiruchchirapalli, Tamilnadu.



## Biostatistical Analysis, 5/e

Jerrold H. Zar

ISBN: 9789332536678

© 2014

Pages: 760

### About the Book

Zar's **Biostatistical Analysis, Fifth Edition**, is the ideal textbook for graduate and undergraduate students seeking practical coverage of statistical analysis methods used by researchers to collect, summarize, analyze and

draw conclusions from biological research. The latest edition of this best-selling textbook is both comprehensive and easy to read. It is suitable as an introduction for beginning students and as a comprehensive reference book for biological researchers and for advanced students.

This book is appropriate for a one- or two-semester, junior or graduate-level course in biostatistics, biometry, quantitative biology, or statistics, and assumes a prerequisite of algebra.

### Features

- **A broad collection of data-analysis procedures and techniques** are presented, covering a wide variety of biological research, such as physiology, genetics, ecology, behavior, morphology.
- **The most comprehensive treatment available** includes coverage of the basics of statistical analysis, and also the following topics rarely or never found in statistics books for biologists:
  - Diversity
  - Polynomial regression
  - Multidimensional contingency tables
  - Stepwise regression
  - Nonparametric multiple comparisons
  - Higher order factorial analyses of variance
  - Circular distributions
  - Power and sample size determinations.
- **An orderly organization and presentation of topics**, with cross-referencing as appropriate.
- **The readable and accessible approach** allows students with no previous statistical background or mathematical expertise beyond simple algebra to understand the material presented.
- **The thoughtful presentation** encourages students to think about the value of each statistical technique, as opposed to merely plugging numbers into formulae.
- **The exposition** considers complex procedures such as factorial analysis of variance and multiple regression in terms of the interpretation of typical computer output.
- **A wealth of graphs and other figures** are integrated to visually support concepts under discussion.
- **A uniquely comprehensive set of statistical tables**—more than 40 in all—facilitates statistical analyses without having to consult a separate book. This includes tables that are unique to this book.
- **Worked examples for all major procedures** guide readers step-by-step through the techniques, demonstrating each of the important concepts.
- **An extensive bibliography** directs readers to further relevant literature.

### Contents

1. Data: Types and Presentations
2. Populations and Samples
3. Measures of Central Tendency
4. Measures of Variability and Dispersion
5. Probabilities
6. The Normal Distribution
7. One-Sample Hypotheses
8. Two-Sample Hypotheses
9. Paired-Sample Hypotheses
10. Multisample Hypotheses and the Analysis of Variance
11. Multiple Comparisons
12. Two-Factor Analysis of Variance
13. Data Transformations
14. Multiway Factorial Analysis of Variance
15. Nested (Hierarchical) Analysis of Variance
16. Multivariate Analysis of Variance
17. Simple Linear Regression
18. Comparing Simple Linear Regression Equations
19. Simple Linear Correlation
20. Multiple Regression and Correlation
21. Polynomial Regression

22. Testing for Goodness of Fit  
 23. Contingency Tables  
 24. Dichotomous Variables  
 25. Testing for Randomness  
 26. Circular Distributions: Descriptive Statistics  
 27. Circular Distributions: Hypothesis Testing  
 Answers to Exercises  
 Literature Cited

### About the Author

**Jerrold H. Zar** received his undergraduate degree in Biological Sciences from Northern Illinois University in 1962. He later earned his M.S. and Ph.D. degrees in biology and zoology from the University of Illinois at Urbana-Champaign. Zar then returned to Northern Illinois University for 34 years to serve in a variety of capacities. He joined the faculty at NIU as an Assistant Professor in 1968 and quickly rose through the ranks of associate and full professor to become Chair of the Department of Biological Sciences in 1978. He served two terms as Chair of the Department and then, became the Vice Provost for Graduate Studies and Research and Dean of the Graduate School. He was a founder of the Illinois Minority Graduate Incentive Program and the Illinois Consortium for Educational Opportunities Program, where he helped create and protect fellowship opportunities for minority graduate students at universities across the state. Zar is a member of 17 professional scientific societies, including being an elected fellow of the American Association for the Advancement of Science. His many research publications cover a range of topics, from statistical analysis to physiological adaptations of animals to their environment.

- methods related to each chapter's content and the biotech industry.
- **End-of-Chapter Questions & Activities** encourage students to apply what they've learned and include internet assignments that explore cutting edge topics. Suggested answers are provided in the Appendix.
- **Abundant illustrations, instructional diagrams, and flow charts** present modern images, step-by-step explanations of complex processes, and include new figures on the use of gene microarrays, PCR, and nanobiotechnology.
- **Companion Website** offers study aids, such as flashcards, a glossary, chapter reviews, and additional web resources.
- **Instructor's Test Bank** includes multiple choice questions for each chapter.
- **A section on "Business of Biotechnology"** in Chapter 1 describes biotech company organization and structure, top biotechnology and pharmaceutical companies, and features updated data on the biotechnology industry worldwide.

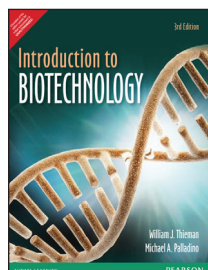
### Contents

1. The Biotechnology Century and Its Workforce  
 2. An Introduction to Genes and Genomes  
 3. Recombinant DNA Technology and Genomics  
 4. Proteins as Products  
 5. Microbial Biotechnology  
 6. Plant Biotechnology  
 7. Animal Biotechnology  
 8. DNA Fingerprinting and Forensic Analysis  
 9. Bioremediation  
 10. Aquatic Biotechnology  
 11. Medical Biotechnology  
 12. Ethics and Biotechnology  
 Appendix I: Answers to Questions  
 Appendix II: The 20 Amino Acids of Proteins

### About the Author

**William Thieman**, formerly of Ventura College, chaired one of the leading biotech programs in California. Co-author **Michael A. Palladino** is a molecular biologist with considerable experience in directing undergraduate student research in recombinant DNA technology; he is co-author of **Concepts of Genetics, Tenth Edition, Essentials of Genetics, Seventh Edition**, as well as **Understanding the Human Genome Project, Second Edition**.

## Introductory Biotechnology



### Introduction to Biotechnology, 3/e

**William J. Thieman**  
**Michael A. Palladino**

ISBN: 9789332535060  
 © 2014  
 Pages: 400

### About the Book

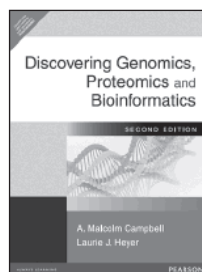
Thoroughly updated for currency and with exciting new practical examples throughout, this popular text provides the tools, practice, and basic knowledge for success in the biotech workforce.

With its balanced coverage of basic cell and molecular biology, fundamental techniques, historical accounts, new advances, and hands-on applications, the Third Edition emphasizes the future of biotechnology and the biotechnology student's role in that future. Two new features—Forecasting the Future, and Making a Difference—along with several returning hallmark features, support the new focus.

### Features

- **Concise overviews** examine cutting-edge techniques and concepts including Bioinformatics, Proteomics, and Genomics, as well as detailed information on agricultural, medical, forensic, and regulatory issues that impact the biotechnology industry.
- **Career Profile Boxes** in each chapter introduce students to different career paths in the biotechnology industry and provide detailed information on job functions, salaries, and guidance for preparing to enter the workforce.
- **You Decide Boxes** in each chapter stimulate ethical discussion by giving students questions and information relating to the social and ethical implications of biotechnology and regulations.
- **Tools of the Trade Boxes** provide details on modern techniques and

## Genetics



### Discovering Genomics, Proteomics and Bioinformatics, 2/e

**A. Malcolm Campbell**  
**Laurie J. Heyer**

ISBN: 9788131715598  
 © 2007  
 Pages: 464

### About the Book

*Discovering Genomics* is the first genomics text that combines web activities and case studies with a problem-solving approach to teach upper-level undergraduates and first-year graduate students the fundamentals of genomic analysis. More of a workbook than a traditional text, *Discovering Genomics, Second Edition* allows students to work with real genomic data in solving problems and provides the user with an active learning experience.

## Features

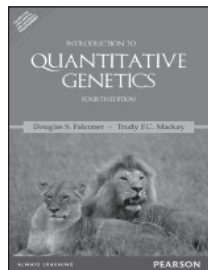
- First genomics textbook written for students that focuses on the process of doing genomic analysis and thinking from a genomics perspective.
- Inquiry approach gives students hands-on practice and builds problem-solving skills.

## Contents

1. Genomic Medicine Case Study: What's wrong with my child?
2. Genome Sequence Acquisition and Analysis.
3. Comparative Genomics in Evolution and Medicine.
4. Genome Variations.
5. Genomic Medicine Case Study: Why Can't I Just Take a Pill to Lose Weight?
6. Basic Research with DNA Microarrays.
7. Applied Research with DNA Microarrays.
8. Proteomics.
9. Genomic Medicine Case Study: Why Can't We Cure More Diseases?
10. Genomic Circuits in Single Genes.
11. Integrated Genomic Circuits.
12. Modeling Whole-Genome Circuits.

## About the Author

**A. Malcolm Campbell**, Davidson College  
**Laurie J. Heyer**, Davidson College



## Introduction to Quantitative Genetics, 4/e

**Douglas S. Falconer**  
**Trudy F. C. Mackay**

ISBN: 9788131727409  
© 1996  
Pages: 480

## About the Book

This classic text continues to provide the basis for understanding genetic principles behind quantitative differences, and extends these concepts to the segregation of genes that cause genetic variation in quantitative traits.

## Features

- New chapter on Quantitative Trait Loci
- Fully revised chapter on natural selection, with increased emphasis on maintenance of variation by mutation-selection balance
- Incorporates essential maths necessary for using computer algorithms
- Addresses potential applications in animal and plant breeding, and human disease
- More evolutionary and molecular examples and problems
- Problems and solutions based on real data to test understanding

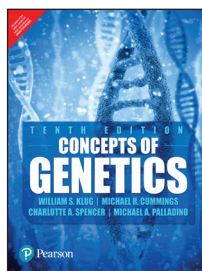
## Contents

1. Genetics Constitution of a Population
2. Changes of Gene Frequency
3. Small Populations: I Changes of Gene Frequency Under Simplified Conditions
4. Small Populations: II Less Simplified Conditions
5. Small Populations: III Pedigreed Populations and Close Inbreeding
6. Continuous Variation
7. Values and Means
8. Variance
9. Resemblance Between Relatives
10. Heritability
11. Selection: I The Results of Experiments
12. Selection: III Information from Relatives
13. Inbreeding and Crossbreeding: I Changes of Mean Value

14. Inbreeding and Crossbreeding: II Changes of Variance
15. Inbreeding and Crossbreeding: III Applications
16. Scale
17. Threshold Characters
18. Correlated Characters
19. Metric Characters under Natural Selection
20. Quantitative Trait Loci

## About the Author

**Douglas S. Falconer**, University of Edinburgh  
**Trudy F.C. Mackay**, North Carolina State University



## Concepts of Genetics, 10e

**William S. Klug**  
**Michael R. Cummings**  
**Charlotte A. Spencer**  
**Michael A. Palladino**

ISBN: 9789332577466  
© 2016  
Pages: 896

New

## About the Book

Concepts of Genetics is known for its focus on teaching core concepts and problem solving. This best-selling text has been extensively updated, with coverage on emerging topics in genetics, and problem-solving support has been enhanced.

## Features

- Focus on the key concepts to help build a foundation for further study.
- Scientifically based. The text teaches students how to read and critically evaluate the current research.
- Every chapter is subdivided into a series of conceptual sections, each introduced by a Sentence Heading that summarizes the Principle being described in that section. In addition, the importance of scientific evidence is highlighted by including more than 50 graphs, histograms, and pie charts containing data from the scientific literature, each accompanied by a citation to the original source of the data.
- Art that Teaches. Each piece of art in the text has been carefully considered to ensure that readers can easily absorb the data.
- A bulleted Summary of Main Concepts is found at the end of each chapter helping students review the major principles covered in that chapter.
- A Glossary containing a brief definition of every boldfaced term is included as a reference tool at the end of the book. Each definition is followed by one or more page references indicating where in the book the meaning of the term is described.

## Contents

1. Introduction to Genetics
2. Mitosis and Meiosis
3. Mendelian Genetics
4. Extensions of Mendelian Ratios
5. Chromosome Mapping in Eukaryotes
6. Genetic Analysis and Mapping in Bacteria and Bacteriophages
7. Sex Determination and Sex Chromosomes
8. Chromosome Mutations: Variation in Number and Arrangement
9. Extranuclear Inheritance
10. DNA Structure and Analysis
11. DNA Replication and Recombination
12. DNA Organization in Chromosomes
13. The Genetic Code and Transcription
14. Translation and Proteins

15. Gene Mutation and DNA Repair, and Transposition
16. Regulation of Gene Expression in Prokaryotes
17. Regulation of Gene Expression in Eukaryotes
18. Developmental Genetics
19. Cancer and Regulation of the Cell Cycle
- Special Topics in Modern Genetics, DNA Forensics
- Special Topics in Modern Genetics, Genomics and Personalized Medicine
- Special Topics in Modern Genetics, Epigenetics
- Special Topics in Modern Genetics, Stem Cells
20. Recombinant DNA Technology and Gene Cloning
21. Genomics, Bioinformatics, and Proteomics
22. Quantitative Genetics and Multifactorial Traits
23. Applications and Ethics of Genetic Engineering and Biotechnology
24. Genetics and Behavior
25. Population and Evolutionary Genetics
26. Conservation Genetics

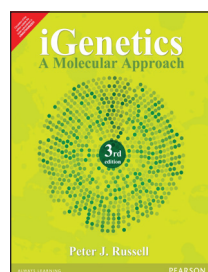
### About the Author

**William S. Klug** is an Emeritus Professor of Biology at The College of New Jersey (formerly Trenton State College) in Ewing, New Jersey, where he served as Chair of the Biology Department for 17 years.

**Michael R. Cummings** is Research Professor in the Department of Biological, Chemical, and Physical Sciences at Illinois Institute of Technology, Chicago, Illinois. For more than 25 years, he was a faculty member in the Department of Biological Sciences and in the Department of Molecular Genetics at the University of Illinois at Chicago.

**Charlotte A. Spencer** is a retired Associate Professor from the Department of Oncology at the University of Alberta in Edmonton, Alberta, Canada. She has also served as a faculty member in the Department of Biochemistry at the University of Alberta.

**Michael A. Palladino** is Dean of the School of Science and Professor of Biology at Monmouth University in West Long Branch, New Jersey. He received his B.S. degree in Biology from Trenton State College (now known as The College of New Jersey) and his Ph.D. in Anatomy and Cell Biology from the University of Virginia.



### iGenetics: A Molecular Approach, 3/e

**Peter J. Russell**

ISBN: 9789332571624

© 2106

Pages: 864



### About the Book

With its modern chapter organization and new “Focus on Genomics” boxes, iGenetics: A Molecular Approach reflects the increasing molecular emphasis in today’s experimental study of genes while helping students develop problem-solving skills and an appreciation for classic experiments. Although molecular topics are presented first, instructors can assign the chapters in any sequence.

Pedagogical features such as chapter-opening “Key Questions” and strategically placed “Keynotes” help students to efficiently master genetic concepts. The Genetics Place Companion Website contains interactive iActivities and narrated animations that help students visualize and understand processes and concepts that are illustrated in the text.

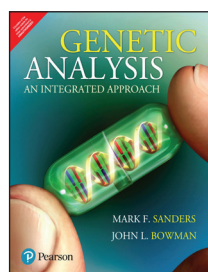
### Features

- Modern chapter organization covers all major areas of genetics, balancing molecular and classical aspects to give students an integrated view of genetic principles.
- The text’s inquiry-based approach engages students in the process of science.

- Step-by-step examples of problem solving throughout the book represent a wide range of topics and difficulty levels.
- Key Questions, appear at the beginning of each chapter, focus student attention in advance on the major concepts within their reading.
- Keynotes, strategically placed throughout the chapter, summarize important ideas and allow students to check their progress.

### Contents

1. Genetics: An Introduction
2. DNA: The Genetic Material
3. DNA Replication
4. Gene Control of Proteins
5. Gene Expression: Transcription
6. Gene Expression: Translation
7. DNA Mutation, DNA Repair, and Transposable Elements
8. Genomics
9. Functional and Comparative Genomics
10. Recombinant DNA Technology
11. Mendelian Genetics
12. Chromosomal Basis of Inheritance
13. Extensions of and Deviations from Mendelian Genetic Principles
14. Genetic Mapping in Eukaryotes
15. Genetics of Bacteria and Bacteriophages
16. Variations in Chromosome Structure and Number
17. Regulation of Gene Expression in Bacteria and Bacteriophages
18. Regulation of Gene Expression in Eukaryotes
19. Genetic Analysis of Development
20. Genetics of Cancer
21. Quantitative Genetics
22. Population Genetics
23. Molecular Evolution



### Genetic Analysis: An Integrated Approach, 1e

**Mark F. Sanders**

**John L. Bowman**

ISBN: 9789332578555

© 2016

Pages: 872



### About the Book

Informed by many years of genetics teaching and research experience, authors Mark Sanders and John Bowman use an integrative approach that helps contextualize three core challenges of learning genetics: solving problems, understanding evolution, and understanding the connection between traditional genetics models and more modern approaches.

