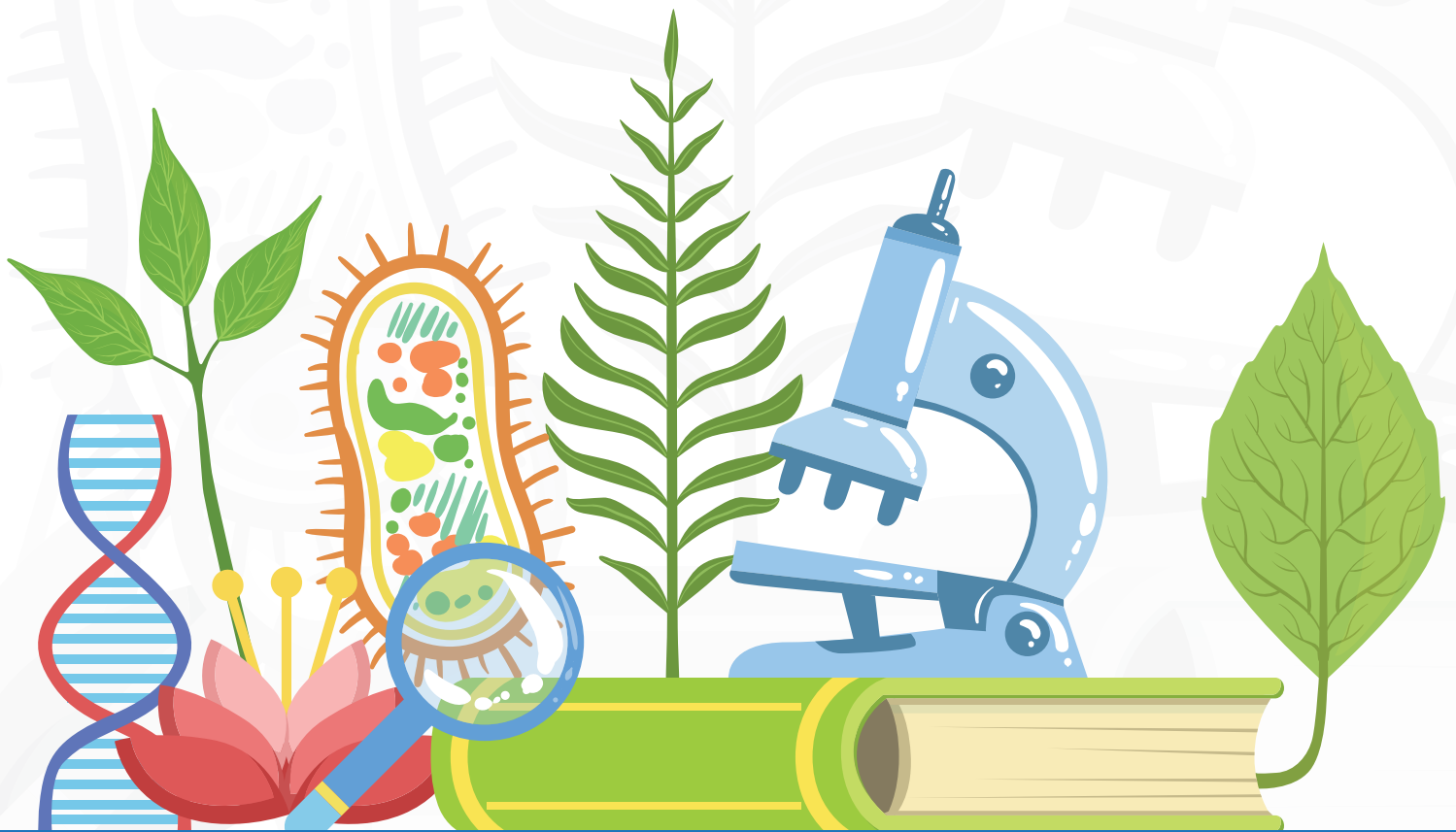




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[www.pearsoned.co.in/web/lecturecapture.aspx](http://www.pearsoned.co.in/web/lecturecapture.aspx)





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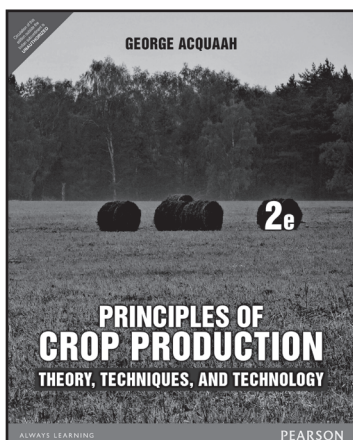
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# AGRICULTURE







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

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

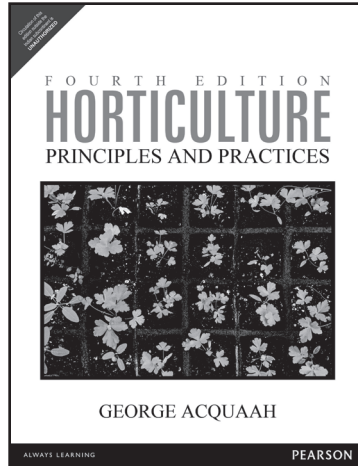
1. Crop Production and Society
2. Plant Morphology
3. Fundamental Plant Growth Processes
4. Plant Growth and Development
5. Crop Improvement
6. Climate and Weather
7. Soil and Land
8. Plant Nutrients and Fertilizers
9. Plant and Soil Water
10. Pests in Crop Production
11. Agricultural Production Systems
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, 4/e

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**

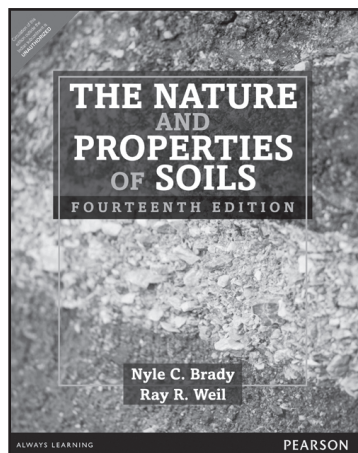
20. Growing Vegetables Outdoors
21. Herb Gardening
22. Organic Farming
23. Establishment and Management of an Orchard

**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 Soil, 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

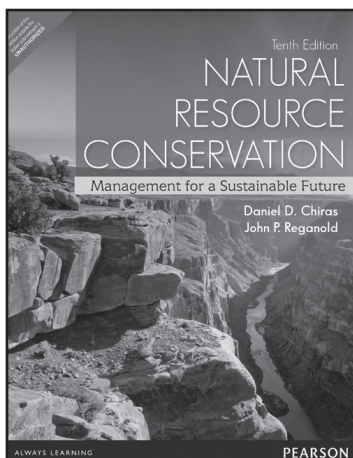
### CONTENTS

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 Sodicyty
  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.

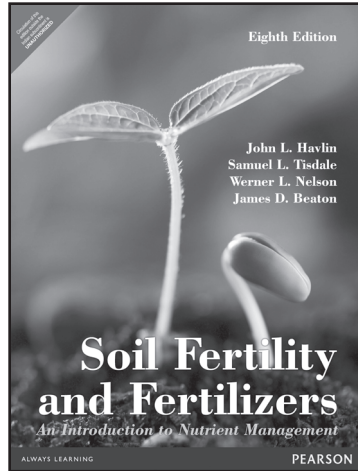
### FEATURES

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

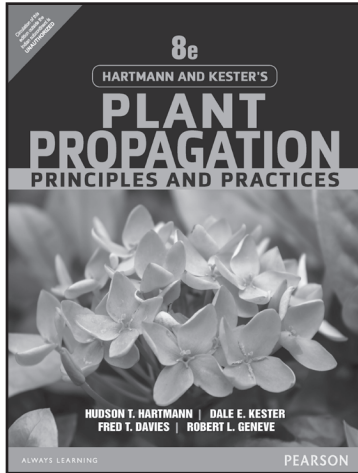
**John L. Havlin**, North Carolina State University

**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

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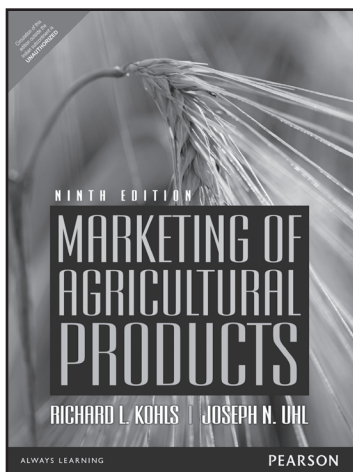
### ABOUT THE AUTHORS

**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, 9/e

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.