### Features

- An integrative problem-solving approach presents a consistent and effective strategy for students to work through genetics problems.
- Genetic Analysis sections guide students with a unique, three step approach that trains them to Evaluate, Deduce, and then Solve problems. Each Genetic Analysis is presented in a clear, two-column format
- Case Studies are short, real-world examples that appear at the end of every chapter and highlight central ideas or concepts of the chapter with interesting examples that remind students of some practical applications of genetics.
- Carefully crafted summaries and figures help students distill the most important “take home” lessons in each chapter.
- Genetic Insights appear several times within each chapter and help students recognize and understand key concepts at-a-glance.
- Foundation Figures integrate text and art to illustrate pivotal genetics concepts in a concise, easy-to-follow format.

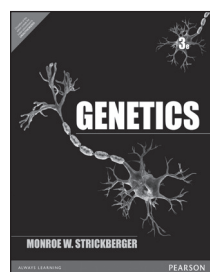
## Contents

- 1 The Molecular Basis of Heredity, Variation, and Evolution
- 2 Transmission Genetics
- 3 Cell Division and Chromosome Heredity
- 4 Gene Interaction
- 5 Genetic Linkage and Mapping in Eukaryotes
- 6 Genetic Analysis and Mapping in Bacteria and Bacteriophage
- 7 DNA Structure and Replication
- 8 Molecular Biology of Transcription and RNA Processing
- 9 The Molecular Biology of Translation
- 10 The Integration of Genetic Approaches: Understanding Sickle Cell Disease
- 11 Chromosome Structure
- 12 Gene Mutation, DNA Repair, and Homologous Recombination
- 13 Chromosome Aberrations and Transposition
- 14 Regulation of Gene Expression in Bacteria and Bacteriophage
- 15 Regulation of Gene Expression in Eukaryotes
- 16 Forward Genetics and Recombinant DNA Technology
- 17 Applications of Recombinant DNA Technology and Reverse Genetics
- 18 Genomics: Genetics from a Whole-Genome Perspective
- 19 Cytoplasmic Inheritance and the Evolution of Organelle Genomes
- 20 Developmental Genetics
- 21 Genetic Analysis of Quantitative Traits
- 22 Population Genetics and Evolution

## About the Author

**Mark F. Sanders** has been a faculty member in the Department of Molecular and Cellular Biology at the University of California, Davis for 27 years. In that time, he has taught more than 120 genetics courses to more than 30,000 undergraduate students. Specializing in teaching the genetics course for which this book is written, Dr. Sanders also teaches a genetics laboratory course, an advanced human genetics course for biology majors, and a human heredity course for non-science majors. His teaching experience also includes introductory biology, and courses in population genetics and evolution.

**John L. Bowman** is a Professor in the School of Biological Sciences at Monash University in Melbourne, Australia and an Adjunct Professor in the Department of Plant Biology at the University of California, Davis in the US. He received a B.S. in Biochemistry at the University of Illinois at Urbana-Champaign, Illinois in 1986 and a Ph.D. in Biology from the California Institute of Technology in Pasadena, California. His Ph.D. research focused on how the identities floral organs are specified in *Arabidopsis* (described in Chapter 20).



## Genetics, 3e

**Monroe W. Strickberger**

ISBN: 9789332555105

© 2015

Pages: 864

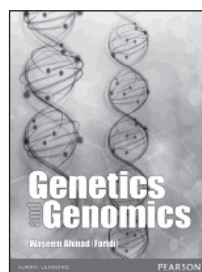


## About the Book

Genetics occupies a unique central position among the various biological sciences because of its diverse specializations. This acclaimed book provides the basic theoretical information on genetics, the study of heredity and details some of the experiments and reasoning which yield this information. The book is organized into six parts and deals with the identification, transmission and distribution, arrangement, structure, and function of genetic material. The last part of the book deliberates on the course of genetic material in populations. The comprehensive material is supported by a multitude of illustrations and references and problems in every chapter.

## Contents

1. Part I IDENTIFICATION OF GENETIC MATERIAL:
  2. History of the Problem.
  3. Cellular Division and Chromosomes.
  4. Reproductive Cycles.
  5. Nucleic Acids.
  6. Replication and Synthesis of Nucleic Acids.
7. Part II TRANSMISSION AND DISTRIBUTION OF GENETIC MATERIAL:
  8. Mendelian Principles: I. Segregation
  9. Mendelian Principles: II. Independent Assortment.
  10. Probability and Statistical Testing.
  11. Dominance Relations and Multiple Alleles in Diploid Organisms.
  12. Environmental Effects and Gene Expression.
  13. Gene Interaction and Lethality.
  14. Sex Determination and Sex Linkage in Diploids.
  15. Maternal Effects and Cytoplasmic Heredity.
  16. Quantitative Inheritance.
  17. Analysis of Quantitative Characters.
18. Part III ARRANGEMENT OF GENETIC MATERIAL:
  19. Linkage and Recombination.
  20. Gene Mapping in Diploids.
  21. Recombination in Fungi.
  22. Recombination in Bacteria.
  23. Recombination in Viruses.
24. Part IV CHANGE AND STRUCTURE OF GENETIC MATERIAL:
  25. Chromosome Variation in Number



## Genetics and Genomics

**Dr. Waseem Ahmad Faridi**

ISBN: 9788131771099

© 2013

Pages: 572

## About the Book

Genetics and Genomics provides an incredible blend of basic as well as applied knowledge and deals with the identification, transmission, structure and function of genetic material, recombinant DNA technology, and areas related to the expression and regulation of genome.

The book exhibits a thorough and enhanced approach to the conceptual understanding of the subject with latest examples and experiments. Being a multidisciplinary subject, the book would be a great asset for students studying zoology, botany, biochemistry, genetics and genomics, cytology, cytogenetics, cell and molecular biology. Students of toxicology, genotoxicity and environmental biology, human genetics, medical and clinical genetics, paramedical and allied sciences would also find the book useful. Special efforts have been taken to address the curricula of a wide range of universities, institutes and colleges.

## Features

- Over 450 colour illustrations/diagrams, photographs and micrographs
- Succinct concept outlines and chapter-end summaries for effortless recapitulation
- Key terms at the end of each chapter for quick reference
- Over 230 review questions for practice

## Contents

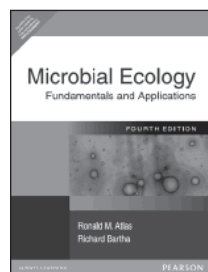
1. Mendelian Genetics
2. Extension and Modification of Mendel Laws and Gene Interaction
3. Multiple Alleles and Polygenic Inheritance
4. Sex Determination and Differentiation

5. Sex Linkage and Holandric Transmission
6. Extranuclear Inheritance
7. Linkage and Crossing Over
8. Cell Mechanics and Molecular Basis of Cell Cycle
9. The Events of M Phase
10. Structural Organization and Special Types of Chromosomes
11. Changes in Arrangement and Chromosome Number
12. Nucleic Acids and Chromatin
13. DNA Replication and Fidelity
14. Mutation, Molecular Mechanism and DNA Repair
15. Genome Expression RNA Synthesis and Processing
16. Genome Expression Translation and Proteins
17. Regulation of Genome Expression
18. Cloning and Recombinant DNA Technology
19. Human Genetics
20. Population Genetics

### About the Author

**Dr Waseem Ahmad** (Faridi) is a Professor in the Department of Zoology, Aligarh Muslim University, Aligarh, Uttar Pradesh.

## Ecology



### Microbial Ecology : Fundamentals and Applications, 4/e

**Ronald M. Atlas  
Richard Bartha**

ISBN: 9788131713846  
© 1998  
Pages: 704

### About the Book

The leading text since its first edition, the Fourth Edition retains its comprehensiveness, covering both the principles of microbial ecology and the biotechnology applications critical to the field.

### Features

- Enhanced coverage of hot topics such as biofilms, thermal vent communities, extreme habitats, starvation response, molecular methods for studying microbial ecology, microbial biodiversity, biodegradation and bioremediation.
- Extensive updating includes the latest research findings and references.
- NEW - Over 45 new art and photos illustrate complex concepts and processes.
- Comprehensive coverage of the principles, methodology, and applications of microbial ecology.
- Authors are both well-known, respected scientists in their fields: Atlas for his pioneering work in bioremediation and Bartha for his research into the interactions between man-made synthetic pollutants and microorganisms.

### Contents

#### I. Ecology And Evolution.

1. Microbial Ecology: Historical Development.
2. Microbial Evolution and Biodiversity.

#### II. Population Interactions.

3. Interactions among Microbial Populations.
4. Interactions between Microorganisms and Plants.
5. Microbial Interactions with Animals.
6. Microbial Communities and Ecosystems.

### III. Quantitative And Habitat Ecology.

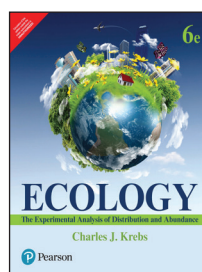
7. Measurement of Microbial Numbers, Biomass, and Activities.
8. Effects of Abiotic Factors and Environmental Extremes on Microorganisms.
9. Microorganisms in Their Natural Habitats: Air, Water, and Soil Microbiology.

### IV. Biogeochemical Cycling.

10. Biogeochemical Cycling: Carbon, Hydrogen, and Oxygen.
11. Biogeochemical Cycling: Nitrogen, Sulfur, Phosphorus, Iron, and Other Elements.

### V. Biotechnological Aspects Of Microbial Ecology.

12. Ecological Aspects of Biodeterioration Control: Soil, waste, and Water Management.
13. Microbial Interactions with Xenobiotic and Inorganic Pollutants.
14. Biodegradability Testing and Monitoring the Bioremediation of Xenobiotic Pollutants.
15. Microorganisms in Mineral and Energy Recovery and Fuel and Biomass Production.
16. Ecological Control of Pests and Disease-Causing Populations.



### Ecology: The Experimental Analysis of Distribution and Abundance, 6e

**Charles J. Krebs**

ISBN: 9789332575745  
© 2016  
Pages: 656

New

### About the Book

Charles Krebs' best-selling majors-level text approaches ecology as a series of problems that are best understood by evaluating empirical evidence through data analysis and application of quantitative reasoning. No other text presents analytical, quantitative, and statistical ecological information in an equally accessible style for students. Reflecting the way ecologists actually practice, the new edition emphasizes the role of experiments in testing ecological ideas and discusses many contemporary and controversial problems related to distribution and abundance.

Ecology: The Experimental Analysis of Distribution and Abundance, Sixth Edition builds on a clear writing style, historical perspective, and emphasis on data analysis with an updated, reorganized discussion of key topics and two new chapters on climate change and animal behavior. Key concepts and key terms are now included at the beginning of each chapter to help students focus on what is most important within each chapter; mathematical analyses are broken down step by step in a new feature called "Working with the Data," concepts are reinforced throughout the text with examples from the literature, and end-of-chapter questions and problems emphasize application.

### Features

- Selected topics have been reorganized and condensed in response to feedback from professors and students.
- Chapter 8: Population Parameters and Demographic Techniques streamlines material from Chapters 9 and 10 of the Fifth Edition.
- Chapters 5 and Chapter 6 have also been reorganized to summarize concepts from Chapters 4 to 7 of the Fifth Edition.
- Key concepts have moved from the end of each chapter to the beginning of each chapter to assist students in identifying and reviewing topics that are explored in the chapter.
- Profiles of eminent ecologists add a historical perspective and demonstrate that ecology is a very human activity.
- A unique problems-oriented approach raises a question in each chapter about how populations and communities operate in nature, and then provides information to help students think critically about the problem.
- Writing in clear, jargon-free language, the author incorporates a strong

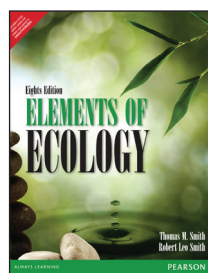
research base, presenting theory and data in parallel so students can evaluate how well the theory fits reality. A set of problems and questions after each chapter further motivates thinking.

## Contents

1. Introduction to the Science of Ecology
2. Evolution and Ecology
3. Behavioral Ecology
4. Analyzing Geographic Distributions
5. Factors That Limit Distributions I: Biotic
6. Factors That Limit Distributions II: Abiotic
7. Distribution and Abundance
8. Population Parameters and Demographic Techniques
9. Population Growth
10. Species Interactions I: Competition
11. Species Interactions II: Predation
12. Species Interactions III: Herbivory and Mutualism
13. Species Interactions IV: Disease and Parasitism
14. Regulation of Population Size
15. Applied Problems I: Harvesting Populations
16. Applied Problems II: Pest Control
17. Applied Problems III: Conservation Biology
18. Community Structure in Space: Biodiversity
19. Community Structure in Time: Succession
20. Community Dynamics I: Predation and Competition in Equilibrial Communities
21. Community Dynamics II: Disturbance and Nonequilibrium Communities
22. Ecosystem Metabolism I: Primary Production
23. Ecosystem Metabolism II: Secondary Production
24. Ecosystem Metabolism III: Nutrient Cycles
25. Ecosystem Dynamics under Changing Climates
26. Ecosystem Health and Human Impacts

## About the Author

**Charles Krebs** is Emeritus Professor of Zoology at the University of British Columbia in Vancouver. He received his B.S. from the University of Minnesota and earned both his M.A. and Ph.D. from the University of British Columbia. In addition to teaching ecology for 40 years, he works extensively on the population of rodents in Northern Canada, the United States, and Australia, trying to understand the mechanisms behind population fluctuations. He has published three ecology textbooks including *Ecology: The Experimental Analysis of Distribution and Abundance*, Sixth Edition and *Ecological Methodology*, Second Edition both published by Benjamin Cummings.



## Elements of Ecology, 8/e

**Thomas M. Smith**  
**Robert Leo Smith**

ISBN: 9789332536692

© 2014

Pages: 688

## About the Book

Known for its evolution theme and strong coverage of the relevance of ecology to everyday life and the human impact on ecosystems, the thoroughly revised **Eighth Edition** features refined quantitative exercises, a restructured chapter on life history, a thoroughly revised species interactions unit including a chapter introducing the subject, and a new chapter on species interactions. To emphasize the dynamic and experimental nature of ecology, each chapter draws upon current research in the various fields of ecology while providing accessible examples that help students understand species natural history, specific ecosystems, the process of science, and ecological patterns at both an evolutionary and demographic scale.

To engage students in using and interpreting data, a wide variety of Quantifying Ecology boxes walk through step-by-step examples of equations and statistical techniques. The enhanced companion website ([www.ecologyplace.com](http://www.ecologyplace.com)) features new MapMaster™ interactive map activities for exploring ecosystems, physical environments, and populations at regional and global scales, along with popular GRAPHit!, and QUANTIFYit! exercises that help students further master and apply math skills, and a new Pearson eText.

## Features

- **Interpreting Ecological Data** exercises help students test their understanding of graphs and data and to consider different outcomes.
- **The Ecology Place companion website** is referenced in the text and features new MapMaster interactive map activities for exploring ecosystems, physical environments, and populations at regional and global scales, along with popular GRAPHit!, and QUANTIFYit! exercises that help students further master and apply math skills, and a new Pearson eText. A subscription to the Ecology Place is included with each new copy of the text for no additional charge ([www.ecologyplace.com](http://www.ecologyplace.com)).
- **Quantifying Ecology** boxes help students develop the quantitative skills they need to interpret ecological data, research, and models. Skills are reinforced by a set of follow-up questions and links to GRAPHit! and QUANTIFYit! on the companion website ([www.ecologyplace.com](http://www.ecologyplace.com)).
- **Field Studies** discuss ecological research performed by young up-and-coming scientists, and challenge students to interpret the results of the featured research.
- **Ecological Issues** essays describe how humans influence the study of ecology. For example, the short essay “The Ecology of Antibiotic Resistance” discusses how antibiotic resistance is a result of natural selection. Each essay is followed by a set of critical thinking questions.
- **Engaging introductions** give students a “big picture” overview of the coming chapters in each of the eight parts of the book, so they can understand how various topics interrelate.
- **Landscape Ecology chapter** explores the role of disturbance in ecosystems.
- **Further Readings** at the end of each chapter emphasize how the text is based on real scientific studies. These Further Readings are annotated to explain their relevance to the student/instructor.

## Contents

### I. THE PHYSICAL ENVIRONMENT

2. Climate
3. The Aquatic Environment
4. The Terrestrial Environment

## II. THE ORGANISM AND ITS ENVIRONMENT

5. Ecological Genetics: Adaptation and Natural Selection
6. Plant Adaptations to the Environment
7. Animal Adaptations to the Environment

## III. POPULATIONS

8. Properties of Populations
9. Population Growth
10. Life History
11. Intraspecific Population Regulation
12. Metapopulations

## IV. SPECIES INTERACTIONS

13. Species Interactions, Population Dynamics and Natural Selection
14. Interspecific Competition
15. Predation
16. Parasitism and Mutualism

## V. COMMUNITY ECOLOGY

17. Community Structure
18. Factors Influencing the Structure of Communities
19. Community Dynamics
20. Landscape Ecology

## VI. ECOSYSTEM ECOLOGY

21. Ecosystem Energetics
22. Decomposition and Nutrient Cycling
23. Biogeochemical Cycles

## VII. BIOGEOGRAPHICAL ECOLOGY

24. Terrestrial Ecosystems
25. Coastal and Wetland Ecosystems
26. Land-Water Margins
27. Large-scale Patterns of Biological Diversity

## VIII. HUMAN ECOLOGY

28. Population Growth, Resource Use, and Sustainability
29. Global Climate Change

## Features

- Simple and lucid language explaining core concepts
- Rich pedagogy that facilitates learning
- Colourful and consistent art programme comprising over 300 four-colour illustrations that helps to visualize and comprehend concepts better
- 400 end-of-chapter questions help revise the key concepts
- Discussion of the latest developments in the area of immunology such as MHC haplotype matching for cell transplantation, latest antiretroviral drugs developed against HIV, etc.
- Description of key contributors, researchers and their landmark experiments
- Packed with supplements and media resources  
Over 30 animations that depict key concepts in three dimensions  
A question bank containing over 400 questions and clinical case studies along with lecture slides including artwork from the book, as supplements to the text, specifically for the instructors

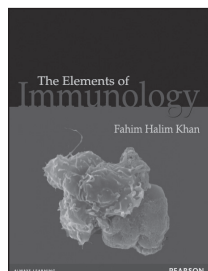
## Contents

1. Introduction to the Immune System
2. Cells and Organs of the Immune System
3. Antigens
4. Antibodies
5. Generation of Antibody Diversity
6. Major Histocompatibility Complex
7. T-cell Receptor
8. T-cell Development and Activation
9. B-cell Development and Activation
10. Complement System
11. Antigen Processing and Presentation
12. Cell-mediated Immunity
13. Hypersensitivity
14. Cell Migration and Inflammatory Response
15. Immune Response to Infectious Agents
16. Vaccines
17. Transplantation Immunology
18. Cancer and the Immune System
19. Primary and Secondary Immunodeficiencies
20. Autoimmunity and Autoimmune Diseases

## About the Author

**Fahim Halim Khan** is an assistant professor of biochemistry at the Aligarh Muslim University.

# Immunology



## The Elements of Immunology

**Fahim Halim Khan**

ISBN: 9788131711583

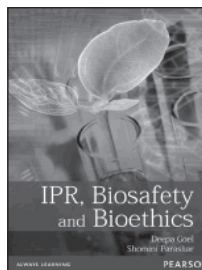
© 2009

Pages: 508

## About the Book

The Elements of Immunology is designed to introduce readers to the exciting world of immunology, the people who populate it and foster a curiosity to question and know more. The book is supported by a consistent, colourful art programme. The detailed explanation of concepts and terms, and the deconstruction of complex molecular mechanisms into simple, easy-to-remember steps help students focus on the fundamentals without any distractions. Packed with extensive Web-based supplements, the book enables students to visualize concepts, thereby enriching the learning process. The book, comprising twenty chapters, has numerous pedagogical elements built into it. Margin snippets present interesting and relevant information without breaking the flow of the text. Margin definitions highlight the key terms for easy identification and recollection. Each chapter talks about a relevant molecular biology technique, thus providing an insight into the practical aspect of immunology as well. A glossary at the end of the book lists out the important terms used.

# Intellectual Property Rights (Biotech)



## IPR, Biosafety and Bioethics

**Dr Deepa Goel**  
**Dr Shomini Parashar**

ISBN: 9788131774700

© 2013

Pages: 248

## About the Book

This book provides a broad coverage of three areas of patenting intellectual property rights (IPR), biosafety and bioethics. It creates awareness about the value of IPR in our lives. The book also fosters a better understanding of the rights associated with IPR such as copyright, patent, trademarks, industrial designs, geographical indications and so on. Biosafety and bioethical issues prevalent in modern society are discussed. The text covers the complete

syllabi of all major Indian universities and caters to the needs of Indian students.

### Features

- Discusses all aspects of the subject in a simple and lucid manner
- Contains review question and multiple-choice questions for practice
- Provides unmatched pedagogy:
  - 100 review questions
  - 120 multiple-choice questions

### Contents

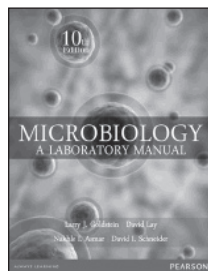
1. Meaning and Justification of Patenting an Invention
2. History and Evolution of Patent Law
3. Classification of Patents
4. Grant of Patent and Patenting Authorities
5. Patent Owner: Rights and Duties
6. Protection of Plant varieties and Farmers' Right Act, 2001
7. Patent law- Present Scenario
8. Introduction to Biosafety
9. GMOs: Concerns and Challenges
10. National and International Regulatory Mechanism for GMO
11. Biosafety of Genetically Engineered Products
12. Allergenicity: Assessment of Genetically Modified food
13. Introduction to Bioethics
14. NGOs for Biosafety and Bioethics
15. Web-based Information of Biosafety on GMO
16. Good Laboratory Biosafety Practices
17. Case Studies in IPR and Biosafety

### About the Author

**Dr Deepa Goel** is Assistant Professor at the Department of Biotechnology, IMS Engineering College, Ghaziabad. Her core area of interest is the development of transgenic plants with elite traits.

**Ms Shomini Parashar** is Assistant Professor at the Department of Biotechnology, IMS Engineering College, Ghaziabad. Her core area of interest is screening of microbes with novel traits that are useful to mankind.

## Microbiology



### Microbiology: A Laboratory Manual, 10/e

**James Cappuccino**  
**Natalie Sherman**

ISBN: 9789332535190

© 2014

Pages: 576

### About the Book

Versatile, comprehensive, and clearly written, this competitively priced laboratory manual can be used with any undergraduate microbiology text—and now features brief clinical applications for each experiment, MasteringMicrobiology@quizzes that correspond to each experiment, and a new experiment on hand washing. **Microbiology: A Laboratory Manual** is known for its thorough coverage, descriptive and straightforward procedures, and minimal equipment requirements. A broad range of experiments helps to convey basic principles and techniques. Each experiment includes an overview, an in-depth discussion of the principle involved, easy-to-follow procedures, and lab reports with review and critical thinking questions. Ample introductory material and laboratory safety instructions are provided.

### Features

- **Comprehensive coverage of the core microbiology topics** includes experiments in the areas of genetics, immunology, and biotechnology.
- **A wide range of experiments progressing from simple to complex** enable instructors to tailor their laboratory classes to the topics they wish to cover.
- **Experiments use the most common and affordable laboratory materials**, designed to accommodate any lab.
- **Over 90 photographs in full color and numerous illustrations appear directly alongside the experiments**, helping students visualize techniques and expected results.
- **Spiral binding** makes student-use easier and minimizes space on a lab bench.
- **A detailed introductory section on basic lab techniques and safety** thoroughly prepares students for lab work during the semester.
- **“Caution” icons** alert users to experiments that pose a potential risk.
- **Six appendices** cover the topics of Scientific Notification, Methods for Preparation of Dilutions, Microbiological Media, Biochemical Test Reagents, Staining Reagents, and Experimental Microorganisms.
- **A Guide to Serial Dilutions** is printed on the inside back cover for students' quick reference in completing exercises.
- **Art demonstrating lab procedures** appears consistently in a special box design that distinguishes it from other art, and catches the student's eye.
- **A bold and modern four-color design** adds distinction to each individual element, and allows for easier navigation within each experiment.

### Contents

#### Part 1: Basic Laboratory Techniques for Isolation, Cultivation, and Cultural Characterization of Microorganisms

1. Effectiveness of Hand Washing
2. Culture Transfer Techniques
3. Techniques for Isolation of Pure Cultures
4. Cultural Characteristics of Microorganisms

#### Part 2: Microscopy

5. Microscopic Examination of Stained Cell Preparations
6. Microscopic Examination of Living Microorganisms Using a Hanging-Drop Preparation or a Wet Mount
7. The Microscopic Measurement of Microorganisms

#### Part 3: Bacterial Staining

8. Preparation of Bacterial Smears
9. Simple Staining
10. Negative Staining
11. Gram Stain
12. Acid-Fast Stain
13. Differential Staining for Visualization of Bacterial Cell Structures

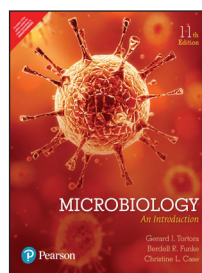
#### Part 4: Cultivation of Microorganisms: Nutritional and Physical Requirements, and Enumeration of Microbial Poulations

14. Nutritional Requirements: Media for the Routine Cultivation of Bacteria
15. Use of Differential, Selective, and Enriched Media
16. Physical Factors: Temperature
17. Physical Factors: pH of the Extracellular Environment
18. Physical Factors: Atmospheric Oxygen Requirements
19. Techniques for the Cultivation of Anaerobic Microorganisms
20. Serial Dilution - Agar Plate Procedure to Quantitate Viable Cells
21. The Bacterial Growth Curve

#### Part 5: Biochemical Activities of Microorganisms

22. Extracellular Enzymatic Activities of Microorganisms
23. Carbohydrate Fermentation
24. Triple Sugar-Iron Agar Test
25. IMViC Test
26. Hydrogen Sulfide Test
27. Urease Test
28. Litmus Milk Reactions

29. Nitrate Reduction Test
  30. Catalase Test
  31. Oxidase Test
  32. Utilization of Amino Acids
  33. Genus Identification of Unknown Bacterial Cultures
- Part 6: The Protozoa**
34. Free-Living Protozoa
  35. Parasitic Protozoa
- Part 7: The Fungi**
36. Cultivation and Morphology of Molds
  37. Yeast Morphology, Cultural Characteristics, and Reproduction
  38. Identification of Unknown Fungi
- Part 8: The Viruses**
39. Cultivation and Enumeration of Bacteriophages
  40. Isolation of Coliphages from Raw Sewage
- Part 9: Physical and Chemical Agents for the Control of Microbial Growth**
41. Physical Agents of Control: Moist Heat
  42. Physical Agents of Control: Environmental Osmotic Pressure
  43. Physical Agents of Control: Electromagnetic Radiations
  44. Chemical Agents of Control: Chemotherapeutic Agents
  45. Determination of Penicillin Activity in the Presence and Absence of Penicillinase
  46. Chemical Agents of Control: Disinfectants and Antiseptics
- Part 10: Microbiology of Food**
47. Microbiological Analysis of Food Products: Bacterial Count
  48. Wine Production
- Part 11: Microbiology of Water**
49. Standard Qualitative Analysis of Water
  50. Quantitative Analysis of Water: Membrane Filter Method
- Part 12: Microbiology of Soil**
51. Microbial Populations in Soil: Enumeration
  52. Isolation of Antibiotic-Producing Microorganisms and Determination of Antimicrobial Spectrum of Isolates
  53. Isolation of *Pseudomonas* Species by Means of the Enrichment Culture Technique
- Part 13: Bacterial Genetics**
53. Enzyme Induction
  54. Bacterial Conjugation
  55. Isolation of a Streptomycin-Resistant Mutant
  56. The Ames Test: A Bacterial Test System for Chemical Carcinogenicity
- Part 14: Biotechnology**
57. Bacterial Transformation
  58. Isolation of Bacterial Plasmids
  59. Restriction Analysis and Electrophoretic Separation of Bacteriophage Lambda DNA
- Part 15: Medical Microbiology**
60. Microbial Flora of the Mouth: Determination of Susceptibility to Dental Caries
  61. Normal Microbial Flora of the Throat and Skin
  62. Identification of Human Staphylococcal Pathogens
  63. Identification of Human Streptococcal Pathogens
  64. Identification of *Streptococcus pneumoniae*
  65. Identification of Enteric Microorganisms Using Computer-Assisted Multitest Microsystems
  66. Isolation and Presumptive Identification of *Campylobacter*
  67. Microbiological Analysis of Urine Specimens
  68. Microbiological Analysis of Blood Specimens
  69. Species Identification of Unknown Bacterial Cultures
- Part 16: Immunology**
70. Precipitin Reaction: The Ring Test
  71. Agglutination Reaction: The Febrile Antibody
  72. Immunofluorescence
  73. Enzyme-Linked Immunosorbent Assay
  74. Agglutination Reaction: Mono-Test for Infectious Mononucleosis
  75. Sexually Transmitted Diseases: Rapid Immunodiagnostic Procedures



## Microbiology: An Introduction, 11/e

Gerard J. Tortora  
Berdell R. Funke  
Christine L. Case

ISBN: 9789332575417

© 2016

Pages: 984

Now in Full  
Colour

### About the Book

This #1 selling non-majors microbiology textbook is praised for its straightforward presentation of complex topics, careful balance of concepts and applications, and proven art that teaches. In its Eleventh Edition, Tortora, Funke, and Case's *Microbiology: An Introduction* helps students make the connection between microbiology and human health. This edition continues to incorporate the latest in microbiology research and includes more features designed to engage students and promote critical thinking.

With the complex and extensive information presented in introductory microbiology courses, demonstrating the connections between processes students can't see with their naked eye and diseases they will encounter in future careers can be challenging. *Microbiology: An Introduction* guides students through the process of disease diagnosis, aided by the practical application of the new Clinical Cases that are integrated through every textbook chapter.

### Features

The text's proven illustration methods include Foundation figures that help students see the big picture and step-by-step diagrams that place explanatory text immediately next to the relevant art so students don't have to refer to lengthy legends to understand complex processes.

Active learning pedagogy engages students through the use of figure legend questions with every figure. Check Your Understanding questions appear at key points throughout the chapters, encouraging students to engage interactively with the text and self-assess their understanding of the corresponding Learning Objectives.

Diseases are organized by body system in the disease chapters (Chapters 21–26), which facilitates learning for students who are pursuing careers in health care fields and have taken an anatomy & physiology course that also organizes topics by body system.

### Contents

#### I. FUNDAMENTALS OF MICROBIOLOGY

1. The Microbial World and You
2. Chemical Principles
3. Observing Microorganisms Through a Microscope
4. Functional Anatomy of Prokaryotic and Eukaryotic Cells
5. Microbial Metabolism
6. Microbial Growth
7. The Control of Microbial Growth
8. Microbial Genetics
9. Biotechnology and Recombinant DNA

#### II. A SURVEY OF THE MICROBIAL WORLD

10. Classification of Microorganisms
11. The Prokaryotes: Domains Bacteria and Archaea
12. The Eukaryotes: Fungi, Algae, Protozoa, and Helminths
13. Viruses, Viroids, and Prions

#### III. INTERACTION BETWEEN MICROBE AND HOST

14. Principles of Disease and Epidemiology
15. Microbial Mechanisms of Pathogenicity
16. Innate Immunity: Nonspecific Defenses of the Host
17. Adaptive Immunity: Specific Defenses of the Host

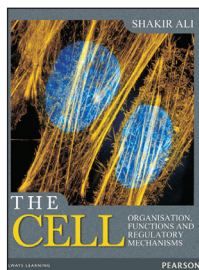
18. Practical Applications of Immunology
19. Disorders Associated with the Immune System
20. Antimicrobial Drugs
- IV. MICROORGANISMS AND HUMAN DISEASE**
21. Microbial Diseases of the Skin and Eyes
22. Microbial Diseases of the Nervous System
23. Microbial Diseases of the Cardiovascular and Lymphatic Systems
24. Microbial Diseases of the Respiratory System
25. Microbial Diseases of the Digestive System
26. Microbial Diseases of the Urinary and Reproductive Systems
- V. ENVIRONMENTAL AND APPLIED MICROBIOLOGY**
27. Environmental Microbiology
28. Applied and Industrial Microbiology
- Appendix A: Metabolic Pathways
- Appendix B: Exponents, Exponential Notation, Logarithms, and Generation Time
- Appendix C: Methods for Taking Clinical Samples
- Appendix D: Pronunciation of Scientific Names
- Appendix E: Word Roots Used in Microbiology
- Appendix F: Classification of Bacteria According to Bergey's Manual

### About the Author

**Gerard J. Tortora** is a professor of biology and teaches microbiology, human anatomy, and physiology at Bergen Community College in Paramus, New Jersey. He received his M.A. in Biology from Montclair State College in 1965. He belongs to numerous biology/microbiology organizations, such as the American Society of Microbiology (ASM), Human Anatomy and Physiology Society (HAPS), American Association for the Advancement of Science (AAAS), National Education Association (NEA), New Jersey Educational Association (NJEA), and the Metropolitan Association of College and University Biologists (MACUB). Jerry is the author of a number of biological science textbooks. In 1995, he was selected as one of the finest faculty scholars at Bergen Community College and was named Distinguished Faculty Scholar. In 1996, Jerry received a National Institute for Staff and Organizational Development (NISOD) excellence award from the University of Texas and was selected to represent Bergen Community College in a campaign to increase awareness of the contributions of community colleges to higher education. Berdell R. Funke received his Ph.D., M.S., and B.S. in microbiology from Kansas State University. He has spent his professional years as a professor of microbiology at North Dakota State University. He taught introductory microbiology, including laboratory sections, general microbiology, food microbiology, soil microbiology, clinical parasitology, and pathogenic microbiology. As a research scientist in the Experiment Station at North Dakota State, he has published numerous papers on soil microbiology and food microbiology.

Christine L. Case is a registered microbiologist and a professor of microbiology at Skyline College in San Bruno, California, where she has taught for the past 38 years. She received her EdD. in curriculum and instruction from Nova Southeastern University and her M.A. in microbiology from San Francisco State University. She was Director for the Society for Industrial Microbiology (SIM). She received the ASM and California Hayward outstanding educator awards. In addition to teaching, Chris contributes regularly to professional literature, develops innovative educational methodologies, and maintains a personal and professional commitment to conservation and the importance of science in society. Chris is also an avid photographer, and many of her photographs appear in this book.