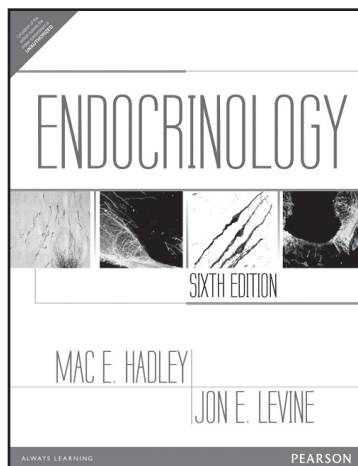




# BIOLOGY







## 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.

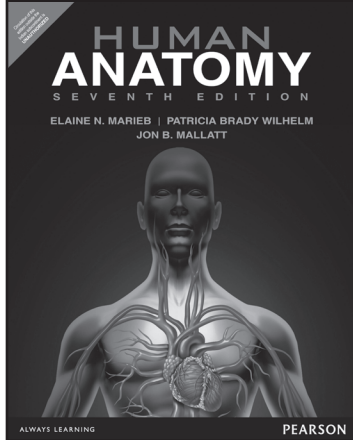
### FEATURES

- 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 • Patricia Brady Wilhelm • Jon Mallatt

ISBN: 9789332570993 | © 2016 | Pages: 888

**NEW**

### 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 figures.

### CONTENTS

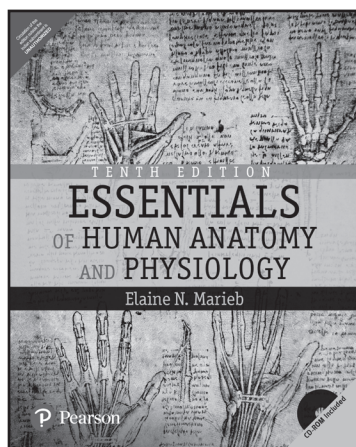
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| 2. Cells: The Living Units                                | 15. The Autonomic Nervous System and Visceral Sensory Neurons |
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| 4. Tissues  | 17. The Endocrine System                                      |
| 5. The Integumentary System                               | 18. Blood   |
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| 7. Bones, Part 1: The Axial Skeleton                      | 20. Blood Vessels   |
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| 9. Joints   | 22. The Digestive System                                      |
| 10. Skeletal Muscle Tissue                                | 23. The Respiratory System                                    |
| 11. Muscles of the Body                                   | 24. The Urinary System  |
| 12. Fundamentals of the Nervous System and Nervous Tissue | 25. The Reproductive System                                   |
| 13. The Central Nervous 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, 10/e

Elaine N. Marieb

ISBN: 9789332578548 | © 2016 | Pages: 648

**NEW**

### 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

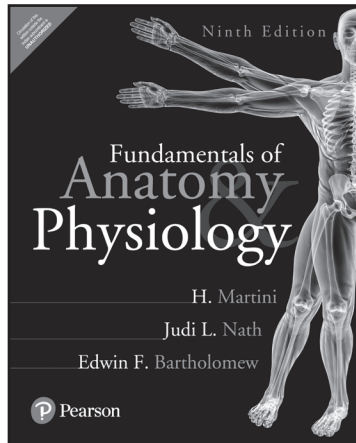
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| 2. Chemistry Comes Alive                                  | 18. The Cardiovascular System: The Heart                   |
| 3. Cells: The Living Units                                | 19. The Cardiovascular System: Blood Vessels               |
| 4. Tissue: The Living Fabric                              | 20. The Lymphatic System and Lymphoid Organs and Tissues   |
| 5. The Integumentary System                               | 21. The Immune System: Innate and Adaptive Body Defenses   |
| 6. Bones and Skeletal Tissues                             | 22. The Respiratory System                                 |
| 7. The Skeleton   | 23. The Digestive System                                   |
| 8. Joints   | 24. Nutrition, Metabolism, and Body Temperature Regulation |
| 9. Muscles and Muscle Tissue                              | 25. The Urinary System                                     |
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| 11. Fundamentals of the Nervous System and Nervous Tissue | 27. The Reproductive System                                |
| 12. The Central Nervous System                            | 28. Pregnancy and Human Development                        |
| 13. The Peripheral Nervous System and Reflex Activity     | 29. Heredity   |
| 14. The Autonomic Nervous System                          |  |
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### 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

**NEW**

### 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.

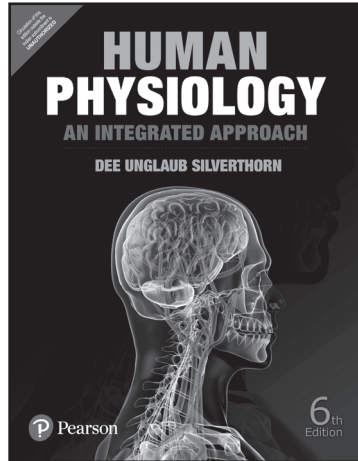
**Ed Bartholomew** received his undergraduate degree from Bowling Green State University and his M.S. from the University of Hawaii.

**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, 6/e

Dee Unglaub Silverthorn

ISBN: 9789332577541 | © 2016 | Pages: 1032

**NEW**

### 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
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#### II. Homeostasis and Control

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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

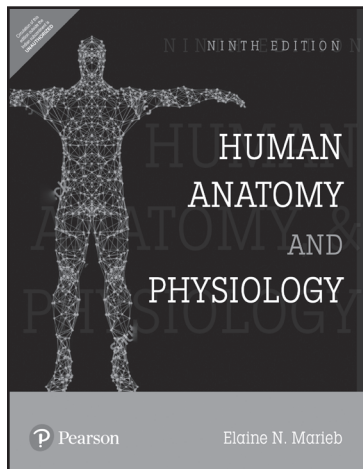
14. Cardiovascular Physiology
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17. Mechanics of Breathing
18. Gas Exchange and Transport
19. The Kidneys
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22. Metabolism and Energy Balance
23. Endocrine Control of Growth and Metabolism
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25. 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.



## Human Anatomy & Physiology, 9/e

Elaine N. Marieb • Katja N. Hoehn

ISBN: 9789332585591 | © 2017 | Pages: 1264

**NEW**

### 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.
- A trusted and easy-to-navigate text features writing with a clean presentation that is easy to study from and navigate. Student Objectives appear at the beginning of every section of the narrative. These give students a preview of what content is to come and what they are expected to learn.
- Check Your Understanding concept check questions, which are tied to section Learning Objectives, ask students to stop, think, and check their understanding of key concepts at the end of each major 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.

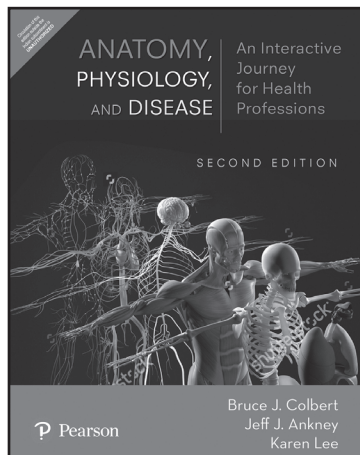


- A simply stunning anatomy art program uses dynamic, three-dimensional, and realistic styles with dramatic views and perspectives. The art includes key anatomy figures that are beautifully rendered, using vibrant and saturated colors, and have excellent detail, depth, and a clear focus on key anatomical structures. These figures are not only visually dynamic but they also do a superior job of teaching key concepts to today's student. Focus figures help students grasp key A&P concepts that they often have trouble visualizing and understanding, such as events at the neuromuscular junction, excitation-contraction coupling, the cross-bridge cycle, and action potential. These 22 key figures, with 12 new Focus Figures in the Ninth Edition, convey tough topics by walking students step-by-step through processes with easy-to-follow illustrations and explanations.
- 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.
- System Connections highlight relationships between body systems.

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| 5. The Integumentary System                               | 20. The Lymphatic System and Lymphoid Organs and Tissues   |
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| 8. Joints   | 23. The Digestive System                                   |
| 9. Muscles and Muscle Tissue                              | 24. Nutrition, Metabolism, and Body Temperature Regulation |
| 10. The Muscular System                                   | 25. The Urinary System                                     |
| 11. Fundamentals of the Nervous System and Nervous Tissue | 26. Fluid, Electrolyte, and Acid-Base Balance              |
| 12. The Central Nervous System                            | 27. The Reproductive System                                |
| 13. The Peripheral Nervous System and Reflex Activity     | 28. Pregnancy and Human Development                        |
| 14. The Autonomic Nervous System                          | 29. Heredity   |
| 15. The Special Senses                                    |  |





## Anatomy, Physiology, and Disease: An Interactive Journey for Health Professions, 2/e

Bruce J. Colbert • Jeff J. Ankney • Karen Lee

ISBN: TBA | © 2017 | Pages: 704

**NEW**

### ABOUT THE BOOK

For all combined courses covering anatomy, physiology, and pathology in allied health programs, four year degree programs, military healthcare training centers, and other programs; for standard A&P I and II courses; and as an advanced high school courses.

This engaging, conversational book introduces all the anatomy, physiology, and pathology concepts that students must master to succeed in the health professions. It's designed to promote true understanding, not mere memorization, and to help students make the lasting connections they need to thrive as practitioners. Throughout, well-placed "Pathology Connections" sections tightly link A&P concepts to pathologic processes. Analogies help students compare the human body to objects and processes they already understand, and illustrations and visual features support the visual learning style many of them prefer. This edition adds new web-based animations, videos, and interactive exercises to its fully integrated website. It also offers an easier-to-navigate text design; enriched illustrations and new photographs; and a new chapter on biochemistry.

### FEATURES

- Enjoyable to read, and linked to students' everyday lives. Takes a more personal approach that engages students by using real-world analogies and humor wherever appropriate, and encourages mastery rather than mere memorization.
- Supports more visual, interactive learning. The text contains more illustrations and visual features than ever, and is complemented by a tightly integrated website that reinforces key concepts through videos, animations, and interactive learning experiences.
- Helps students understand the crucial interconnections among body systems and functions. Links A&P with pathology by placing focused, accessible "Pathology Connections" sections immediately after key A&P concepts are introduced
- Reinforces key concepts and supports more efficient review. Provides end-of-chapter "Quick Trip" review sessions summarizing system related diseases, with causes, signs and symptoms, diagnostic tests, and treatments.
- Helps students immediately understand the applied sciences related to key A&P concepts and pathologic processes. Provides well-placed Applied Sciences boxes illuminating the science behind key topics such as cellular respiration.
- Prepares students to apply the text's information in clinical practice. Includes Clinical Applications boxes that show how to apply knowledge in clinical practice, and also illuminates A&P and disease issues associated with aging.
- Promotes mastery by introducing topics in multiple ways to support diverse learning styles. Concepts are explained simply, with engaging and intuitively clear analogies; students are then directed to weblinks that reinforce key topics with animations, videos, or interactive exercises.
- Promotes deeper engagement, enjoyment, and insight through many engaging pedagogical features. Includes special boxed Learning Hints, "That's Awesome" Amazing Body Facts, and other features designed to help students extend their knowledge, link it to other key topics, and apply it in practice.
- Integrates diverse concepts and pathologies through realistic case studies. Presents two running case studies: one of a patient with diabetes, and the other of a patient with a spinal cord injury. Throughout the text, these case studies integrate key concepts, demonstrate multi-system effects, understand the patient's progression; and encourage students to use critical thinking to make clinical connections.

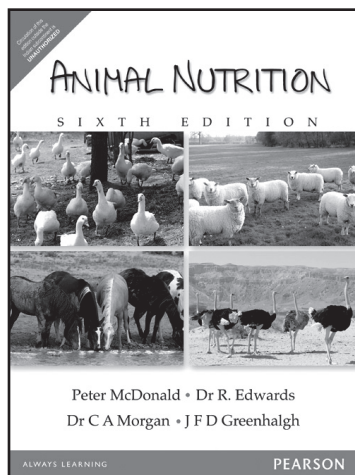
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- Enables students to quickly confirm their understanding of key concepts before moving forward. Places “Test Your Knowledge” questions after blocks of content to help students check their mastery.
- Introduces students to common medications used to treat each specific system-related disease. Includes a Pharmacology Corner concisely introducing relevant medicines in each chapter.
- Introduces students to key body system diagnostic tests. Provides a dedicated chapter on body system diagnostic tests at the end of the book.
- Helps students learn key medical terminology as they proceed, so specialized jargon is never an obstacle to mastery. Places medical terminology, word roots, suffixes, prefixes, and “see-and-say” pronunciation in the margins, alongside first usage; and supports these with an audio glossary online.
- Gives students rich reference resources they can rely upon for years. Contains appendices with more information about medical terminology, clinical abbreviations, “Do Not Use” lists, infectious diseases and related pathogens, laboratory reference values, multi-system effects, vitamins and minerals, and both standard and transmission-based precautions.
- Gives students tools to study more effectively with less stress. Contains an exclusive Study Success Companion at the end of the book, compiling basic study skills and stress management tips that can be used in all classes, not just A&P.

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  8. The Integumentary System: The Protective Covering
  9. The Nervous System: The Body’s Control Center
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  11. The Senses: The Sights and Sounds
  12. The Cardiovascular System: Transport and Supply
  13. The Respiratory System: It’s a Gas
  14. The Lymphatic and Immune Systems: Your Defense Systems
  15. The Gastrointestinal System: Fuel for the Trip
  16. The Urinary System: Filtration and Fluid Balance
  17. The Reproductive System: Replacement and Repair
  18. Basic Diagnostic Tests: Assessing the Systems
  19. The Journey’s End: Now What? The Study Success Companion: The Key to Your Successful Journey
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 Appendix B: Clinical Abbreviations and “Do Not Use” List  
 Appendix C: Infectious Diseases and Their Pathogens  
 Appendix D: Laboratory Reference Values  
 Appendix E: Multi-System Effects of Various Diseases and Conditions  
 Appendix F: Vitamins and Minerals: Sources, Functions and Effects of Deficiency and Toxicity  
 Appendix G: Standard and Transmission Based Precautions





## 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

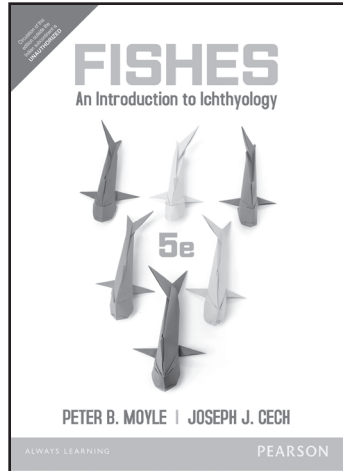
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|   | 25. Food additives  |

### 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

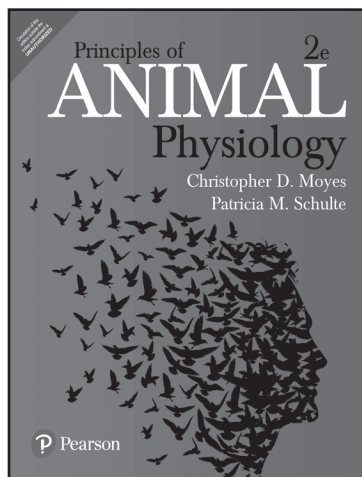
- Provides more global comprehensive examples for a broader perspective of fishes.
- Conservation orientation—Includes references to applied problems in all chapters that reflect the interests of the authors in real-world issues.
- Sustains students' interest and takes the subject matter beyond the classroom.
- “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.

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| 5. Buoyancy and Thermal Regulation              | 24. Flounders, Puffers, and Molas                       |
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| 15. Sharks, Rays and Chimaeras                  | 34. Epipelagic Zone                                     |
| 16. Relict Bony Fishes                          | 35. Deep Sea Habitats                                   |
| 17. Bonytongues, Eels and Herrings              | 36. Polar Regions                                       |
| 18. Minnows, Characins, and Catfishes           | 37. Conservation  |
| 19. Smelt, Salmon and Pike                      |   |







## Principles of Animal Physiology, 2/e

Christopher D. Moyes • Patricia M. Schulte

ISBN: 9789332577473 | © 2016 | Pages: 768

**NEW**

### 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

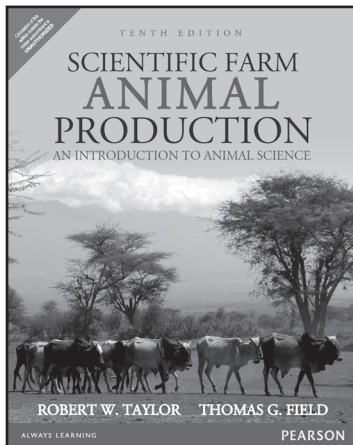
7. Functional Organization of Nervous Systems
8. Circulatory Systems
9. Respiratory Systems
10. Ion and Water Balance
11. Digestion
12. Locomotion
13. Thermal Physiology
14. Reproduction

>>

### 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.



## 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.
- 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               | 8. Market Classes and Grades of Livestock, Poultry, and Eggs              |
| 2. Overview of the Livestock and Poultry Industries | 9. Visual Evaluation of Market Animals                                    |
| 3. Red Meat Products                                | 10. Reproduction  |
| 4. Poultry and Egg Products                         | 11. Artificial Insemination, Estrous Synchronization, and Embryo Transfer |
| 5. Milk and Milk Products                           | 12. Genetics  |
| 6. Wool and Mohair                                  |   |
| 7. By-Products of Meat Animals                      |   |

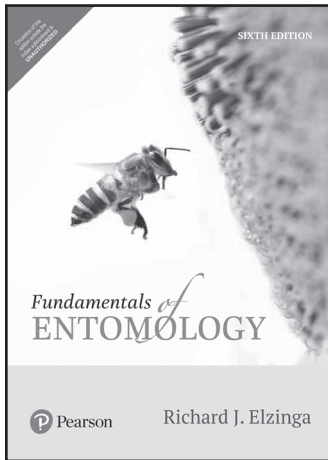


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|--|---|
| 13. Genetic Change through Selection       | 24. Feeding and Managing Beef Cattle          |
| 14. Mating Systems                         | 25. Dairy Cattle Breeds and Breeding          |
| 15. Nutrients and Their Functions          | 26. Feeding and Managing Dairy Cattle         |
| 16. Digestion and Absorption of Feed       | 27. Swine Breeds and Breeding                 |
| 17. Providing Nutrients for Body Functions | 28. Feeding and Managing Swine                |
| 18. Growth and Development                 | 29. Sheep and Goat Breeds and Breeding        |
| 19. Lactation                              | 30. Feeding and Managing Sheep and Goats      |
| 20. Adaptation to the Environment          | 31. Horse Breeds and Breeding                 |
| 21. Animal Health                          | 32. Feeding and Managing Horses               |
| 22. Animal Behavior                        | 33. Poultry Breeding, Feeding, and Management |
| 23. Beef Cattle Breeds and Breeding        | 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.