## Molecular Biology



### The Cell: Organization, Functions and Regulatory Mechanisms

Shakir Ali

ISBN: 9788131773284

© 2014

Pages: 376

### About the Book

*The Cell: Organisation, Functions and Regulatory Mechanisms* provides a precise blend of basic and applied knowledge of cell science that reinforces the conceptual understanding of the subject with leading edge examples and experiments. Catering to the prescribed curricula for a wide range of programmes in different universities and colleges, this book is ideal for undergraduate and postgraduate students who pursue a detailed study of the subject. The book will also serve as a standard resource material for teachers and scholars who may like to enrich their knowledge about the cell in areas pertaining to their specific fields of interest. The book discusses the structure and composition of the cell, its constituents and molecules that make up the cell and the whole organism, besides describing the regulatory mechanisms of cellular processes in healthy and disease states.

### Features

- Chapter overview and concept outlines for effortless recapitulation
- Key terms highlighted in text and indexed for quick reference
- Historical perspective and additional information provided in Boxes
- Key biochemical pathways included in Appendix
- Over 100 colour illustrations/diagrams, photographs and micrographs
- More than 20 tables
- Review questions in excess of 570, presented methodically for practice

### Contents

#### Section A: Structure, Composition and Study of the Cell

1. Cell: Structure and Composition
2. Study of the Cell: Cell Doctrine, Diversity and Its Origin
3. Methods in Cell Biology

#### Section B: Cell Membrane and Extracellular Matrix Components: Structure and Properties

4. Cell Membrane: Structure and Chemical Composition
5. Movement of Material Across Membrane
6. Membrane Electric Potential and Conduction of Nerve Impulse
7. The Extracellular Matrix and Cell Junctions

#### Section C: Cytoplasm and Organelles

8. Intracellular Fluid and the Cytoskeleton
9. Endomembrane System and Associated Organelles
10. Energy Processing Organelles: Mitochondrion and Chloroplast
11. Microbodies
12. Nucleus: Ultrastructure and Functions
13. Ribosome: Molecular Machine for Protein Synthesis

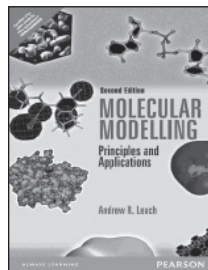
#### Section D: Regulatory Mechanisms and Cellular Processes

14. Regulatory Mechanisms of the Cell and Signal Transduction
15. Cell Cycle and Cell Death
16. Cell Differentiation, Stem Cell and Regeneration
17. Cancer

### About the Author

**Dr Shakir Ali**, PhD, is Professor and former Head of the department of biochemistry at Jamia Hamdard, New Delhi. He has been teaching cell biology and clinical biochemistry at the postgraduate level for over 20 years and guiding several research students to their M. Phil. and PhD degrees.

A recipient of the commonwealth fellowship award (UK) in 2002 and UGC research award in 2013, Dr Ali has over 100 publications and two volumes of a book on liver diseases to his credit.



## Molecular Modelling : Principles and Applications, 2/e

**Andrew Leach**

ISBN: 9788131728604

© 2009

Pages: 768

### About the Book

This important new edition is for graduate students studying Molecular Modelling, Computational Chemistry within Chemistry, Medicinal Chemistry and Biochemistry. Postgraduates and researchers in academia and in the chemical and pharmaceutical industries. This new edition introduces background theory and techniques of molecular modeling, also illustrates applications in studying physical, chemical and biological phenomena. It includes simple numerical examples and numerous explanatory figures and a colour plate section.

### Features

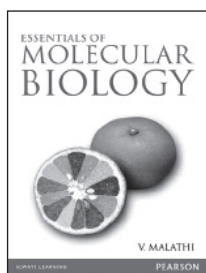
- New chapter on protein structure including more bioinformatics.
- Extended chapter on drug design including more on chemoinformatics.
- Expanded coverage of materials chemistry giving more examples.
- Updated chapter on DFT.
- Problems and answers specifically for graduate teaching

### Contents

1. Useful Concepts in Molecular Modelling.
2. An Introduction to Computational Quantum Mechanics.
3. Advanced AB Initio Methods, Density Functional Theory and Solid-State Quantum Mechanics.
4. Force Field Models: Molecular Mechanics.
5. Energy Minimisation and Related Methods for Exploring the Energy Surface.
6. Computer Simulation Methods.
7. Molecular Dynamics Simulation Methods.
8. Monte Carlo Simulation Methods.
9. Conformational Analysis.
10. Protein Structure Prediction, Sequence Analysis and Protein Folding.
11. Four Challenges in Molecular Modelling: Free Energies, Solvation, Reactions and Solid-State Defects.
12. The Use of Molecular Modelling and Chemoinformatics to Discover and Design New Molecules.

### About the Author

**Dr. Andrew Leach** is a Group Leader in Computational Chemistry and Informatics at Glaxo Wellcome Research and Development.



## Essentials of Molecular Biology

**Malathi V**

ISBN: 9788131773215

© 2012

Pages: 468

### About the Book

This book provides an introduction to the concepts of molecular biology in strict adherence to the UGC curriculum for undergraduate students of biochemistry, microbiology, biotechnology, bioinformatics, botany and zoology offered by all Indian universities. Replete with vivid illustrations, the book probes the recent developments in epigenetics, drug discovery, genomics, proteomics, prions and oncology. Exhaustive coverage of the fundamentals of molecular biology as well as comprehensive review questions and multiple-choice questions make this book a perfect text for classroom.

### Features

- In-depth examination of the principles of transcription, translation and post translational modifications
- Detailed explanation of gene organization in prokaryotes and eukaryotes, gene regulation concepts and recombinant DNA technology
- Extended case studies on cancer-causing genes and real-time applications of rDNA technology
- Illustrative experiments on DNA sequencing, gene mutation and other molecular biology techniques

### Contents

1. Nucleic acids
2. Gene organization
3. DNA replication
4. Transcription
5. Translation
6. Protein Sorting
7. Gene regulation
8. Gene mutation and DNA repair
9. Recombinant DNA technology
10. Epigenetics
11. Genomics and Proteomics
12. Molecular Biology lab Techniques

### About the Author

**Malathi V.** is Professor, Department of Biochemistry, Ethiraj College for Women, Chennai. She has over 13 years of experience in research and academics in the fields of biochemistry and molecular biology.



## Tissue Engineering, 1/e

**Bernhard O. Palsson**  
**Sangeeta N. Bhatia**

ISBN: 9789332571792

© 2016

Pages: 432



### About the Book

For senior-level and first-year graduate courses in Tissue Engineering, in departments of bioengineering; and for students researching tissue replacement and restorations; as well as students of biology medicine and life science working with primary and complex cell biology.

This text—the first in its field—lays the foundation for students studying tissue engineering. It provides a conceptual framework that includes exposure to all the necessary background material in all areas.

### Features

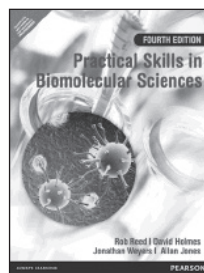
- Coverage of basic, important fundamental concepts—Rather than review articles.
- Makes this book a practical guide in the field as tissue engineering changes, and helps students establish a conceptual framework within which to place further advances in the field.
- A four-part presentation—Part I quantitative cell and tissue biology; Part II cell and tissue characterization; Part III engineering methods and design; and Part IV clinical implementation.
- Supplies students with the broad coverage that eliminates their need to supplement class notes with medical and methods literature.
- Emphasis on relevant time and length scales of physical-chemical processes in cell biology and medicine.
- Establishes a conceptual framework within which to place further advances in the field.
- Broad range of quantitative homework sets with solutions.
- Gives students extensive opportunity to apply learned concepts throughout the text.

### Contents

1. Introduction.
- I. QUANTITATIVE CELL AND TISSUE BIOLOGY.**
2. Tissue Organization.
3. Tissue Dynamics.
4. Morphogenesis.
5. Stem Cells.
6. The Cellular Fate Processes.
7. Coordination.
- II. CELL AND TISSUE CHARACTERIZATION.**
8. High-Throughput Biological Data.
9. Cell and Tissue properties.
10. Cell and Tissue Culture.
11. Gene Transfer.
- III. ENGINEERING METHODS AND DESIGN.**
12. Time Constants.
13. Scaling-up.
14. Cell Separation.
15. Biomaterial Scaffolds.
16. Tailoring Biomaterials.
- IV. CLINICAL IMPLEMENTATION.**
17. Conventional Approaches to Tissue Repair.
18. Host Integration.
19. Producing TE Therapies.
- Tissue Engineering Study Problems.
- Bibliography.
- Index.

### About the Author

**Bernhard O. Palsson**  
**Sangeeta N. Bhatia**



## Practical Skills in Biomolecular Sciences, 4/e

**Jonathan Weyers**

ISBN: 9789332517387

© 2014

Pages: 576

### About the Book

If you are studying within the biomolecular sciences (including biochemistry, biomedical sciences, biotechnology, genetics, microbiology and molecular biology) then this book will be an indispensable companion throughout the whole of your degree programme. It provides effective support for the development of the laboratory and data analysis skills that you will draw on time and again for the practical aspects of your studies, and also gives you a solid grounding in the broader transferable skills which are

### Features

- Provides a 'one-stop' guide to the key practical and broader skills needed in biomolecular sciences, including comprehensive coverage of: study and examination skills; fundamental laboratory and analytical skills; investigative techniques and evaluation skills; analysis and presentation of data.
- Contains numerous margin tips and hints, 'how to' boxes, checklists and examples.
- Key points highlight the most important features of methodology.
- Includes numerous study exercises, references and sources for further study.

### Contents

#### STUDY AND EXAMINATION SKILLS

- 1 The importance of transferable skills
- 2 Managing your time
- 3 Working with others
- 4 Taking notes from lectures and texts
- 5 Learning effectively
- 6 Revision strategies
- 7 Assignments and exams
- 8 Preparing your curriculum vitae

#### INFORMATION TECHNOLOGY AND LEARNING RESOURCES

- 9 Finding and citing published information
- 10 Evaluating information
- 11 Using online resources
- 12 Bioinformatics - Internet resources
- 13 Using Spreadsheets
- 14 Using word processors, databases and other packages

#### COMMUNICATING INFORMATION

- 15 Organising a poster display
- 16 Giving a spoken presentation
- 17 General aspects of scientific writing
- 18 Writing essays
- 19 Reporting practical and project work
- 20 Writing literature surveys and reviews

#### FUNDAMENTAL LABORATORY TECHNIQUES

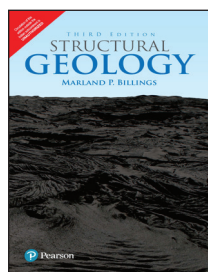
- 21 Essentials of practical work
- 22 Bioethics
- 23 Health and safety
- 24 Working with liquids

- 25 Basic laboratory procedures
- 26 Principles of solution chemistry
- 27 pH and buffer solutions
- 28 Introduction to microscopy
- 29 Setting up and using a light microscope
- THE INVESTIGATIVE APPROACH**
- 30 Making measurements
- 31 SI units and their use
- 32 Scientific method and design of experiments
- 33 Making notes of practical work
- 34 Project work
- WORKING WITH CELLS AND TISSUES**
- 35 Sterile technique
- 36 Culture systems and growth measurement
- 37 Collecting and isolating microbes
- 38 Identifying microbes
- 39 Naming microbes and other organisms
- 40 Working with animal and plant tissues and cells
- 41 Homogenisation and fractionation of cells and tissues
- ANALYTICAL TECHNIQUES**
- 42 Calibration and its application to quantitative analysis
- 43 Immunological methods
- 44 Using stable isotopes
- 45 Using radioisotopes
- 46 Light measurement
- 47 Basic spectroscopy
- 48 Advanced spectroscopy and spectrometry
- 49 Centrifugation
- 50 Chromatography - separation methods
- 51 Chromatography - detection and analysis
- 52 Principles and practice of electrophoresis
- 53 Advanced electrophoretic techniques
- 54 Electroanalytical techniques
- ASSAYING BIOMOLECULES AND STUDYING METABOLISM**
- 55 Analysis of biomolecules: fundamental principles
- 56 Assaying amino acids, peptides and proteins
- 57 Assaying lipids
- 58 Assaying carbohydrates
- 59 Assaying nucleic acids and nucleotides
- 60 Protein purification
- 61 Enzyme studies
- 62 Membrane transport processes
- 63 Photosynthesis and respiration
- GENETICS**
- 64 Mendelian genetics
- 65 Bacterial and phage genetics
- 66 Molecular genetics I - fundamental principles
- 67 Molecular genetics II - PCR and related applications
- 68 Molecular genetics III - genetic engineering techniques ?rDNA techs?
- ANALYSIS AND PRESENTATION OF DATA**
- 69 Manipulating and transforming raw data
- 70 Using graphs
- 71 Presenting data in tables
- 72 Hints for solving numerical problems
- 73 Descriptive statistics
- 74 Choosing and using statistical tests

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## Environmental Geology



### Structural Geology, 3e

**Marland P. Billings**

ISBN: 9789332577565

© 2016

Pages: 624



#### About the Book

The primary objective of this book is to present the basic concepts of structural geology to undergraduate students. A comprehensive coverage of important topics, such as folding, joints, faults, diaperism, unconformities, impact structures, igneous rocks and geophysical methods essential for both the geologist and geophysicist is incorporated.

#### Features

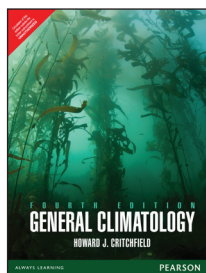
- Emphasis is laid on mathematical methods especially while dealing with mechanical principles, mechanics of folding, jointing, plastic deformations, and geophysical methods.
- Laboratory exercises encourage students to analyze geological problems in a wider perspective.
- References at the end of each chapter render the book useful to advanced reader also.

#### Contents

1. Structural Geology.
  2. Mechanical Principles.
  3. Description of Folds.
  4. Field Study of Folds.
  5. Office Techniques Used in Studying Folds.
  6. Mechanics and Causes of Folding.
  7. Joints.
  8. Description and Classification of Faults.
  9. Criteria for Faulting.
  10. Reverse Faults, Thrust Faults, and Overthrusts.
  11. Normal Faults.
  12. Strike-Slip Faults.
  13. Dating of Structural Events.
  14. Diapirs and Related Structural Features.
  15. Extrusive Igneous Rocks.
  16. Intrusive Igneous Rocks.
  17. Emplacement of Large Plutons.
  18. Cleavage and Schistosity.
  19. Secondary Lineation.
  20. Plastic Deformation.
  21. Impact Structures.
  22. Geophysical Methods in Structural Geology: Gravitational and Magnetic.
  23. Geophysical Methods in Structural Geology: Seismic and Thermal.
  24. Laboratory Exercises.
  25. Equal-Area Net.
- Index.

#### About the Author

**Marland Pratt Billings** was an American geologist and professor. He specialised in Structural Geology. He earned his PhD from Harvard University and was Professor of Geology at that university. He was a Fellow of the American Academy of Arts and Sciences and was awarded the Penrose Medal. His other books include Origin of the Appalachian Highlands and the Geology of the Mt. Washington Quadrangle.



### General Climatology 4e

**Critchfield**

ISBN: 9789332555242

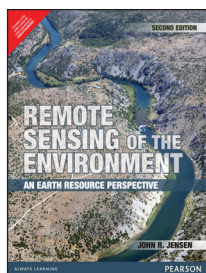
© 2015

Pages: 464



#### About the Book

Non-technical introductory text for a one term course. Contents extend beyond focus solely on the atmosphere. Emphasizes natural and cultural processes in the climate system.



### Remote Sensing of the Environment: An Earth Resource Perspective 2e

**Jensen**

ISBN: 9789332518940

© 2013

Pages: 618

#### About the Book

This widely adopted book introduces the fundamentals of remote sensing from an earth resource (versus engineering) perspective. Emphasis is on turning remote sensing data into useful spatial biophysical or socio-economic information that can be used to make decisions.

#### Features

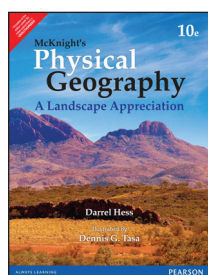
- Thorough review of the nature of electromagnetic radiation:
- Visually stimulating, clear format: Hundreds of specially designed illustrations communicate principles in an easily understood manner
- Emphasis on manual, visual image analysis of the remote sensor data using introductory photogrammetric techniques: Takes the approach that the detailed digital image processing principles should be taught in a separate course, not in the introductory remote sensing or airphoto interpretation course
- Coverage of the history of photography and other remote sensing detectors, and aerial platforms (balloon, kite, aircraft, satellite)
- Case studies in most chapters that demonstrate the proper application of remote sensing principles and technology
- Practical applications of principles throughout the text

#### Contents

1. Remote Sensing of the Environment
  2. Electromagnetic Radiation Principles
  3. Aerial Photography - Vantage Point, Cameras, Filters, and Film
  4. Elements of Visual Image Interpretation
  5. Photogrammetry
  6. Multispectral Remote Sensing Systems
  7. Thermal Infrared Remote Sensing
  8. Active and Passive Microwave Remote Sensing
  9. LIDAR Remote Sensing (new)
  10. Remote Sensing of Vegetation
  11. Remote Sensing of Water
  12. Remote Sensing the Urban Landscape
  13. Remote Sensing of Soils, Minerals, and Geomorphology
  14. In situ Spectral Reflectance Measurement (new)
- Appendix A-Sources of Remote Sensing Information

## About the Author

John R. Jensen received a BA in geography from California State University at Fullerton, an MS from Brigham Young University (BYU), and a PhD from the University of California at Los Angeles (UCLA). He is a Carolina Distinguished Professor Emeritus in the Department of Geography at the University of South Carolina. He is a certified photogrammetrist and a past president of the American Society for Photogrammetry & Remote Sensing (ASP&RS): The Geospatial Information Society. He has conducted more than 50 remote sensing-related projects sponsored by NASA, DOE, NOAA, and the Nature Conservancy and published more than 120 refereed journal articles. He mentored 34 PhD and 62 master's students. He received the SAIC/ASP&RS John E. Estes Memorial Teaching Award for education, mentoring, and training in remote sensing and GIS. He received the U.S. Geological Survey/National Aeronautics & Space Administration (NASA) William T. Pecora Award for his remote sensing research contributions. He received the Association of American Geographers (AAG) Lifetime Achievement Award for research and education in remote sensing and GIScience.



## McKnight's Physical Geography: A Landscape Appreciation 10e

Hess / Tasa

ISBN: 9789332551909

© 2016

Pages: 624



## About the Book

Carrying forth Tom L. McKnight's well-known thematic focus on landscape appreciation, this best-seller fosters a solid understanding of Earth and its physical geography. Its clear writing style, superior art program, and abundant pedagogy appeal to a wide variety of students. This edition includes thoroughly updated content and introduces renowned illustrator Dennis Tasa—yet it maintains the proven approach first presented by McKnight more than two decades ago.

## Features

- Unique landscape appreciation approach and clear presentation of concepts make this hallmark classic text engaging and easily accessible to students of all backgrounds.
- An excellent new cartographic and illustration program by renowned geoscience Illustrator Dennis Tasa provides:
- Hundreds of maps with shaded relief where appropriate
- Line art with numerous multi-part illustrations that capture sequence and evolution to help students understand various processes
- Major photos paired with locator maps to enhance geographic literacy.
- Global environmental change is integrated and discussed extensively throughout the book.

## Contents

1. Introduction to Earth
2. Portraying Earth
3. Introduction to the Atmosphere
4. Insolation and Temperature
5. Atmospheric Pressure and Wind
6. Atmospheric Moisture
7. Atmospheric Disturbances
8. Climate and Climate Change
9. The Hydrosphere
10. Cycles and Patterns in the Biosphere
11. Terrestrial Flora and Fauna

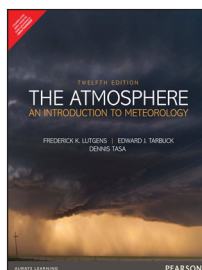
12. Soils
13. Introduction to Landform Study
14. The Internal Processes
15. Preliminaries to Erosion: Weathering and Mass Wasting
16. Fluvial Processes
17. Solution Processes and Karst Topography
18. The Topography of Arid Lands
19. Glacial Modification of Terrain
20. Coastal Processes and Terrain

## About the Author

Darrel Hess is professor of geography at City College of San Francisco, where he served as chair of the Earth Sciences department from 1995-2009. He regularly teaches physical geography, economic geography, and human geography. Hess received his B.A. in geography from UC Berkeley and his M.A. in geography from UCLA.

Dennis Tasa has been a renowned illustrator of many bestselling geoscience textbooks since 1978, including Physical Geography by Darrel Hess, Laboratory Manual in Physical Geology by the American Geosciences Institute and the National Association of Geoscience Teachers, as well as the physical geology, Earth science, and meteorology franchises by Tarbuck and Lutgens.

Tom L. McKnight taught geography at UCLA from 1956 to 1993. He received his bachelor's degree in geology from Southern Methodist University in 1949, his master's degree in geography from the University of Colorado in 1951, and his Ph.D. in geography and meteorology from the University of Wisconsin in 1955. During his long academic career, Tom served as chair of the UCLA Department of Geography from 1978 to 1983, and was director of the University of California Education Abroad Program in Australia from 1984 to 1985.



## Atmosphere: An Introduction to Meteorology 12e

Lutgens / Tarbuck / Tasa

ISBN: 9789332551817

© 2014

Pages: 528



## About the Book

The Atmosphere: An Introduction to Meteorology remains the standard introduction in its field, reinforcing basic concepts with everyday, easy-to-grasp examples. This revision retains the hallmarks professors have come to expect from Tarbuck and Lutgens: a friendly, largely non-technical narrative, timely coverage of recent atmospheric events, and carefully crafted artwork by leading science illustrator Dennis Tasa. The Twelfth Edition maintains a student-friendly approach while evolving to address various course challenges and trends. Current digital visualization and assessment tools are now available on MyMeteorologyLab, a new resource that both encourages student self-study and enables instructors to manage their courses online, with customizable assessments for students.

## Features

- The Students Sometimes Ask... feature adds relevance to text discussions with high-interest questions and answers distributed throughout the chapter and identified by a large question mark.
- Compelling illustrations by Dennis Tasa, carefully selected photographs, and relevant satellite images demonstrate ideas and concepts more clearly and realistically than ever before.
- Ample pedagogy includes chapter summaries, key terms, checklists, review questions, and application problems with a quantitative orientation.
- A flexible organization allows instructors to rearrange or omit

chapters without losing continuity.

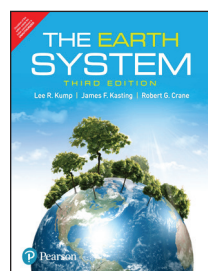
- GEODE icons are found throughout the book wherever a text discussion has a corresponding GEODE:Atmosphere activity. This dynamic program reinforces key concepts by using animations, tutorials, interactive exercises and review quizzes.

## Contents

- 1 Introduction to the Atmosphere
- 2 Heating Earth's Surface and Atmosphere
- 3 Temperature
- 4 Moisture and Atmospheric Stability
- 5 Forms of Condensation and Precipitation
- 6 Air Pressure and Winds
- 7 Circulation of the Atmosphere
- 8 Air Masses
- 9 Weather Patterns
- 10 Thunderstorms and Tornadoes
- 11 Hurricanes
- 12 Weather Analysis and Forecasting
- 13 Air Pollution
- 14 The Changing Climate
- 15 World Climates
- 16 Optical Phen

## About the Author

**Fred Lutgens** received his B.S. and M.S. from Illinois State University. Ed Tarbuck received his B.S. from the University of Minnesota Duluth, and his M.A. from Indiana University. Both are professors emeriti from Illinois Central College. They have been good friends and colleagues since 1970.



## The Earth System, 3/e

**Lee R. Kump**  
**James F. Kasting**  
**Robert G. Crane**

ISBN: 9789332575738

© 2016

Pages: 472



## About the Book

For courses in Earth Systems Science offered in departments of Geology, Earth Science, Geography and Environmental Science.

The first textbook of its kind that addresses the issues of global change from a true Earth systems perspective, The Earth System offers a solid emphasis on lessons from Earth's history that may guide decision-making in the future. It is more rigorous and quantitative than traditional Earth science books, while remaining appropriate for non-science majors.

## Features

- A Closer Look, Useful Concepts, and Thinking Quantitatively boxes address topical issues related to the material presented. They give students appealing visual and highlighted aids and isolates advanced, quantitative treatments for higher-level courses.
- The systems theory approach looks holistically at all that happens on Earth and the interactions of all that is here—such as the effect of weather on land, the effect of erosion on the ocean, the chemical changes that occur—and emphasizes that these processes do not happen in a vacuum.
- An emphasis on global change addresses such modern issues as global warming, ozone depletion, and biodiversity loss.
- A thorough treatment of Earth history provides a framework for developing a deep understanding of global problems while it explores analogous situations in Earth history.

- Extensive pedagogy in each chapter includes thought questions, a summary of important points, a list of important terms, and recommended general and advanced readings.
- Instructor's Resource Guide and Instructor's Resource CD-ROM are now standard instructor supplements with the text.

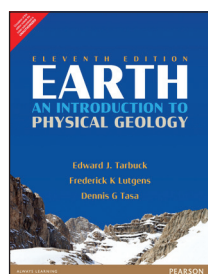
## Contents

1. Global Change
2. Daisyworld: An Introduction to Systems
3. Global Energy Balance: The Greenhouse Effect
4. The Atmospheric Circulation System
5. The Circulation of the Oceans
6. The Cryosphere
7. Circulation of the Solid Earth: Plate Tectonics
8. Recycling of the Elements
9. Focus on the Biota: Metabolism, Ecosystems and Biodiversity
10. Origin of the Earth and of Life
11. Effect of Life on the Atmosphere: The Rise of Oxygen and Ozone
12. Long-Term Climate Regulation.
13. Biodiversity Through Earth History.
14. Pleistocene Glaciations.
15. Global Warming, Part 1: The Scientific Evidence.
16. Global Warming, Part 2: Impacts, Adaptation, and Mitigation
17. Ozone Depletion.
18. Human Threats to Biodiversity.
19. Climate Stability on Earth and Earth-Like Planets.

## About the Author

Lee R. Kump is a Professor in the Department of Geosciences, and an associate of the Earth System Science Center and Astrobiology Research Center at the Pennsylvania State University. A native of Minnesota, he received his bachelor's degree in geophysical sciences from the University of Chicago in 1981, and his Ph.D. in marine sciences from the University of South Florida in 1986. While in Florida he spent two summers as a geologist with the United States Geological Survey's Fisher Island Station. In August of 1986 he joined the faculty at Penn State.

James Kasting is a Distinguished Professor of Geosciences at Penn State University. He received his undergraduate degree from Harvard University in Chemistry and Physics and did his Ph.D. at the University of Michigan in Atmospheric Sciences. Prior to coming to Penn State in 1988, he spent 7 years in the Space Science Division at NASA Ames Research Center. His research focuses on the evolution of planetary atmospheres, particularly the question of why the atmospheres of Mars and Venus are so different from that of Earth. He is also interested in the question of whether habitable planets exist around other stars and is involved with NASA's proposed Terrestrial Planet Finder Mission(s), which will try to answer that question over the next 15-20 years.



## Earth: An Introduction to Physical Geology, 11/e

**Edward J. Tarbuck**

ISBN: 9789332571662

© 2016

Pages: 888

## About the Book

With its strong focus on readability and engaging, instructive illustrations, this trusted bestseller returns in a new edition with a bold new look, new contributor Callan Bentley, interactive "SmartFigures," and a highly anticipated learning path that facilitates active learning. Earth: An Introduction to Physical Geology, 11/e maintains its highly visual, non-technical survey and up-to-date

coverage of foundational physical geology principles. The authors' emphasis on currency and relevance includes the latest thinking in the field, particularly in the dynamic area of plate tectonics.

### Features

- Art that teaches and motivates includes high-quality photographs and line art that were carefully selected to aid understanding, add realism, and heighten student interest. The art program is the work of Dennis Tasa, a gifted artist and respected geological illustrator.
- Strong Readability is achieved through the book's straightforward language, written to be understood. Clear, readable discussions with a minimum of technical language are the rule.
- Focus on Basic Principles is stronger than ever with the Eleventh Edition, fostering student understanding of basic principles while also addressing topical issues.
- Flexibility is achieved through the text's adaptable organization meeting the needs and desires of the instructor. Realizing the broad diversity of introductory courses in both content and approach, we have designed each chapter to be as self-contained as possible so that material may be taught in a different sequence according to the preference of the instructor.

### Contents

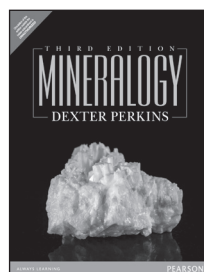
1. An Introduction to Geology
2. Plate Tectonics: A Scientific Revolution Unfolds
3. Matter and Minerals
4. Magma, Igneous Rocks, and Intrusive Activity
5. Volcanoes and Volcanic Hazards
6. Weathering and Soil
7. Sedimentary Rocks
8. Metamorphism and Metamorphic Rocks
9. Geologic Time
10. Crustal Deformation
11. Earthquakes and Earthquake Hazards
12. Earth's Interior
13. Divergent Boundaries: Origin and Evolution of the Ocean Floor
14. Convergent Boundaries: Origin of Mountains
15. Mass Wasting: The Work of Gravity
16. Running Water
17. Groundwater
18. Deserts and Winds
19. Glaciers and Glaciation
20. Shorelines
21. Global Climate Change
22. Earth's Evolution through Geologic Time
23. Energy and Mineral Resources

### About the Author

Fred Lutgens and Ed Tarbuck have been good friends and colleagues since 1970. Between them, they have more than 57 years of experience teaching geology to undergraduates, and both have been recognized with awards as excellent and inspiring professors. They share a special interest in introducing geology to beginning students and a belief in the value of field experiences for students of all levels.

Lutgens and Tarbuck published their first college text, *Earth Science*, in 1976. That book, winner of the McGuffey Award from the Text and Academic Authors Association, is now in its thirteenth edition. In 1983, as the first edition of *Earth* was being prepared, gifted geology illustrator Dennis Tasa joined the author team. Since then the three have collaborated on more than twenty projects. Not only do Tarbuck, Lutgens, and Tasa work well together creatively; they also enjoy spending time in the Sangre de Cristo Mountains near Tasa's New Mexico studio.

## Mineralogy



### Mineralogy, 3/e

Dexter Perkins

ISBN: 9789332550421

© 2015

Pages: 453

New

### About the Book

Considered a classic by many, *A First Course in Abstract Algebra* is an in-depth introduction to abstract algebra. Focused on groups, rings and fields, this text gives students a firm foundation for more specialized work by emphasizing an understanding of the nature of algebraic structures.

### Features

- Emphasis is placed on problems encountered in everyday life, including environmental problems.
- Sciences outside of mineralogy, such as petrology and chemistry, are emphasized to place the material in context for students.
- The history and human aspects of mineralogy are discussed by profiling individuals and their contributions.
- Topical boxes relate mineralogy to everyday life, as well as other branches of science.
- Examples are illustrated with photos and color plates.
- Descriptions of minerals are brief and concise.
- Clearly described objectives begin each chapter.
- A Glossary of nearly 1,000 mineralogical terms is provided, and References appear at the end of each chapter.
- "Questions for Thought" appear at the end of each chapter and encourage students to explore further.
- In-depth treatment of Optical Mineralogy is adapted from the very successful "Minerals in Thin Section."

### Contents

#### Part I

- Chapter 1: Elements and Minerals
- Chapter 2: Crystallization and Classification of Minerals
- Chapter 3: Mineral Properties: Hand Specimen Mineralogy
- Chapter 4: Optical Mineralogy
- Chapter 5: Igneous Rocks and Silicate Minerals
- Chapter 6: Sedimentary Minerals and Sedimentary Rocks
- Chapter 7: Metamorphic Minerals and Metamorphic Rocks
- Chapter 8: Ore Deposits and Economic Minerals

#### Part II: Symmetry, Crystallography, and Atomic Structure

- Chapter 9: Crystal Morphology and Symmetry
- Chapter 10: Crystallography
- Chapter 11: Unit Cells, Points, Lines, and Planes
- Chapter 12: X-Ray Diffraction and Mineral Analysis
- Chapter 13: Atomic Structure

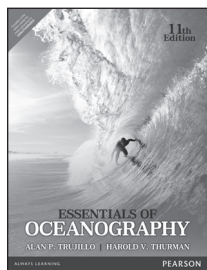
#### Part III: Mineral Descriptions

- Chapter 14: Descriptions of Minerals

### About the Author

Dexter Perkins received his B.S. from the University of Rochester in 1973, and an M.S. and Ph.D. from the University of Michigan in 1979. After graduate school, his first faculty position was at the University of Chicago. He came to the University of North Dakota in 1981 where he is currently a Professor of Geology. During the past 25 years Perkins has had several 1-year appointments at European universities. Perkins is a past editor of *American Mineralogist* and the *Journal of Geoscience Education* (since 2000).

# Oceanography



## Essentials of Oceanography, 11/e

Alan P. Trujillo  
Harold V. Thurman

ISBN: 9789332550438

© 2015

Pages: 608



### About the Book

How do the oceans work?" *Essentials of Oceanography, Eleventh Edition*, takes an interdisciplinary approach to help students answer this question. The latest edition brings together the interrelated spheres that compose Earth's systems as they relate to the oceans: geological, chemical, physical, and biological. Trujillo and Thurman balance rigor and accessibility, combining in-depth discussions of oceanographic concepts with highly visual and interactive study aids to demystify the science for the non-science student. This unique combination has made *Essentials of Oceanography* the best-selling brief book—and one of the best-sellers overall—in oceanography.