**Fundamentals of Entomology**

**Richard J. Elzinga**

ISBN: TBA | © 2017 | Pages: 512

**NEW**

**ABOUT THE BOOK**

For undergraduate courses in General Entomology and Pest Management.

Using an exceptionally clear writing style, minimal scientific jargon, and vivid photos and drawings, this text provides a comprehensive view of the fundamentals of entomology at a level that introductory, non-major students can comprehend. It captures the rich diversity and complexity of insects and their influence upon the ecosystem—without turning students off with excessive details.

**FEATURES**

- **NEW** - Expanded section on IPM. Provides students with added information on Genetic Engineering and transgenics.
- **NEW** - Added discussion on plants. Examines how plants use insects for food.
- **NEW** - Improved chapter on Ecology—Ch. 5. Supplies students with coverage of coevolution and biomes.

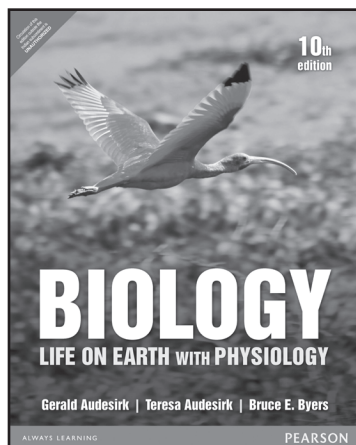


- NEW - Expanded coverage throughout—Includes specialized insect collecting techniques; disease transmission; medicine; leaf-rolling; skeletonizing; and gall formation.  
Allows students in entomology, agriculture, education, and biology to use and more easily understand the text.
- NEW - Chapter-end summaries.  
Enables students to recognize the key content in each chapter and review their understanding of it before moving on.
- The basic insect plan—Outlined with minimal yet noteworthy examples.  
Presents the fundamentals at a level that biology and agriculture students can comprehend without turning them off with excessive details.
- The macro- and microcosm of the insect world.  
Helps students understand the nature and place of insects generally on a grand scale as well as the tremendously rich diversity that exists among the insects themselves.
- Minimal, yet sufficient, classification.  
Provides students with enough classification information to enable them to easily follow other material in the text and to intelligently read outside materials that they will be exposed to.
- A wealth of vivid photographs and diagrams.  
Aids in insect identification and makes abstract concepts easier to understand for today's visually oriented students.
- Chapter-end questions.  
Helps students focus on important points.
- Quick-reference organization— Features carefully coordinated cross-references, glossary of terms, glossary of photographs, and references.  
Provides students with convenient in-text resources for study and additional research.

## CONTENTS

- |                                   |   |
|-----------------------------------|---|
| 1. The Arthropod Plan             | 10. Insects, Plants, Livestock, Domestic Animals,<br>and Humans |
| 2. The Insect Externally          | 11. Insect Pest Management                                      |
| 3. The Insect Internally          | 12. Household Insects   |
| 4. Development and Specialization | 13. Classification  |
| 5. Ecology                        | 14. Making an Insect Collection                                 |
| 6. Behavior                       | Glossary  |
| 7. From Solitary to Social        | Selected References   |
| 8. Parasitism by Insects          | Index   |
| 9. Predation by Insects           |   |





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

Gerald Audesirk • Teresa Audesirk • Bruce E. Byers

ISBN: 9789332570986 | © 2016 | Pages: 1056

**NEW**

### 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

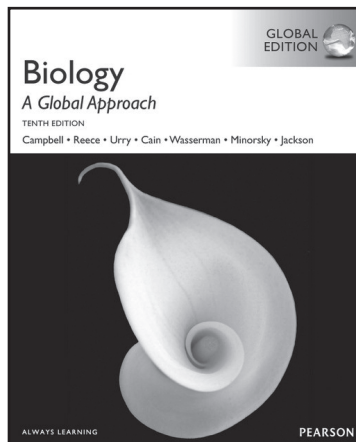
#### ABOUT THE AUTHORS

**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.



## Biology, A Global Approach, 10/e

Campbell • Reece • Urry • Cain • Wasserman • Minorsky

ISBN: 9781292008653 | © 2014 | Pages: 1512

#### ABOUT THE BOOK

The Tenth Edition of the best-selling text *Campbell Biology* helps launch you to success in biology through its clear and engaging narrative, superior pedagogy, and innovative use of art and photos to promote student learning.

The Tenth Edition helps you develop a deeper understanding of biology by making connections visually across chapters and building the scientific skills needed for success in upper-level courses.

#### FEATURES

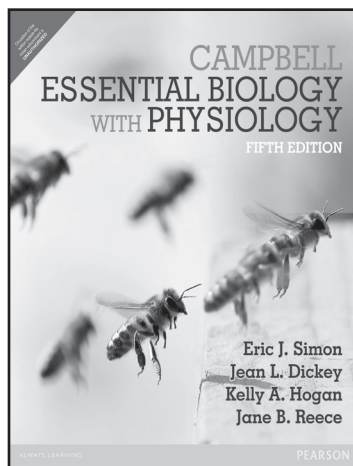
- **New Make Connections Figures** pull together content from different chapters visually, helping you see “big picture” relationships.
- **New Scientific Skills Exercises** in every chapter use real data to build key skills needed for biology, including data analysis, graphing, experimental design, and math skills.
- **New examples** show you how our ability to sequence DNA and proteins rapidly and inexpensively is transforming every subfield of biology.

#### CONTENTS

- Unit 1: The role of Chemistry in Biology
- Unit 2: Cell Biology
- Unit 3: The genetic basis of life
- Unit 4: Evolution

- Unit 5: The diversity of life
- Unit 6: Plants: Structure and function
- Unit 7: Animals: Structure and function
- Unit 8: The ecology of life





## Campbell Essential Biology with Physiology, 5/e

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

ISBN: 9789332555372 | © 2016 | Pages: 520

**NEW**

### 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

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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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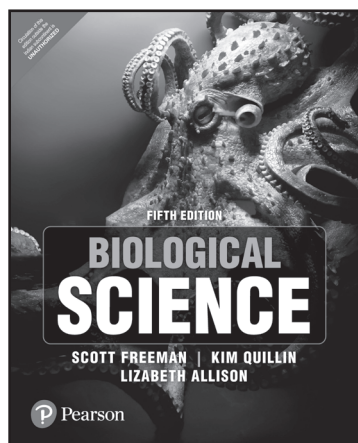
### ABOUT THE AUTHORS

**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, 5/e

Scott Freeman • Kim Quillin • Lizabeth Allison

ISBN: 9789332575912 | © 2016 | Pages: 1502

**NEW**

### 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

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- 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

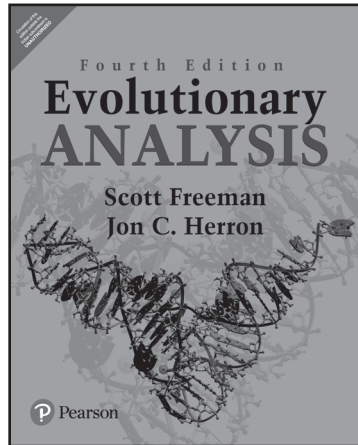
- 50. An Introduction to Ecology
- 51. Behavioral Ecology
- 52. Population Ecology
- 53. Community Ecology
- 54. Ecosystems
- 55. Biodiversity and Conservation