### Features

- Accessible language demystifies scientific terms by introducing each new term with its etymon (the true sense of a word) and helps maintain accessible rigor and depth of material, particularly in the coverage of tides and biological processes.
- Discussion of The Oceans and Climate Change (Ch. 16) includes detailed coverage of greenhouse gases and the unintended and severe changes in the ocean, such as ocean warming, more intense hurricanes, increasing ocean acidity, changes in deep-water circulation, melting of polar ice, and rising sea level, and how action must be taken to reduce human-caused greenhouse gases.
- Popular "Students Sometimes Ask" feature answers common, and often entertaining, questions asked by real students (e.g., "Why do my fingers get all wrinkly when I stay in the water for a long time?"; "Can internal waves break?")
- **End-of-chapter questions and exercises** help students self-check their understanding.
- **Geoscience Animations icons** throughout the text are provided to:
  - o Link the narrative to state-of-the-art computer animations created by Al Trujillo and a panel of geoscience educators.
  - o Help students visualize some of the most challenging oceanographic concepts.
  - o Demonstrate animations of topics including Formation of Seamounts/Tablemounts and Stages of Coral Reef Development;
- **Key terms**, noted in bold print, are defined when introduced and are included in the glossary.
- The authors use the international metric system (Système International or **SI units**) with comparable English system units in parentheses

### Contents

Chapter 1. Introduction to Planet "Earth"  
Chapter 2. Plate Tectonics and the Ocean Floor  
Chapter 3. Marine Provinces  
Chapter 4. Marine Sediments  
Chapter 5. Water and Seawater  
Chapter 6. Air–Sea Interaction  
Chapter 7. Ocean Circulation  
Chapter 8. Waves and Water Dynamics

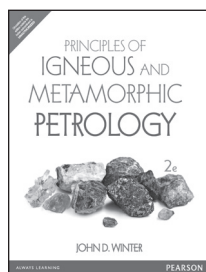
Chapter 9. Tides  
Chapter 10. The Coast: Beaches and Shoreline Processes  
Chapter 11. The Coastal Ocean  
Chapter 12. Marine Life and the Marine Environment  
Chapter 13. Biological Productivity and Energy Transfer  
Chapter 14. Animals of the Benthic Environment  
Chapter 15. Animals of the Pelagic Environment  
Chapter 16. The Oceans and Climate Change

### About the Author

**Alan P. Trujillo** teaches at Palomar Community College in San Marcos, CA, where he is co-Director of the Oceanography Program and Chair of the Earth Sciences Department. He received his bachelor's degree in geology from the University of California at Davis and his master's degree in geology from Northern Arizona University, afterwards working for several years in industry as a development geologist, hydrogeologist, and computer specialist. Al began teaching in the Earth Sciences Department at Palomar in 1990 and in 1997 was awarded Palomar's Distinguished Faculty Award for Excellence in Teaching. He has co-authored *Introductory Oceanography* with Hal Thurman and is a contributing author for the textbooks *Earth and Earth Science*. In addition to writing and teaching, Al works as a naturalist and lecturer aboard natural history expedition vessels in Alaska and the Sea of Cortez/Baja California. His research interests include beach processes, sea cliff erosion, and computer applications in oceanography.

**Harold V. Thurman** retired in May 1994, after 24 years of teaching in the Earth Sciences Department of Mt. San Antonio College in Walnut, California. Interest in geology led to a bachelor's degree from Oklahoma A&M University, followed by seven years working as a petroleum geologist, mainly in the Gulf of Mexico, where his interest in oceans developed. He earned a master's degree from California State University at Los Angeles and then joined the Earth sciences faculty at Mt. San Antonio College. Other books that Hal has co-authored include *Introductory Oceanography* (with Alan Trujillo) and a marine biology textbook. He has also written articles on the Pacific, Atlantic, Indian, and Arctic Oceans for the 1994 edition of *World Book Encyclopedia* and served as a consultant on the National Geographic publication *Realms of the Sea*.

# Petrology



## Principles of Igneous and Metamorphic Petrology, 2/e

John D. Winter

ISBN: 9789332550407

© 2015

Pages: 560



### About the Book

Typical texts on igneous and metamorphic petrology are geared to either advanced or novice petrology students. This unique text offers comprehensive, up-to-date coverage of both igneous and metamorphic petrology in a single volume—and provides the quantitative and technical background required to critically evaluate igneous and metamorphic phenomena in a way that students at all levels can understand. The goal throughout is for students to be able to apply the techniques—and enjoy the insights of the results—rather than tinker with theory and develop everything from first principles.

### Features

- A balanced presentation limits the theory to the extent that students can practice it on real occurrences—without such excessive detail that the course becomes more like chemistry than geology.
- A survey of actual occurrences of igneous and metamorphic rocks, and processes that produce them, is provided. This section is often greatly condensed in most other texts, but it is the most interesting and dynamic aspect of petrology.
- A techniques/occurrences approach for both igneous and metamorphic rocks that first presents the techniques, then applies them to assess a field area, and then expands the techniques as necessary if the field examples call for it.
- A comprehensive section on petrogenesis, particularly igneous petrogenesis, covers important igneous petrogenetic associations
- An accessible approach to mathematics, chemistry, and physics requires only a working knowledge of algebra; calculus is occasionally discussed, but is not required. Chemical and physical principles are presented early on, and at a level that is comprehensible and accessible.
- Worked examples, problems, and computer-related problems, found at the end of many chapters, carefully integrate a number of problems and computer programs
- Spreadsheets are used extensively in worked examples and problems. Spreadsheets, data files, and other programs
- Approximately 350 figures and tables are provided.

### Contents

#### Part I Igneous Petrology

- Chapter 1 Some Fundamental Concepts
- Chapter 2 Classification and Nomenclature of Igneous Rocks
- Chapter 3 Textures of Igneous Rocks
- Chapter 4 Igneous Structures and Field Relationships
- Chapter 5 An Introduction to Thermodynamics
- Chapter 6 The Phase Rule and One- and Two-Component Systems
- Chapter 7 Systems with More than Two Components
- Chapter 8 Chemical Petrology I: Major and Minor Elements
- Chapter 9 Chemical Petrology II: Trace Elements and Isotopes
- Chapter 10 Generation of Basaltic Magmas
- Chapter 11 Magma Diversity
- Chapter 12 Layered Mafic Intrusions
- Chapter 13 Mid-Ocean Ridge Volcanism
- Chapter 14 Oceanic Intraplate Volcanism
- Chapter 15 Continental Flood Basalts

- Chapter 16 Subduction-Related Igneous Activity Part I: Island Arcs
- Chapter 17 Subduction-Related Igneous Activity Part II: Continental Arcs
- Chapter 18 Granitoid Rocks
- Chapter 19 Continental Alkaline Magmatism
- Chapter 20 Anorthositic

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- Chapter 22 A Classification of Metamorphic Rocks
- Chapter 23 Structures and Textures of Metamorphic Rocks
- Chapter 24 Stable Mineral Assemblages in Metamorphic Rocks
- Chapter 25 Metamorphic Facies and Metamorphosed Mafic Rocks
- Chapter 26 Metamorphic Reactions
- Chapter 27 Thermodynamics of Metamorphic Reactions
- Chapter 28 Metamorphism of Pelitic Sediments
- Chapter 29 Metamorphism of Calcareous and Ultramafic Rocks
- Chapter 30 Metamorphic Fluids, Mass Transport and Metasomatism
- Appendix A: Units and Constants
- Appendix B: Abbreviations and Acronyms
- Appendix C: The CIPW Norm

### About the Author

**John D. Winter** did his undergraduate work in geology at the University of Illinois at Urbana, and earned his M.S. and Ph.D. at the University of Washington in Seattle. Now Professor of Geology at Whitman College in Walla Walla, Washington, his principal fields of interest are in metamorphic petrology, mineralogy and crystallography, and geochemistry. He has spent several summers in Greenland, a summer in Labrador, and another in Norway, where he studied processes that take place during the formation and subsequent development of the ancient deep continental crust. He is also working on contact metamorphism in the Wallowa Mountains of NE Oregon. Briefly, he also worked as an exploration geologist in New Guinea.

Professor Winter teaches Mineralogy, Igneous and Metamorphic Petrology, Introductory Geology, Environmental Geology, and Geochemistry. Outside the classroom, his interests include travel, mountaineering, hiking, mountain biking, and telemark skiing.

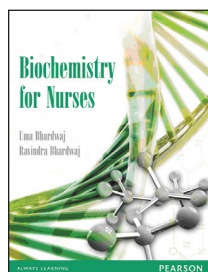




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## Biochemistry



### Biochemistry for Nurses

**Dr Uma Bhardwaj**  
**Dr R Bhardwaj**

ISBN: 9788131768563

© 2012

Pages: 296

#### About the Book

Biochemistry for Nurses has been designed considering the syllabi requirements laid down by The Indian Nursing Council and other premier institutes/universities. Book covers the most up-to-date developments in the area of Biochemistry and presents all the essential course information required for all UG course in an easy-to-follow and step-by-step format.

#### Features

- Detailed Interpretation and Investigation of metabolic disorders of biomolecules
- Simple and self-explanatory diagrams
- Multiple choice and review questions to test one's skills

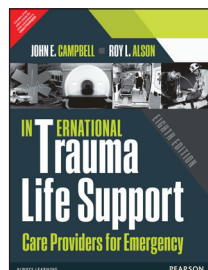
#### Contents

1. Introduction
2. Structure and functions of Cell membrane
3. Composition and metabolism of Carbohydrates
4. Composition and metabolism of Lipids
5. Composition and metabolism of Amino acids and Proteins
6. Composition of Vitamins and Minerals
7. Immunochemistry
8. Composition and Metabolism of Nucleic Acids

#### About the Author

**Dr. Uma Bhardwaj** is an experienced Prof. of Biochemistry. Presently she is working as Sr. Director with Arni University. She is M.Sc gold medalist in Biochemistry, M.Tech and Ph.D. The author has published a number of research papers in national and international journals also published books. She is the chief editor of Arni University International journals of Science, Technology and Management. She has developed many formulations for commercial products Dr R Bhardwaj is currently Vice-chancellor and has been professor of Biochemistry from the young age of 34 years, teaching M Sc and Ph. D students. Prof R Bhardwaj is a world renowned distinguished scientist and a professor of biochemistry have published research papers in worlds top scientific journals like Nature and BBRC. He had developed biological solar cells with greater power conversion efficiency. Prof Bhardwaj has guided 11 PhD's and has a large number of research publications.

## Emergency & Medical Care



### International Trauma Life Support for Emergency Care Providers, 8/e

**ITLS**

ISBN: 9789332573857

© 2016

Pages: 432

**New**

#### About the Book

For basic trauma life support courses

For more than 30 years, International Trauma Life Support has been at the forefront of trauma education at all levels of emergency care worldwide. This complete reference is filled with practical, hands-on training that guides readers through the hows and whys behind all of the skills necessary for rapid assessment, resuscitation, stabilization, and transportation of the trauma patient. Updated with the latest approaches to the care of the trauma patient, this Eighth Edition conforms to the most recent AHA/ILCOR guidelines for artificial ventilation and CPR. This new edition continues ITLS's tradition of excellence to ensure learners get the most out of the few minutes they have to save their patients' lives.

#### Features

- This proven training book has been at the forefront of trauma education at all levels of pre-hospital emergency care worldwide for more than 30 years.
- **UPDATED:** BRADY provides book-specific online resources for both learners and instructors including review questions, games, animations, case studies, additional trauma photos and much more! BRADY resources offers instructors a full complement of online supplemental teaching materials such as test banks and PowerPoint lectures to aid in the classroom. [www.bradyybooks.com](http://www.bradyybooks.com) Updates to student online resources include:
- **NEW:** In "Additional Skills," the use of the new FastResponder™ sternal IO has been added.
- **UPDATED:** In "Multicasualty Incidents and Triage," the discussion of various triage schemes has been expanded and now includes SALT Triage.
- **UPDATED:** In "Role of the Medical Helicopter," the data has been updated.
- **NEW:** In "Trauma Scoring in the Prehospital Care Setting," the CDC Trauma Triage Scheme is included.
- **UPDATED:** The "Tactical EMS" bibliography reflects current thinking within the Hartford Consensus.
- **UPDATED:** Coverage of the latest and most effective approaches to the care of the trauma patient prepares readers to become effective emergency care providers.
- **NEW:** Dr. Roy Alson has joined Dr. John Campbell as co-editor in chief for this edition. Dr. Alson is a board certified EM and EMS physician with extensive experience in EMS care and education and has been a contributor to the ITLS text and course for over 25 years.
- **UPDATED:** Conforms to the latest AHA/ILCOR guidelines for artificial ventilation and CPR.
- Hands-on exercises throughout the text help readers practice their knowledge and skills on simulated patients. By the end of the course, learners should feel confident in their ability to provide rapid lifesaving trauma care.
- Management skills chapters follow the topic chapters to help reinforce learning.
- **UPDATED:** Key terms, photos, drawings, and case presentations accompany each chapter to promote retention of key concepts. Many

of the case presentations draw upon a single scenario so they reflect a realistic situation.

- Each chapter opens with a Chapter Overview and Objectives to focus students' study time.
- Pearls feature quick references and reminders in the side margins, providing learners with reinforcement of difficult chapter concepts.
- Chapter Summaries wrap up each chapter, reviewing important concepts and revisiting the overview that opens up the chapter, forming a bridge between areas of focus and objectives.

## Contents

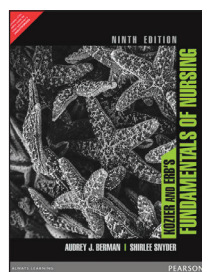
Scene Size-up  
Trauma Assessment and Management  
Assessment Skills  
Airway Management  
Airway Skills  
Thoracic Trauma  
Thoracic Trauma Skills  
Shock  
Vascular Access Skills  
Head Trauma and Traumatic Brain Injury  
Spinal Trauma and Patient-Centered Spinal Motion Restriction  
Spine Management Skills  
Abdominal Trauma  
Extremity Trauma  
Extremity Trauma Skills  
Burns  
Pediatric Trauma  
Geriatric Trauma  
Trauma in Pregnancy  
The Impaired Patient  
Trauma Arrest  
Standard Precautions and Transmission-Based Precautions

## About the Author

John E. Campbell, MD, FACEP

Dr. Campbell received his BS degree in pharmacy from Auburn University in 1966 and his medical degree from the University of Alabama at Birmingham in 1970. He has been in the practice of Emergency Medicine for 40 years, practicing in Alabama, Georgia, New Mexico, and Texas. He became interested in prehospital care in 1972 when he was asked to teach a basic EMT course to members of the Clay County Rescue Squad. He is still an honorary member of that outstanding group. Since then, he has served as medical director of many EMT and paramedic training programs. He recently retired as the Medical Director for EMS and Trauma for the State of Alabama.

# Nursing



## Kozier & Erb's Fundamentals of Nursing, 9/e

Audrey Berman  
Shirlee Snyder

ISBN: 9789332519060

© 2014

Pages: 1666

## About the Book

**Kozier & Erb's Fundamentals of Nursing, 9/e** thoroughly addresses the key concepts of contemporary professional nursing, helping nurses grow and evolve to meet the demands of a dramatically changing health care system. The Ninth Edition's content has been systematically revised to reflect new evidence, and a stronger emphasis on aging, wellness, safety, and home- and community-based care. Coverage includes: health promotion, disease prevention, holistic care, multiculturalism, nursing theories, informatics, research, ethics, advocacy, and many other topics. Designed for use with any nursing theory or conceptual framework, this edition contains several new pedagogical features, including new Safety and Self-Care alerts.

## Features

- Nursing Care Plans-presenting sample written guides organizing information about a client's care
- Critical Thinking Checkpoints-presenting brief case studies followed by questions designed to stimulate deeper consideration
- Identifying Nursing Diagnoses, Outcomes, and Interventions Tables-providing guidelines, with data clusters and current NIC and NOC language for each specific disorder
- Drug Capsule Boxes-providing brief overviews of drug information, nursing responsibilities, and related client teaching
- Anatomy & Physiology Review Boxes-in selected clinical chapters, with additional critical thinking questions
- Developmental Assessment Guidelines-supporting coverage of caring for babies, children, adolescents, young and middle-aged adults, and older adults
- Nursing Process in Action-presented in a two page visual depiction of the components of the nursing process

## Contents

### Unit 1. The Nature of Nursing

1. Historical and Contemporary Nursing Practice
2. Evidence-Based Practice and Research in Nursing
3. Nursing Theories and Conceptual Frameworks
4. Legal Aspects of Nursing
5. Values, Ethics and Advocacy

### Unit 2. Contemporary Health Care

6. Health Care Delivery Systems
7. Community Nursing and Care Continuity
8. Home Care
9. Electronic Health Records and Information Technology

### Unit 3. The Nursing Process

10. Critical Thinking and Nursing Practice
11. Assessing
12. Diagnosing
13. Planning
14. Implementing and Evaluating
15. Documenting and Reporting

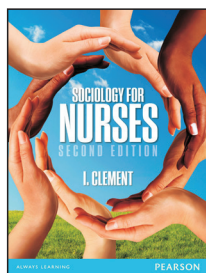
### Unit 4. Health Beliefs and Practices

16. Health Promotion
17. Health, Wellness, and Illness

18. Culture and Heritage
19. Complementary and Alternative Healing Modalities
- Unit 5. Life Span Development**
20. Concepts of Growth and Development
21. Promoting Health from Conception through Adolescence
22. Promoting Health in Young and Middle-Aged Adults
23. Promoting Health in Older Adults
24. Promoting Family Health
- Unit 6. Integrated Aspects of Nursing**
25. Caring
26. Communicating
27. Teaching
28. Leading, Managing, and Delegating
- Unit 7. Assessing Health**
29. Vital Signs
30. Health Assessment
- Unit 8. Integral Components of Client Care**
31. Asepsis
32. Safety
33. Hygiene
34. Diagnostic Testing
35. Medications
36. Skin Integrity and Wound Care
37. Perioperative Nursing
- Unit 9. Promoting Psychosocial Health**
38. Sensory Perception
39. Self-Concept
40. Sexuality
41. Spirituality
42. Stress and Coping
43. Loss, Grieving, and Death
- Unit 10. Promoting Physiological Health**
44. Activity and Exercise
45. Sleep
46. Pain Management
47. Nutrition
48. Urinary Elimination
49. Fecal Elimination
50. Oxygenation
51. Circulation
52. Fluid, Electrolyte, and Acid-Base Balance
- Appendix A. Answers to Anatomy and Physiology, Critical thinking Possibilities, and Answers to Test Your Knowledge
- Appendix B. 20XX-20XX NANDA-Approved Nursing Diagnoses
- Appendix C. Measurement Scales Used in Nursing Outcomes Classification (NOC)

### About the Author

Audrey J. Berman, Ph.D., RN, AOCN  
Shirlee Snyder, EdD, RN



## Sociology for Nurses

**I. Clement**

ISBN: 9789332525269

© 2014

Pages: 584

### About the Book

In its pursuit to bring about an awakening among students of nursing about human social behavior, this second edition of Sociology for Nurses continues to build on sociological theories that are of relevance to the nursing community. Conforming to the syllabus prescribed by the Indian Nursing Council and catering to the needs of second year B.Sc Nursing students, this book provides jargon-free explanation of even the most difficult concepts to the student's benefit.