#### 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, 4/e

Scott Freeman • Jon C. Herron

ISBN: 9789332577459 | © 2016 | Pages: 856

**NEW**

### 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

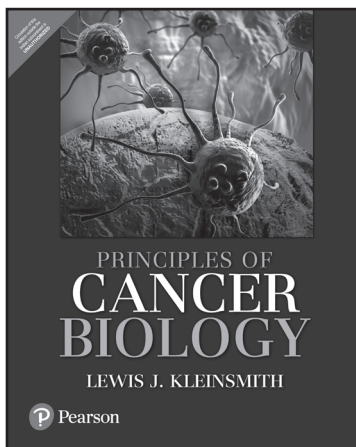
#### IV. The History of Life

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, 1/e

Lewis J. Kleinsmith

ISBN: 9789332577480 | © 2016 | Pages: 320

**NEW**

### 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.

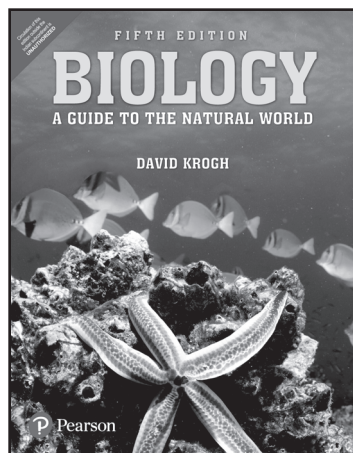
### CONTENTS

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

### ABOUT THE AUTHORS

**Lewis J. Kleinsmith**, University of Michigan





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

David Krogh

ISBN: 9789332578562 | © 2016 | Pages: 824

**NEW**

### 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

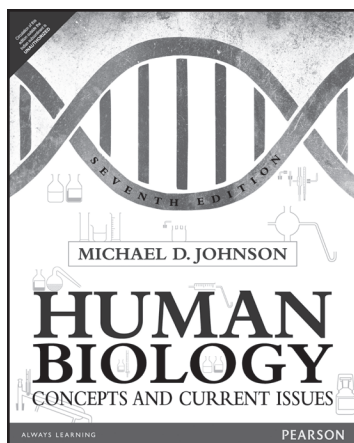
- Accessible writing style acts as a helpful companion that guides non-majors students through the subject of biology by placing unfamiliar biology topics in context with everyday life.
- The Process of Science essays present scientific research and discovery with contemporary and historical topics of 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:<br>A Guide to the Natural World  | 20. Arriving Late, Traveling Far:<br>The Evolution of Human Beings                  |
| 2. Fundamental Building Blocks:<br>Chemistry, Water, and pH   | 21. Viruses, Bacteria, Archaea, and Protists:<br>The Diversity of Life 1            |
| 3. Life's Components: Biological Molecules  | 22. Fungi: The Diversity of Life 2  |
| 4. Life's Home: The Cell  | 23. Animals: The Diversity of Life 3  |
| 5. Life's Border: The Plasma Membrane   | 24. Plants: The Diversity of Life 4   |
| 6. Life's Mainspring: An Introduction to Energy   | 25. The Angiosperms:<br>Form and Function in Flowering Plants                       |
| 7. Vital Harvest: Deriving Energy from Food   | 26. Body Support and Movement:<br>The Integumentary, Skeletal, and Muscular Systems |
| 8. The Green World's Gift: Photosynthesis   | 27. Communication and Control 1: The Nervous System                                 |
| 9. The Links in Life's Chain: Genetics and Cell Division  | 28. Communication and Control 2:<br>The Endocrine System                            |
| 10. Preparing for Sexual Reproduction: Meiosis  | 29. Defending the Body: The Immune System   |
| 11. The First Geneticist: Mendel and His Discoveries  | 30. Transport and Exchange 1: Blood and Breath                                      |
| 12. Units of Heredity: Chromosomes and Inheritance  | 31. Transport and Exchange 2:<br>Digestion, Nutrition, and Elimination              |
| 13. Passing On Life's Information:<br>DNA Structure and Replication                                       | 32. An Amazingly Detailed Script:<br>Animal Development                             |
| 14. How Proteins Are Made: Genetic Transcription,<br>Translation, and Regulation                          | 33. How the Baby Came to Be: Human Reproduction                                     |
| 15. The Future Isn't What It Used to Be: Biotechnology  | 34. An Interactive Living World 1:<br>Populations in Ecology                        |
| 16. An Introduction to Evolution: Charles Darwin,<br>Evolutionary Thought, and the Evidence for Evolution | 35. An Interactive Living World 2: Communities in Ecology                           |
| 17. The Means of Evolution: Microevolution  |   |
| 18. The Outcomes of Evolution: Macroevolution   |   |
| 19. A Slow Unfolding: The History of Life on Earth  |   |

### 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

**NEW**

### 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.

### CONTENTS

- |   |  |
|---|--|
| 1. Human Biology, Science, and Society          | 14. The Digestive System and Nutrition                     |
| 2. The Chemistry of Living Things               | 15. The Urinary System                                     |
| 3. Structure and Function of Cells              | 16. Reproductive Systems                                   |
| 4. From Cells to Organ Systems                  | 17. Cell Reproduction and Differentiation                  |
| 5. The Skeletal System                          | 18. Cancer: Uncontrolled Cell Division and Differentiation |
| 6. The Muscular System                          | 19. Genetics and Inheritance                               |
| 7. Blood  | 20. DNA Technology and Genetic Engineering                 |
| 8. Heart and Blood Vessels                      | 21. Development and Aging                                  |
| 9. The Respiratory System: Exchange of Gases    | 22. Evolution and the Origins of Life                      |
| 10. The Immune System and Mechanisms of Defense | 23. Ecosystems and Populations                             |
| 11. The Nervous System: Integration and Control | 24. Human Impacts, Biodiversity, and Environmental Issues  |
| 12. Sensory Mechanisms                          |  |
| 13. The Endocrine System                        |  |



### 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.



## Biology: Science for Life, 5/e

Colleen Belk • Virginia Borden Maier

ISBN: TBA | © 2016 | Pages: 480

### ABOUT THE BOOK

Compelling and relatable stories engage students in learning biology. Colleen Belk and Virginia Borden Maier have helped students understand biology for more than twenty years in the classroom and over ten years with their popular text, *Biology: Science for Life, 5e*. The thoroughly revised Fifth Edition engages students with new storylines that explore high-interest topics such as binge drinking, pseudoscience, and study drugs. This edition also offers a wealth of new “Flipped Classroom” activities and other resources to help professors enliven their classes and to help students assess their understanding of biology outside of class.

For instructors who cover Animal Structure and Function and Plant Biology, an alternate edition of this book, *Biology: Science for Life with Physiology*, is also available.

### FEATURES

- Engage students with relevant stories and help them develop scientific literacy skills.
- **UPDATED!** Each chapter weaves in a story based on a current issue or hot topic through which biological concepts, examples, and applications are presented and explained. Six thoroughly revised storylines make biology topics even more relevant to today’s students: Chapter 2: Science Fiction, Bad Science, and Pseudoscience; Chapter 4: Body Weight and Health; Chapter 18: Binge Drinking Chapter 19: Clearing the Air; Chapter 21: Human Sex Differences; and Chapter 23: Study Drugs.
- Savvy Reader activities in each chapter investigate a selection of current periodicals (newspapers, journals, magazines, and websites) that relate to a discussion in the main narrative. Each excerpt is followed by critical thinking questions to help students interpret and evaluate scientific information and data found in everyday media.



- NEW! Working With Data questions have been added to the figure legends of selected graphs, tables, or figures, and challenge students to closely interpret the data.
- NEW! Sounds Right, But Is It? activities have been added to the end of each chapter and address common student misconceptions about biology concepts. The questions in the activity are available for use in class with Learning Catalytics.
- NEW! “Flipped Classroom” Instructor’s Manual includes many activities that have been tested in the authors’ own classes. Each text chapter is supplemented with video lectures featuring Colleen Belk and Virginia Borden Maier, a selection of in-class activities, suggestions for student “pre-work” outside of class, media references, and more.
- NEW! PowerPoint presentations accompany each chapter storyline to help instructors highlight the relevance of biology to everyday life. Many of these customizable lecture slides include new video clips.
- Make complex biology topics more manageable for non-science students.
- NEW! In the edition with physiology chapters, a new chapter 18 covers the digestive and urinary systems, which were previously part of the chapters on the cardiovascular and respiratory systems. This new chapter presents this material in a more manageable format for students and instructors and features a storyline on binge drinking.
- UPDATED! Roots to Remember references have been added in context within chapter discussions to help students learn the language of biology using word roots.
- EXPANDED! Visualize This questions within select figure legends encourage students to look more closely at figures to more fully understand their content.
- Analogies in the book’s narrative and art compare abstract science with familiar objects and experiences, allowing students to better grasp difficult biological concepts.
- Stop and Stretch questions are strategically placed within the text to help students pace themselves and think critically about material they have just read.
- A Closer Look sections have been heavily revised, isolating particularly challenging content so instructors have flexibility to assign or skip it. “An Overview” section always appears before A Closer Look section, with the former offering the “big picture” of a concept and the latter “the details.”
- NEW! Interactive Storyline Activities tie the storyline of the chapter to key science concepts and ensure that students truly understand the relationship between the story and the science topics.
- EXPANDED! Working with Data questions have been added to each chapter and challenge students to analyze and apply their knowledge of biology to a graph or set of data.
- NEW! Savvy Reader: Evaluating Media activities ask students to examine selected media (web sites, articles, videos) with a critical look at the sources and methods used to convey information.

## CONTENTS

- |   |   |
|---|---|
| 1: Can Science Cure the Common Cold? Introduction to the Scientific Method                  | DNA Profiling   |
| <b>Unit One: Chemistry and Cells</b>  | 9: Genetically Modified Organisms: Gene Expression, Mutation, Stem Cells, and Cloning |
| 2: Science Fiction, Bad Science, and Pseudoscience: Water, Biochemistry, and Cells          | <b>Unit Three: Evolution</b>  |
| 3: Is it Possible to Supplement Your Way to Better Health? Nutrients and Membrane Transport | 10: Where Did We Come From? The Evidence for Evolution                                |
| 4: Body Weight and Health: Enzymes, Metabolism, and Cellular Respiration                    | 11: An Evolving Enemy: Natural Selection  |
| 5: Life in the Greenhouse: Photosynthesis and Climate Change                                | 12: Who Am I? Species and Races   |
| <b>Unit Two: Genetics</b>   | 13: The Greatest Species on Earth? Biodiversity and Classification                    |
| 6: Cancer: DNA Synthesis, Mitosis, and Meiosis  | <b>Unit Four: Ecology</b>   |
| 7: Are You Only as Smart as Your Genes? Mendelian and Quantitative Genetics                 | 14: Is the Human Population Too Large? Population Ecology                             |
| 8: DNA Detective: Complex Patterns of Inheritance and                                       | 15: Conserving Biodiversity: Community and Ecosystem Ecology                          |
|   | 16: Where Do You Live? Climate and Biomes   |





## Biology: The Core

Eric J. Simon

ISBN: TBA | © 2017 | Pages: 408

**NEW**

### ABOUT THE BOOK

Eric Simon's *Biology: The Core* combines a 12-chapter textbook to offer a flexible new teaching and learning package that engages students with concise writing, beautiful and effective visuals. The modular organization of the text makes it easy for instructors to teach concepts in their preferred order and powerful online activities reinforce those concepts by presenting applications and relevant current issues.

This program offers an innovative teaching and learning experience by helping instructors and students:

Revolutionize teaching in and out of the classroom.

Emphasize the big picture: The Core's concise modules focus students' attention on the most important concepts and encourage them to see the relevance of biology to everyday life. Each module provides just enough information to help them understand the subject.

Achieve a basic understanding of biology: The Core combines dynamic figures and illustrations with supporting narrative as the primary source of instruction to create a more engaging and accessible learning experience for students.

### FEATURES

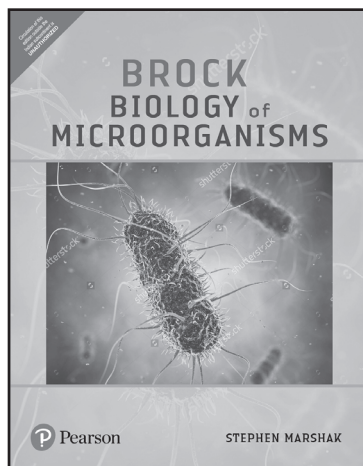
- Each module in the text contains only the most essential content for any concept. The focused presentation prevents students from becoming lost in unnecessary detail.
- The efficient organization of each module helps students focus their attention on key information and guides them through from the clearly stated concept at the start to the question that checks their understanding at the finish.
- Achieve a basic understanding of biology
- A vibrant and contemporary art and photo program places captivating visuals at center stage as the primary teaching tool with narrative integrated seamlessly. Information is presented in an engaging and highly accessible format for the non-science major.
- *Biology: The Core* represents each key biological concept as a two-page module that can stand on its own and be read in any order. Instructors can assign these flexible modules in whatever sequence best suits their course and teaching style.

### CONTENTS

1. An Introduction to the Science of Life
2. The Chemistry of Life
3. The Cell: the Fundamental Unit of Life
4. Energy and Life
5. Chromosomes and Inheritance
6. DNA: The Molecule of Life
7. Darwinian Evolution
8. Biodiversity 1: Microscopic Organisms
9. Biodiversity 2: Fungi and Plants
10. Biodiversity 3: Animals
11. Human Body Systems
12. Ecology







## Brock Biology of Microorganisms, 14/e

Michael T. Madigan • John M. Martinko • Kelly S. Bender •  
Daniel H. Buckley • David A. Stahl

ISBN: TBA | © 2017 | Pages: 1040

### ABOUT THE BOOK

Helping Today's Students Learn Microbiology.

The authoritative #1 textbook for introductory majors microbiology, *Brock Biology of Microorganisms, 14e* continues to set the standard for impeccable scholarship, accuracy, and outstanding illustrations and photos. This book for biology, microbiology, and other science majors balances cutting edge research with the concepts essential for understanding the field of microbiology, including strong coverage of ecology, evolution, and metabolism.

The Fourteenth Edition seamlessly integrates the most current science, paying particular attention to molecular biology and how the genomic revolution has changed and is changing the field. This edition offers a streamlined, modern organization with a consistent level of detail and updated, visually compelling art program.

### FEATURES

- Focus on today's learners
- NEW! Streamlined organization better suits how instructors structure their courses, organizing course topics by 6 units consisting of 32 chapters. The Fourteenth Edition effectively and efficiently introduces students to the foundation and science of microbiology in a modern, appropriate organization.
- NEW! Molecular microbiology and genomics are introduced early in the text and discussed throughout multiple chapters for a more integrated, comprehensive introduction to the field.
- NEW! MicrobiologyNow chapter openers focus on current research problems and discoveries contextualizing chapter content and adding interest with content
- REVISED! A renamed "Explore the Microbial World" box feature (formerly "Microbial Sidebar") places greater emphasis on engaging research and discoveries from multiple microbiology disciplines.
- NEW! Updates have been made to all chapters, tables, boxes, and statistics with the latest data available.
- The Big Ideas at the end of each chapter review the core principles in the chapter by summarizing each section in 2–3 sentences.
- MiniQuizzes concluding each section contain 3–4 questions that give students an opportunity to stop and think about the core principles of each section.
- Extensive and accurate coverage of microbiology make this text a trusted name and valuable reference.
- Well organized and easy to understand writing style. Each author brings superb teaching and research knowledge to the book, with care to cover each topic and discipline appropriately and accurately. Dr. Madigan, as the general editor, provides a consistent voice and writing style to guide students throughout the course providing the best of both worlds: extensive coverage of all of the topics in microbiology as well as a consistent pedagogy and approach.
- Teach tough topics with superior art
- UPDATED! A heavily revised art program provides the consistency and context students need to understand this visual science. Updates include new illustrations and photos, as well as significant art style updates including:
  - Step/process art
  - DNA, RNA, and mRNA pipe style
  - Cell membranes
  - Cell style
  - Phylogenetic trees
  - Keys
  - Glassware

>>

- NEW! Interior text design with a bold color palette, color screens, rules, more distinct heads, and new table design.

## CONTENTS

### I. The Foundations of Microbiology

1. Microorganisms and Microbiology
2. Microbial Cell Structure and Function
3. Nutrition, Culture, and Metabolism
4. Molecular Microbiology
5. Microbial Growth and Growth Control

### II. Genomics, Genetics, and Virology

6. Microbial Genomics
7. Metabolic Regulation
8. Genetics of Bacteria and Archaea
9. Viruses and Virology
10. Genomics and Phylogeny of Viruses
11. Genetic Engineering and Biotechnology

### III. Metabolic and Microbial Diversity

12. Metabolic Diversity of Bacteria and Archaea
13. Microbial Evolution and Systematics
14. Phylogenetic Diversity of Bacteria
15. Functional and Ecological Diversity of Bacteria
16. Diversity of Archaea
17. Diversity of Microbial Eukarya



### IV. Microbial Ecology and Environmental Microbiology

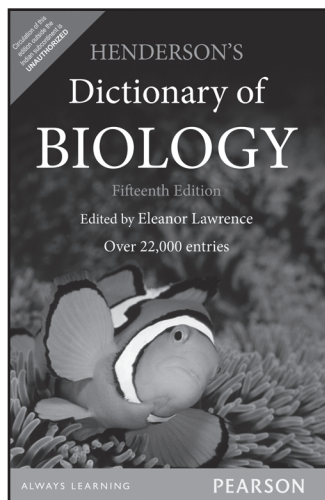
18. Tools of the Microbial Ecologist
19. Microbial Ecosystems
20. Nutrient Cycles in Nature
21. Microbiology of the Built Environment
22. Microbial Symbioses

### V. Pathogenicity and Immunology

23. Microbial Interactions with Humans
24. Principles of Immunology and Host Defense
25. Immune Mechanisms
26. Molecular Immunology
27. Clinical Microbiology and Immunology