### Features

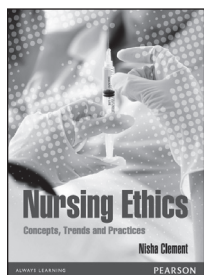
- Core concepts exemplified with vivid illustrations and reinforced by rich pedagogy
- Emphasis on sociological concepts and their applications from the standpoint of the practicing nurse
- Pertinent definitions, insightful concept boxes and deft comparison tables

### Contents

1. Introduction to sociology
2. Sociology and nursing
3. Man, Society and environment
4. Primary concepts in sociology
5. Social process
6. Culture
7. Population
8. Social groups
9. Marriage and family
10. Rural communities in India
11. Urban communities in India
12. Social stratification
13. Social mobility
14. Race
15. Social system
16. Social organization
17. Social disorganization
18. Social problems
19. Social control
20. Social change

### About the Author

**I. Clement** is Principal of VSS college of Nursing, Bangalore. He has been involved in teaching and research for 22 years. He has various peer-reviewed research publications to his credit.



## Nursing Ethics : Concepts, Trends and Practices

**Nisha Clement**

ISBN: 9788131773345

© 2013

Pages: 424

### About the Book

Nursing Ethics presents detailed explanations of the roles and responsibilities of nurses and the code of ethics they must follow at each level of the nursing pyramid. The comprehensive coverage includes a scrupulous study of the scope of ethics in specialized areas such as paediatric nursing, community health nursing and obstetrics and gynaecology. The text is replete with supportive diagrams that enable readers to comprehend the underlying concepts. Written in a lucid style that is easily accessible, this book is an invaluable guide for the entire nursing community students, teachers, researchers, practising nurses and managing nurses.

### Features

This book on Nursing Ethics is meant for the entire nursing community and provides the ethical guidelines for students, teachers, practicing nurses in clinics, managing nurses and those doing researches. The book helps them to understand the concepts in a very simple and lucid manner irrespective of their specialized areas like emergency department, intensive care unit, operation theater, etc.

### Contents

1. Introduction To Ethics
2. Principles Of Nursing Ethics
3. Professional Regulations In Ethics
4. Ethics Issues In Nursing
5. Special Ethical Issues In Nursing

### About the Author

Nisha Clement is Vice Principal, VSS College of Nursing, Bangalore.

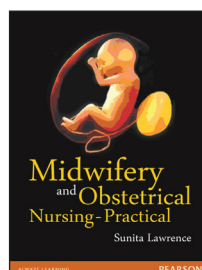
- Based on INC syllabus
- Foreword by Prof. Reena Bose (Former President of NRSI and Principal of Sister Florence College Of Nursing)

### Contents

1. Introduction to Nursing Research
2. Research Process
3. Research Problem
4. Review of literature
5. Theoretical and Conceptual Framework
6. Ethics in Research
7. Quantitative and Qualitative Research Approaches and Designs
8. Population, Sampling and Data Collection Methods in Qualitative Research
9. Population and Sampling in Quantitative Studies
10. Development of Research Tool
11. Data Analysis and Interpretation
12. Critique of Nursing Research Studies
13. Communication of Research Results-Oral and Written
14. Research Utilization and Evidence-based Nursing Practice
15. Fundamentals of Statistics

### About the Author

The Nursing Research Society of India (NRSI) was established in May 1986. From its inception, it has been working continuously to promote research within and around the nursing environment. NRSI also supports the development of nursing research activities in universities, and provides nursing care standards to nursing health-care institutions.



## Midwifery and Obstetrical Nursing - Practical, I/e

**Dr. Sunita Lawrence**

ISBN: 9788131773451

© 2013

Pages: 224

### About the Book

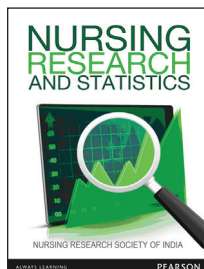
The Midwifery and Obstetric Nursing Practical, based on the latest syllabus of the Indian Nursing Council, is designed to facilitate and complement the training of a nurse. Although many textbooks have addressed the theory portion of nursing, the practical aspect of this course has often been ignored. This book aims to cover all the relevant topics with the latest procedures and technologies used in midwifery and obstetrics. It includes a set of 41 experiments and 150 diagrams to provide students with the necessary skills and knowledge to enhance their professional abilities. Written in an easy-to-understand language, this text is primarily targeted at students pursuing B.Sc. in nursing.

### Features

- 40 practicals
- 150 diagrams illustrating each and every procedure

### Contents

1. Preconception Counselling: An Introduction
2. Prenatal Assessment and Care
3. Intranatal Assessment and Care
4. Postpartum Assessment
5. Assessment of the Newborn
6. Assisting in Operative Procedures



## Nursing Research and Statistics

**Nursing Research Society of India**

ISBN: 9788131775707

© 2013

Pages: 424

### About the Book

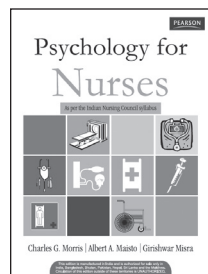
Nursing Research and Statistics provides a clear understanding of the principles and processes of nursing research, which is an essential subject for nursing students. This is a comprehensive text, written by eminent members of the Nursing Research Society of India (NRSI), that also looks into the methods of data collection, its analysis and presentation. Based on the Indian Nursing Council syllabus, this textbook is specially designed to meet the needs of B.Sc. students of nursing.

### Features

- Student-friendly
- Original content written by experienced members of NRSI
- Covers 'Fundamentals of Statistics' in a separate chapter
- Covers both Qualitative and Quantitative studies in Sampling

## About the Author

Sunita Lawrence is Principal, College of Nursing, Bhopal. She is also editor-in-chief of the Indian Journal of Holistic Nursing and Trends In Nursing Administration and Education. Previously, she was the Assistant Director and Head of the Department of Nursing and Health Sciences in Madhya Pradesh, Bhoj (Open) University, Bhopal.



## Psychology for Nurses

**Charles G. Morris**  
**Albert A. Maisto**  
**Girishwar Misra**

ISBN: 9788131732168  
© 2010  
Pages: 260

## About the Book

Based on the latest syllabus by the Indian Nursing Council, *Psychology for Nurses* is a text primarily targeted at the students pursuing B.Sc. in nursing. Designed to facilitate and complement the training of a nurse by creating awareness of and interest in psychology, this textbook provides an introduction to key topics such as the biological basis of behavior, perception, learning, memory, communication, intelligence, and aptitude. This book is written in an easy-to-understand and a lucid style, and deals with concepts of motivation, conflicts and their resolution, personality, and life-span development. Separate chapters on attitude, group psychology, psychological assessment, and the role of a nurse have also been included. Several illustrations, figures, tables, and key terms have been provided in the chapters to aid understanding and recapitulation. Review questions and multiple-choice questions are included at the end of each chapter to test the students' grasp of the concepts learned.

## Features

- The characteristics nurses need to develop to better care for their patients. Some of these are: care, responsibility, sensitivity, collegial interdependence, emotional intelligence, and effective communication and decision making
- The fact that health behavior is moderated by beliefs about health and illness
- The need to form some sort of relationship with patients while remaining objective
- The future of the nursing profession in India

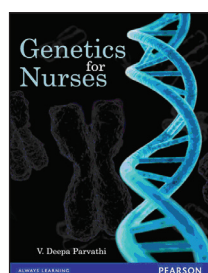
## Contents

1. Introduction
2. The Genetic and Biological Bases of Behavior
3. Sensory and Perceptual Processes
4. Learning
5. Memory
6. Thinking, Language, and Communication
7. Intelligence and Aptitude
8. Motivation and Emotion
9. Stress and Coping
10. Personality
11. Life-span Development
12. Mental Hygiene, Mental Health, and Positive Psychology
13. Psychological Disorders and Therapies
14. Attitudes
15. Group Psychology

## About the Author

**Charles G. Morris**, a Ph.D. in psychology from the University of Illinois, is Professor Emeritus at the University of Michigan. He served as Associate

Dean in the College of Literature, Science and the Arts and as Associate Chair of the Department of Psychology. He is a Fellow of the American Psychological Association and the American Psychological Society. Dr Morris is also the author of more than two dozen books, more than a dozen articles, and more than thirty papers and presentations. Albert A. Maisto earned a Ph.D. in psychology from the University of Alabama. Throughout his career, Dr Maisto distinguished himself as an exemplary instructor of general psychology winning the prestigious Bank of America Award for Teaching Excellence. His portfolio includes dozens of published articles in refereed journals, professional papers, and a successful series of Introductory Psychology textbooks by Pearson Education. Girishwar Misra, currently professor of psychology at the University of Delhi, has served as President of the National Academy of Psychology (NAOP) India, Chairman of the department of psychology, and as Dean of the faculty of arts at Delhi University. Dr Misra has undertaken major research projects and written extensively in the areas such as poverty, stress, environment, creativity, and well-being. During the course of his career, he has won some prestigious awards and has supervised research work of many doctoral students.



## Genetics for Nurses

**V. Deepa Parvathi**

ISBN: 9788131768877  
© 2012  
Pages: 380

## About the Book

*Genetics for Nurses: Genetics* is a compulsory paper offered to undergraduate students of Nursing. *Genetics for Nurses* has been designed considering the syllabi requirements laid down by the Indian Nursing Council and the leading nursing colleges. The book has a variety of case studies and review questions to support the theoretical concepts and is a unique offering to the undergraduate students of nursing.

## Features

- Exhaustive coverage of maternal and prenatal genetic influences on development of defects/ diseases, and genetic testing in neonates/ children
- Numerous self-explanatory figures
- Case studies pertaining to genetic disorders to help students diagnose the clinical condition

## Contents

1. Introduction
2. Maternal, prenatal and genetic influences on development of defects and diseases
3. Genetic testing in the neonates and children
4. Genetic conditions of adolescents and adults
5. Services related to genetics

## About the Author

**V. Deepa Parvathi** is a serial merit scholar in Microbiology and Genetics through her undergraduate and postgraduate career. She majored in Microbiology and was the topper in her university, graduating from the Chennai-based SRM Arts and Science College. Her post-graduation major was Human Genetics in which she was at the top of the rolls at Sri Ramachandra University, Chennai securing for herself the gold medal for her discipline in 2006. She has several anthologies, technical and symposia papers to her credit, presented both solo and in collaboration. Presently, she is a Lecturer with Sri Ramachandra University



## Microbiology for Nurses

**V. Deepa Parvathi**  
**R. Sumitha**  
**Smitha. S**

ISBN: 9789332525276  
© 2014  
Pages: 408

### About the Book

Microbiology for Nurses approaches, in a systematic way, the pathogenic activities of a wide range of microorganisms and their indications on the human body. Designed to fully address the needs of nursing students taking up a curriculum on microbiology, the book conforms to the syllabus prescribed by the Indian Nursing Council. With ample review questions and multiple choice questions to enable easy recapitulation and vibrant color illustrations to appeal to the visual learner, this book presents the theoretical concepts of the subject from a professional nursing perspective.

### Features

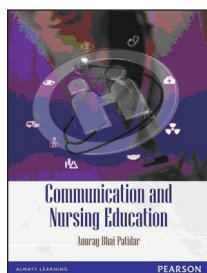
- Exhaustive coverage of asepsis, sterilization and disinfection
- Focus on hospital safety measures and biomedical waste management
- In-depth analysis of the scope of chemotherapy and the action of antibiotics
- Concise and easy-to-follow presentation of techniques for collection and handling of specimens, immunization and vaccination

### Contents

Unit 1: Introduction  
Unit 2: General characteristics of microbes  
Unit 3: Infection Control  
Unit 4: Pathogenic organisms  
Unit 5: Immunology

### About the Author

Mrs. V. Deepa Parvathi is faculty, Department of Human Genetics, Sri Ramachandra University, Tamilnadu  
Mrs. R. Sumitha is faculty, Department of Biomedical Sciences, Sri Ramachandra University, Tamilnadu  
Mrs. Smitha. S is visiting Faculty, C. M. Managuli Arts & Science College Karnataka



## Communication and Nursing Education

**Anurag Bhai Patidar**

ISBN: 9788131788394  
© 2012  
Pages: 384

### About the Book

Based on the latest syllabus of the Indian Nursing Council, Communication and Nursing Education is written primarily for students pursuing B.Sc. in nursing. It covers a wide range of topics such as curriculum development, classroom management, teaching-learning process and evaluation methods for didactic and clinical settings. While there is an entire chapter devoted to the in-service education, issues like interpersonal relationships, human relationships and communication are also comprehensively discussed. The text is supplemented with the most up-to-date teaching and learning

techniques and includes a large number of examples and flow charts to facilitate an easy understanding of the key concepts.

### Features

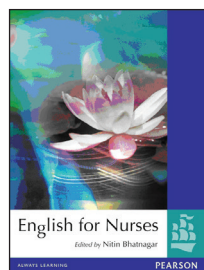
### Contents

1. Review of Communication Process
2. Interpersonal Relationship
3. Human Relation
4. Introduction to Education
5. Teaching/Learning Process
6. Classroom Management
7. Instructional Strategy
8. Educational Media
9. Microteaching
10. Measurement and Evaluation
11. Evaluation Tools
12. Curriculum Development
13. Information, Education and Communication for Health
14. Guidance and Counseling
15. In-Service Education
16. Nursing Education Programs in India

### About the Author

**Anurag Bhai Patidar** is an experienced faculty of nursing sciences. Presently he is a lecturer at the College of Nursing, Dayanand Medical College and Hospital, Ludhiana. He topped in M.Sc. (N) from AIIMS, New Delhi and obtained his Ph.D. degree in nursing at INC consortium in collaboration with Rajiv Gandhi University of Health Sciences, Bangalore.

## English for Nursing



## English for Nurses

**Nitin Bhatnagar**

ISBN: 9788131769621  
© 2012  
Pages: 128

### About the Book

This book addresses the need for nurses to communicate effectively in English. Combining the essentials of communication with language learning, it provides all the necessary skills for professionals in healthcare. English for Nurses puts equal emphasis on all the four aspects of learning the language listening, speaking, reading and writing through a variety of exercises and assessment modules. It provides plenty of practice in functional grammar and also for pronunciation and fluency in speaking.

### Features

1. Reading Comprehension: Objective and Subjective Questions
2. Vocabulary and glossary
3. Grammar exercises that are graded
4. Functional grammar based on practical situations that a nurse faces.
5. Common problems of pronunciation and speaking skills have been addressed
6. Writing skills based on the needs of the nurses have been addressed

## Contents

1. Edith Cavell: And Bravely Fought the Nurse
2. The Story of a British Nurse in India (Margaret Ledger)
3. A doctor for all seasons: The story of Noshir H Antia (Kavita Nambisani)
4. Aarohi: Ascent in Healthcare
5. Communication in healthcare: The perspective of a Nurse
6. Private and Public Partnership in Healthcare (Bharathi Ghanshyam)
7. Managing Pain
8. The story of a British Nurse (Stress in Nursing, Pratibha P. Kane; from a journal)
9. The Quiet Soldiers of Compassion: Prakash and Mandakini Amte
- 10 The Story of a Caribbean Nurse

## About the Author

Nitin Bhatnagar is Professor and Head, Institute of Applied Sciences and Humanities, GLA University, Mathura.