### VI. Infectious Diseases and their Transmission

28. Epidemiology
29. Person-to-Person Bacterial and Viral Diseases
30. Vectorborne and Soilborne Bacterial and Viral Diseases
31. Common Source Diseases: Food and Water
32. Fungal and Parasitic Disease



## 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

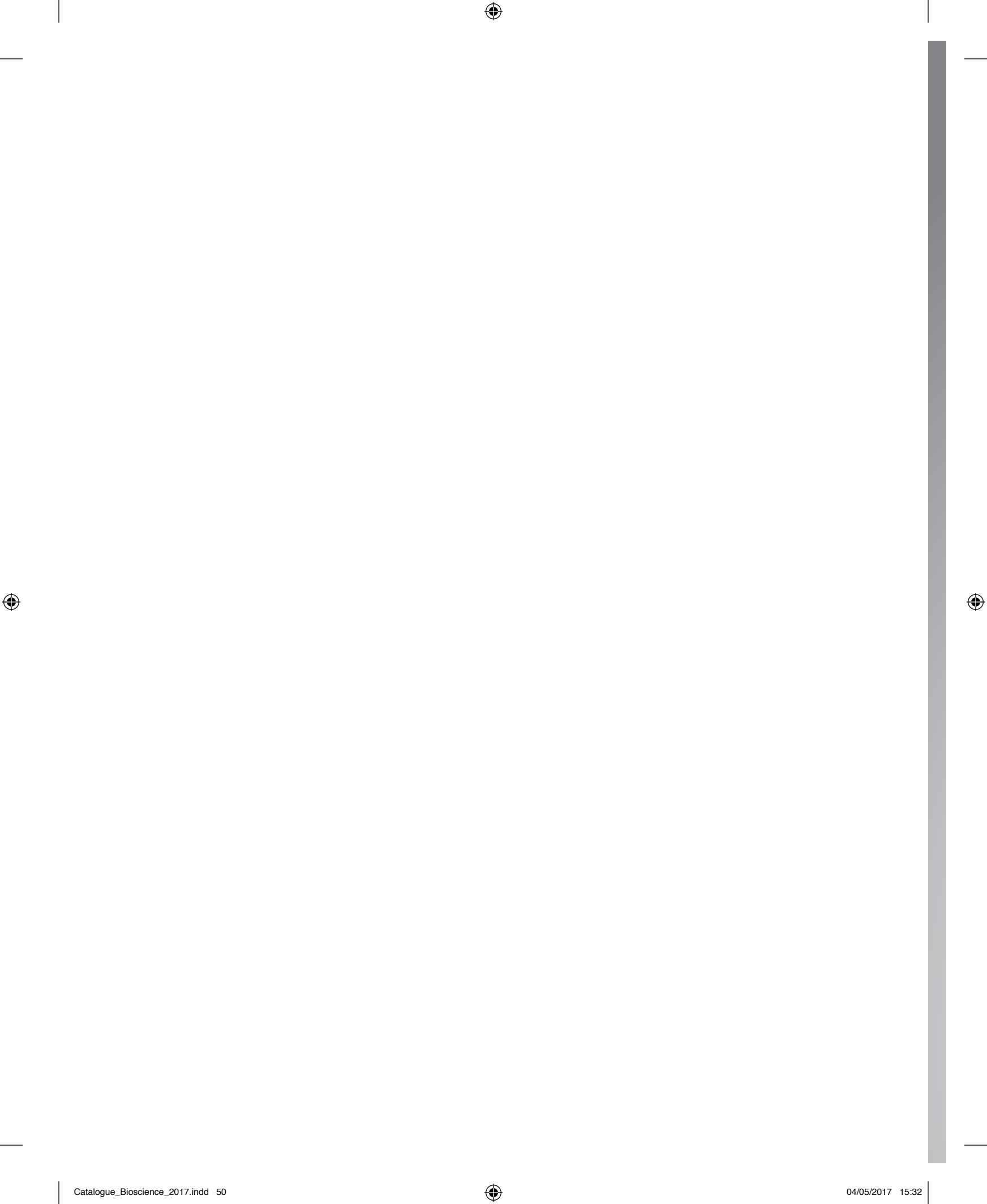
### CONTENTS

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

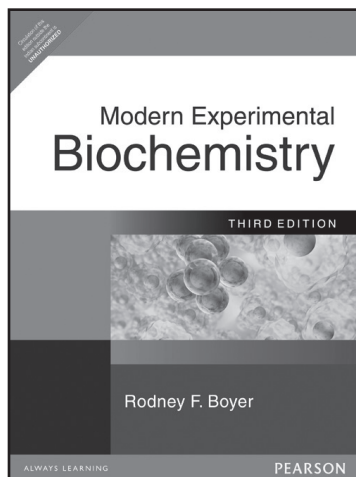




# BIOTECHNOLOGY







## 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

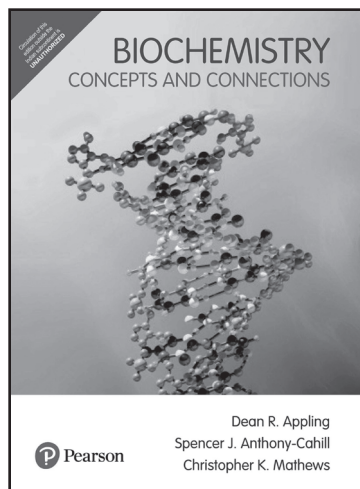
#### Part II: Experiments

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.





## Biochemistry: Concepts and Connections

Dean R. Appling • Spencer J. Anthony-Cahill •  
Christopher K. Mathews

ISBN: 9789332585454 | © 2016 | Pages: 920

**NEW**

### ABOUT THE BOOK

A highly visual, precise and fresh approach to guide today's mixed-science majors to a deeper understanding of biochemistry.

*Biochemistry: Concepts and Connections* engages students in the rapidly evolving field of biochemistry, better preparing them for the challenges of 21st century science through quantitative reasoning skills and a rich, chemical perspective on biological processes.

This concise first edition teaches mixed-science-majors the chemical logic underlying the mechanisms, pathways, and processes in living cells through groundbreaking biochemical art and a clear narrative that illustrates biochemistry's relation to all other life sciences. Integration of biochemistry's experimental underpinnings alongside the presentation of modern techniques encourages students to appreciate and consider how their understanding of biochemistry can and will contribute to solving problems in medicine, agricultural sciences, environmental sciences, and forensics.

### FEATURES

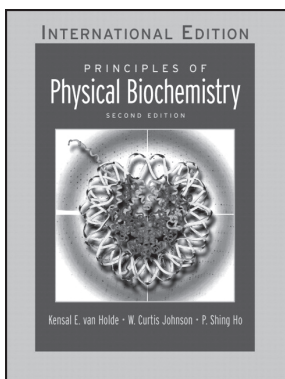
- A striking art program designed specifically for teaching
- Modern science presented in a relevant way
- Organized with students in mind

### CONTENTS

1. Biochemistry and the Language of Chemistry
2. The Chemical Foundation of Life: Weak Interactions in an Aqueous Environment
3. The Energetics of Life
4. Nucleic Acids
5. Introduction to Proteins: The Primary Level of Protein Structure
6. The Three-Dimensional Structure of Proteins
7. Protein Function and Evolution
8. Enzymes: Biological Catalysts
9. Carbohydrates: Sugars, Saccharides, Glycans
10. Lipids, Membranes, and Cellular Transport
11. Chemical Logic of Metabolism
12. Carbohydrate Metabolism: Glycolysis, Gluconeogenesis, Glycogen Metabolism, and the Pentose Phosphate Pathway
13. The Citric Acid Cycle
14. Electron Transport, Oxidative Phosphorylation, and Oxygen Metabolism
15. Photosynthesis
16. Lipid Metabolism
17. Interorgan and Intracellular Coordination of Energy Metabolism in Vertebrates
18. Amino Acid and Nitrogen Metabolism
19. Nucleotide Metabolism
20. Mechanisms of Signal Transduction
21. Genes, Genomes, and Chromosomes
22. DNA Replication
23. DNA Repair, Recombination, and Rearrangement
24. Transcription and Post-transcriptional Processing
25. Information Decoding: Translation and Post-translational Protein Processing
26. Regulation of Gene Expression



## Also Available



## Principles of Physical Biochemistry

Kensal E Van Holde • Curtis Johnson • Pui Shing Ho

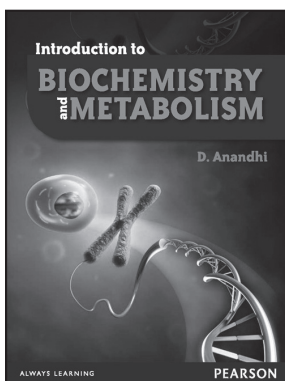
ISBN: 9780132017442 | © 2005 | Pages: 752

### 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.



## Introduction to Biochemistry and Metabolism

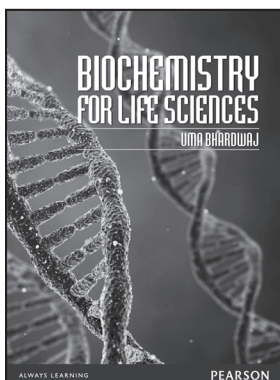
D Anandhi

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.