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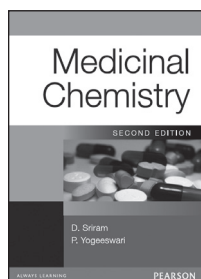


A vibrant, hand-drawn collage featuring a variety of mathematical, scientific, and everyday objects. The central focus is a large, stylized red 'V' shape. Surrounding this are numerous elements:
 

- Mathematical Formulas:**  $1+1=2$ ,  $E=mc^2$ ,  $H_2O$ ,  $H_2SO_4$ ,  $c^2 = \sqrt{a^2 + b^2}$ ,  $T = 3.14$ ,  $\pi = 3.14$ ,  $S_{\square} = 4 \times a$ ,  $OH^-$ ,  $\gamma = ax + b$ ,  $x + y = z$ ,  $x \in \mathbb{R}$ ,  $V_D = a^2$ ,  $S = v \cdot t$ ,  $abc$ ,  $1939-1945$ .
- Scientific and Nature Objects:** A globe, a soccer ball, a heart, a flower, a clock, a cupcake, a briefcase, a house, a calculator, a ruler, a protractor, a compass, a pair of shoes, a pair of glasses, a pair of scissors, a pair of pants, a pair of socks, a pair of shoes, a pair of glasses, a pair of pants, a pair of socks.
- Other Elements:** A large red 'V' shape, a large red 'X' shape, a large red 'Y' shape, a large red 'Z' shape, a large red 'A' shape, a large red 'B' shape, a large red 'C' shape, a large red 'D' shape, a large red 'E' shape, a large red 'F' shape, a large red 'G' shape, a large red 'H' shape, a large red 'I' shape, a large red 'J' shape, a large red 'K' shape, a large red 'L' shape, a large red 'M' shape, a large red 'N' shape, a large red 'O' shape, a large red 'P' shape, a large red 'Q' shape, a large red 'R' shape, a large red 'S' shape, a large red 'T' shape, a large red 'U' shape, a large red 'V' shape, a large red 'W' shape, a large red 'X' shape, a large red 'Y' shape, a large red 'Z' shape.



## Medicinal Chemistry



### Medicinal Chemistry, 2/e

**D. Sriram**  
**P. Yogeeswari**

ISBN: 9788131731444

© 2010

Pages: 712

#### About the Book

The second edition of Medicinal Chemistry is based on the core module of Pharmacy syllabi of various technical universities, and targets undergraduate B.Pharm students across India. The current edition has been designed by authors based on the opinion of the experts to include the latest developments in the field of medicinal chemistry, detailed synthesis mechanism of the drugs and their mode of action inside the body.

#### Features

- Complex reactions broken down into intermediary steps
- A variety of exercises to test the cognitive level of students
- New pedagogical features:
  - Learning objectives
  - Further Reading guidelines
  - Coloured illustrations
  - Data tables
- New chapters on drug design and development, principles of drug action, CADD and a chapter on miscellaneous drugs

#### Contents

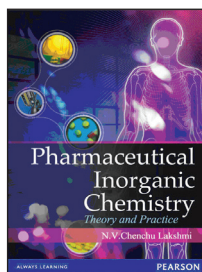
1. Drug Discovery and Development
2. Principles of Drug Action
3. Drug Metabolism and Prodrugs
4. Computer-aided Drug Design
5. General Anaesthetics
6. Local Anaesthetics
7. Sedatives, Hypnotics, and Anxiolytic Agents
8. Anti-Epileptic Drugs
9. Antipsychotic Agents
10. Antidepressants
11. Narcotic Analgesics
12. Antipyretics and Non-Steroidal Anti-Inflammatory Drugs
13. Miscellaneous CNS Agents
14. Antihistamines and Anti-Ulcer Agents
15. Diuretics
16. Antihypertensive Agents
17. Antiarrhythmic Drugs
18. Antihyperlipidemic Agents
19. Antianginal Drugs
20. Insulin and Oral Hypoglycaemic Agents
21. Oral Anticoagulants
22. Adrenergic Drugs
23. Cholinergic Drugs
24. Sulphonamides, Sulphones, and Dihydrofolate
25. Inhibitors
26. Quinolone Antibacterials
27. Antibiotics
28. Antitubercular Agents
29. Antifungal Agents
30. Antiviral Agents
31. Antiprotozoal Agents

32. Anticancer Agents
33. Prostaglandins
34. Steroids
35. Miscellaneous Agents
36. Nomenclature of Medicinal Compounds

#### About the Author

**Dr. D. Sriram** is presently Assistant Professor at Pharmacy Group, Birla Institute of Technology and Science-Pilani, Hyderabad Campus. He received his Ph.D. in 2000 from Banaras Hindu University, Varanasi. He has been involved in teaching for last eight years and in research for nine years. Dr. Sriram has 108 peer-reviewed research publications to his credit. Dr. P. Yogeeswari is presently Assistant Professor at Pharmacy Group, Birla Institute of Technology and Science-Pilani, Hyderabad Campus. She received her Ph.D. degree in 2001 from Banaras Hindu University, Varanasi. She has been involved in research for the last nine years and in teaching for eight years.

## Pharmaceutical Inorganic Chemistry



### Pharmaceutical Inorganic chemistry :Theory and practice

**NV Chenchu Lakshmi**

ISBN: 9788131769409

© 2012

Pages: 430

#### About the Book

Pharmaceutical Inorganic chemistry is a compulsory subject offered to all the under graduate students of Pharmacy. This book on Pharmaceutical Inorganic chemistry has been designed considering the syllabi requirements laid down by AICTE and other premier institutes/universities. The book has two separate sections, one for the theory and the other for practical. Review questions, and viva voce questions have been included to make this book a unique offering to the students of Pharmacy.

#### Features

- The monographs of all the compounds are explained along with their preparation and formulations
- Detailed coverage on Radio pharmaceuticals
- Separate chapters on water, silicates, cement and fillers in dental products and pharmaceutical reagents and Pharmaceutically acceptable glass

#### Contents

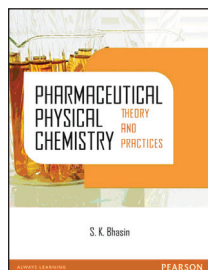
1. Introduction
2. Importance of Inorganic Chemistry in day to day life
3. Periodic classification of elements
4. Pharmacopoeia
5. Impurities in pharmaceuticals
6. Water
7. Acids and Bases
8. Buffer Solutions
9. Electrolytes
10. Official compounds of Calcium
11. Official compounds of Iron
12. Official compounds of Iodine
13. Gastrointestinal Agents
14. Dental products

15. Pharmaceutical acids
16. Topical agents
17. Respiratory agents
18. Radio pharmaceuticals
19. Miscellaneous
20. Complexing agents
21. Qualitative tests for anions and cations
22. Reagents

### About the Author

**N V Chenchu Lakshmi** is faculty, Department of Pharmaceutical chemistry at KVSRR Siddhartha College of Pharmaceutical sciences, Vijayawada.

## Pharmaceutical Physical Chemistry



### Pharmaceutical Physical Chemistry :Theory and Practices

**Dr S K Bhasin**

ISBN: 9788131765272

© 2012

Pages: 575

### About the Book

Physical Chemistry is a compulsory paper offered to all the students of Pharmacy. There is a dearth of good books that exclusively cover the syllabi of physical chemistry offered to pharmacy courses. Pharmaceutical Physical Chemistry has been designed considering their requirements laid down by AICTE and other premier institutes/universities. Apart from the theory 20 most common laboratory experiments have been included to make this book a unique offering to the students of pharmacy.

### Features

- 20 Most common laboratory experiments
- 350 Review questions
- 125 Solved problems, 280 MCQs, 152 Line Diagrams, 35 Tables

### Contents

#### Part A

1. Behaviour of Gases
2. The Liquid state
3. Solution
4. Thermodynamic
5. Adsorption and Catalysis
6. Photochemistry
7. Chemical Kinetics
8. Quantum Mechanics
9. Ionic Equilibria
10. Distribution Law
11. Electrochemistry
12. Electromotive Force and Oxidation-Reduction System
13. Solid State (Crystalline State)
14. Chemical Bonding
15. Phase Equilibria

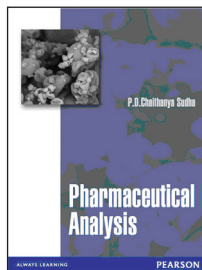
#### Part B

16. Experiments

### About the Author

**Dr S K Bhasin** is the Director and Professor of Chemistry at Himalayan Group of Professional institute, Kala Amb, Ambala, Haryana. He has been teaching undergraduate and postgraduate students for more than 40 years.

## Pharmaceutical Analysis / Chemical Analysis



### Pharmaceutical Analysis

**P D Chaithanya Sudha**

ISBN: 9788131773697

© 2012

Pages: 668

### About the Book

Pharmaceutical Analysis is a compulsory subject offered to all the undergraduate students of Pharmacy. This book on Pharmaceutical Analysis has been designed considering the syllabi requirements laid down by AICTE and other premier institutes/universities. The book covers both the Titrimetric and Instrumental aspects of Pharmaceutical analysis which is helpful for use in multiple semesters.

### Features

- Spectroscopy and chromatography along with the latest techniques like affinity chromatography, super critical fluid chromatography and nano- flow liquid chromatography are explained in a student friendly manner
- Unique compilation of analysis of reagents, analysis of pharmaceutical agents, analysis of biological compounds, quality assurance and regulatory affairs and concept of validation in a single book.
- Detailed coverage of non -aqueous titrations, complexometric titrations and water analysis.

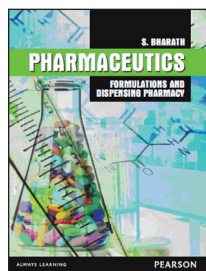
### Contents

1. Introduction to Analysis
2. Physical Analytical Methods
3. Titrimetric Methods
4. Electro analytical Methods
5. Spectroanalytical Methods
6. Chromatographic Techniques
7. Reagents
8. Radiometric Analysis
9. Analysis of Functional groups
10. Analysis of pharmaceutical agents
11. Analysis of packing materials
12. Analysis of Biological compounds (ELISA and other Bioassays)
13. Thermal analysis
14. Analysis of water
15. Analysis of food components
16. Quality Assurance and Regulatory Affairs
17. Concept of Validation
18. Statistical Analysis

### About the Author

**P.D. Chaithanya Sudha** is faculty, Department of Pharmaceutical analysis, St. Mary's college of pharmacy, Andhra Pradesh

# Pharmaceutics/Pharmaceutical Technology



## Pharmaceutics : Formulations and dispensing pharmacy

S. Bharath

ISBN: 9788131795453

© 2013

Pages: 304

### About the Book

Pharmacy is a diverse field, of which pharmaceutics constitutes an integral part. This book has been designed to sensitize the students of pharmacy to the core concepts of pharmaceutics and to disseminate information on converting a drug into suitable dosage forms. It spells out fundamental theoretical aspects of the various dosage forms in a lucid language that enable students to grasp the basics effectively.

### Features

- Solid, liquid and semisolid dosage forms delineated with examples cited for each dosage form
- Emphasis on sterile dosage forms, aerosol technology and surgical aids to give students an insight into their role in therapy
- Exclusive chapter on herbal formulations
- Well-defined diagrams and flowcharts for unambiguous understanding of the concepts and principles.
- Numerous frequently asked questions and multiple choice questions

### Contents

- 1: Introduction To Pharmacy
- 2: Prescription
- 3: Posology
- 4: Introduction To Dosage Forms
- 5: Solid Dosage Forms
- 6: Liquid Dosage Forms

#### Part I - Monophasic Liquid Dosage Forms

#### Part II - Biphasic Liquid Dosage Forms

- 7: Semi - Solid Dosage Forms
- 8: Sterile Dosage Forms
- 9: Incompatibilities
- 10: Surgical Ligatures and Sutures
- 11: Herbal Formulations
- 12: Pharmaceutical Aerosols

### About the Author

**S. Bharath** is Professor of pharmaceutics at M. S. Ramaiah College of Pharmacy, Bengaluru. An established academican with 16 years of teaching and research experience enhanced by a strong industrial background, he has guided numerous postgraduate students in their project work. He is currently guiding doctoral students in research leading to their PhD degrees. He has to his credit more than 60 research articles and over 70 papers presented in national and international journals and conferences.



## Pharmaceutical Technology : Concepts and Applications

S. Bharath

ISBN: 9788131795460

© 2013

Pages: 344

### About the Book

Pharmaceutical Technology - Concepts and Applications articulates on the various pharmaco-technological concepts associated with industrial pharmacy. The book is as much focused on providing comprehensive information on formulation development and affiliated areas, as it is to emphasize on their industrial applications. With a plethora of examples that dwell upon pertinent topics, the book equips students of pharmacy to rise to the requirements of the industry.

### Features

- Unravels pilot plant scale-up techniques to bridge the gap that exists among the laboratory, the pilot plant and the manufacturing unit.
- Elaborates on novel drug delivery systems with emphasis on rate-controlled administration of therapeutic agents.
- Includes a chapter on stability studies that spells out the diverse aspects and test methods conforming to ICH guidelines.
- Probes intellectual property rights and regulatory affairs with accent on international regulations, new drug approval processes, quality system compliance and related documentation requirements.
- Devotes an exclusive chapter to nutraceuticals and cosmeceuticals to highlight the importance of alternative medicine and its fast-growing value in the treatment of today's ailments.

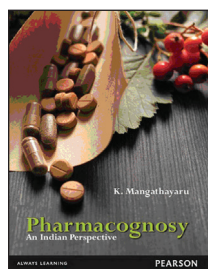
### Contents

1. Preformulation
2. Polymer Science
3. Packaging Technology
4. Production Management
5. Pilot Plant Scale-up Techniques
6. Novel Drug Delivery Systems
7. Stability Testing of Active Substances and Pharmaceutical Products
8. Intellectual Property Rights in Pharmaceuticals
9. Regulatory Affairs
10. Validation
11. Nutraceuticals and Cosmeceuticals

### About the Author

**S. Bharath** is Professor of pharmaceutics at M. S. Ramaiah College of Pharmacy, Bengaluru. An established academican with 16 years of teaching and research experience enhanced by a strong industrial background, he has guided numerous postgraduate students in their project work. He is currently guiding doctoral students in research leading to their PhD degrees. He has to his credit more than 60 research articles and over 70 papers presented in national and international journals and conferences.

## Pharmacognosy



### Pharmacognosy :An Indian Perspective

**K. Mangathayaru**

ISBN: 9788131797266

© 2013

Pages: 472

#### About the Book

Designed to cover the core subject of pharmacognosy offered to undergraduate students of pharmacy, this book presents the theoretical concepts in a lucid style. Its in-depth coverage of topics quintessential to the Indian plant drug sector makes the book unique, as does its exposition on herbal cosmetics and quality control of herbal drugs. Conforming to the latest syllabus prescribed by the AICTE, the book abounds with a rich pedagogy that enables effortless recapitulation of the subject.

#### Features

- Current scenario in the Indian herbal drug industry effectively juxtaposed against the worldwide demand for our herbal dosage forms
- Exhaustive coverage of herbal drug regulatory affairs
- Delineation of ayurvedic therapeutics in a scientifically comprehensible way
- Useful compilation of the facts and figures on modern Indian herbal drug industry
- Exclusive chapters on patents and zoo pharmacognosy

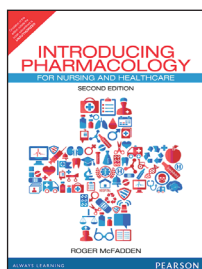
#### Contents

1. Pharmacognosy An Introduction
2. Age-Old Indian Medical Wisdom Ayurveda
3. Worldwide Trade in Herbal Products
4. Herbal Drug Regulatory Affairs
5. Herbal Institutes and Industries Working on Medicinal Plants in India
6. Quality Control and Standardization of Herbal Drugs
7. Phytochemical Analysis An Introduction
8. Plant-Derived Pure Drugs
9. Traditional Herbal Drugs
10. Herbal Cosmetics
11. Plant Biotechnology
12. Intellectual Property Rights "Traditional Knowledge and Plant Drugs
13. Zoo Pharmacognosy

#### About the Author

**K. Mangathayaru** is Professor, Faculty of Pharmacy, Sri Ramachandra University, Chennai, from where she received her PhD in 2010. An accomplished teacher for 19 years, she is an alumnus of University College of Pharmaceutical Sciences, Kakatiya University. She has a number of peer-reviewed research publications in national and international journals to her credit.

## Pharmacology



### Introducing Pharmacology: For Nursing and Healthcare, 2/e

**Roger McFadden**

ISBN: 9789332517295

© 204

Pages: 368

#### About the Book

This new edition of Introducing Pharmacology remains an accessible and relevant introduction for nursing and healthcare students who are new to pharmacology, as well anyone looking to refresh their knowledge of the subject.

Focused and engaging, the text balances accessibility with depth. Coverage of anatomy and physiology as well as pathophysiology helps to relate the subject to practical realities and makes this text stand out.

#### Features

- Extend coverage of the pharmacopoeia with a completely new chapter on anti-cancer drugs.
- New sections, including general anaesthetics, hay-fever and prescribing for special groups such as children, pregnant women and the elderly.
- Fully updated with the Recommended International Non-proprietary Names (rINN) for drugs as used in the British National Formulary.
- Inclusion of a new glossary of key terms and definitions.

#### Contents

##### Part 1 Principles of pharmacology

- 1 Let's start at basics: cells and how they work
- 2 Protein targets for drugs
- 3 Side-effects, interactions and pharmacokinetics

##### Part 2 The major drug groups

- 4 The cardiovascular system I: drugs used in the management of coronary artery disease
- 5 The cardiovascular system II: hypertension and antihypertensive drugs
- 6 Inflammation and the management of pain
- 7 Disorders and drugs of the digestive system
- 8 Infection and anti-microbial drugs
- 9 Disorders and drugs of the respiratory system
- 10 Disorders and drugs of the endocrine system
- 11 Drugs used in the treatment of mental health and neurological disorders
- 12 Drugs used in the treatment of Cancers and Chemotherapy

#### About the Author

**Roger McFadden** is Senior Lecturer in Applied Physiology at Birmingham City University



# AUTHOR INDEX

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