## Biochemistry: for Life Sciences

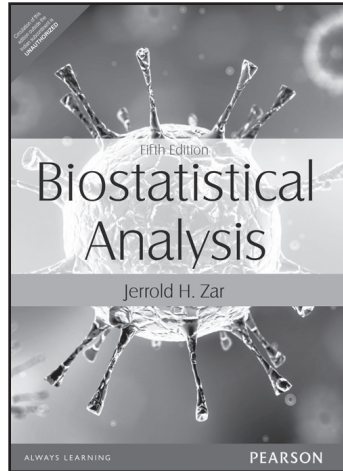
Uma Bhardwaj

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.



## 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          | 7. One-Sample Hypotheses                                |
| 2. Populations and Samples                | 8. Two-Sample Hypotheses                                |
| 3. Measures of Central Tendency           | 9. Paired-Sample Hypotheses                             |
| 4. Measures of Variability and Dispersion | 10. Multisample Hypotheses and the Analysis of Variance |
| 5. Probabilities                          | 11. Multiple Comparisons                                |
| 6. The Normal Distribution                |   |

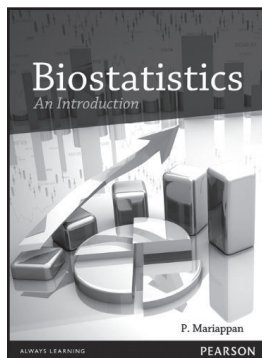
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| 12. Two-Factor Analysis of Variance              | 21. Polynomial Regression                          |
| 13. Data Transformations                         | 22. Testing for Goodness of Fit                    |
| 14. Multiway Factorial Analysis of Variance      | 23. Contingency Tables                             |
| 15. Nested (Hierarchical) Analysis of Variance   | 24. Dichotomous Variables                          |
| 16. Multivariate Analysis of Variance            | 25. Testing for Randomness                         |
| 17. Simple Linear Regression                     | 26. Circular Distributions: Descriptive Statistics |
| 18. Comparing Simple Linear Regression Equations | 27. Circular Distributions: Hypothesis Testing     |
| 19. Simple Linear Correlation                    | Answers to Exercises                               |
| 20. Multiple Regression and Correlation          | 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.



### Also Available



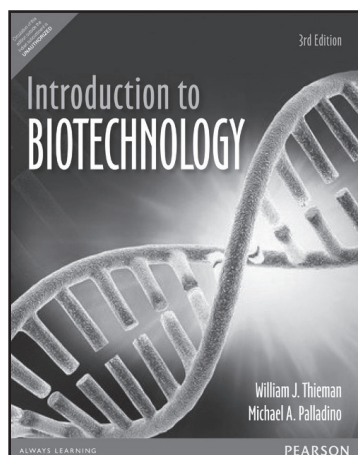
## Biostatistics: An Introduction

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.



## 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 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

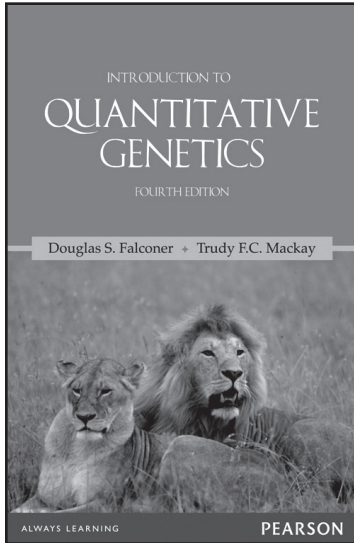
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|--|---|
| 1. The Biotechnology Century and Its Workforce | 8. DNA Fingerprinting and Forensic Analysis |
| 2. An Introduction to Genes and Genomes        | 9. Bioremediation                           |
| 3. Recombinant DNA Technology and Genomics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







## 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

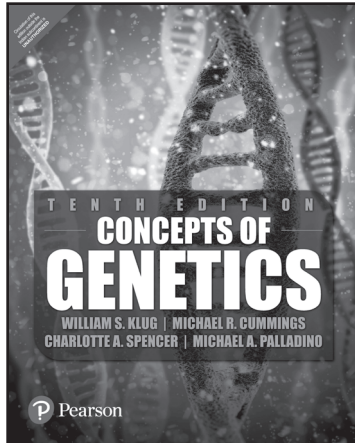
1. Genetics Constitution of a Population
2. Changes of Gene Frequency
3. Small Populations: I Changes of Gene Frequency Under Simplified Conditions
4. Small Populations: II Less Simplified Conditions
5. Small Populations: III Pedigreed Populations and Close Inbreeding
6. Continuous Variation
7. Values 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, 10/e

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.

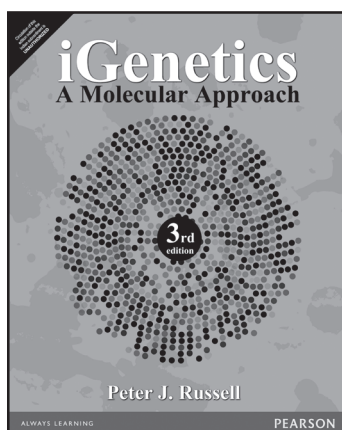




**Michael R. Cummings** is Research Professor in the Department of Biological, Chemical, and Physical Sciences at Illinois Institute of Technology, Chicago, Illinois. For more than 25 years, he was a faculty member in the Department of Biological Sciences and in the Department of Molecular Genetics at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

**NEW**

### 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

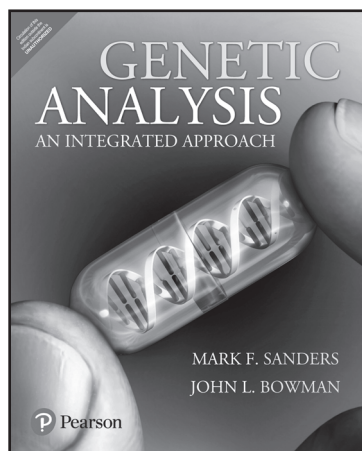
animations that help students visualize and understand processes and concepts that are illustrated in the text.

### 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

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



## Genetic Analysis: An Integrated Approach, 1e

Mark F. Sanders • John L. Bowman

ISBN: 9789332578555 | © 2016 | Pages: 872

**NEW**

### 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.

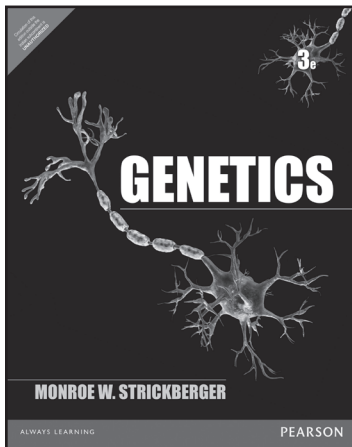
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| 1. The Molecular Basis of Heredity, Variation, and Evolution                 | Recombination   |
| 2. Transmission Genetics   | 13. Chromosome Aberrations and Transposition                        |
| 3. Cell Division and Chromosome Heredity     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

### 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, 3/e

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

#### Part I Identification Of Genetic Material:

1. History of the Problem
2. Cellular Division and Chromosomes
3. Reproductive Cycles
4. Nucleic Acids
5. Replication and Synthesis of Nucleic Acids

#### Part II Transmission And Distribution Of Genetic Material:

6. Mendelian Principles: I. Segregation
7. Mendelian Principles: II. Independent Assortment
8. Probability and Statistical Testing
9. Dominance Relations and Multiple Alleles in Diploid Organisms
10. Environmental Effects and Gene Expression

11. Gene Interaction and Lethality
12. Sex Determination and Sex Linkage in Diploids
13. Maternal Effects and Cytoplasmic Heredity
14. Quantitative Inheritance
15. Analysis of Quantitative Characters

#### Part III Arrangement Of Genetic Material:

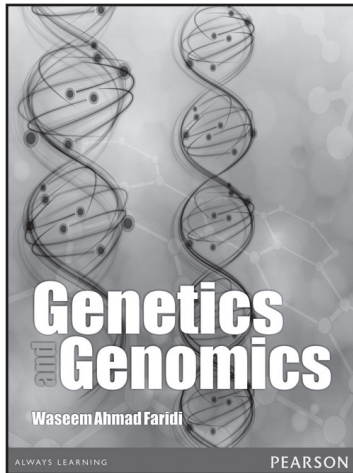
16. Linkage and Recombination
17. Gene Mapping in Diploids
18. Recombination in Fungi
19. Recombination in Bacteria
20. Recombination in Viruses

#### Part IV Change And Structure Of Genetic Material:

21. Chromosome Variation in Number



## Also Available



## Genetics and Genomics

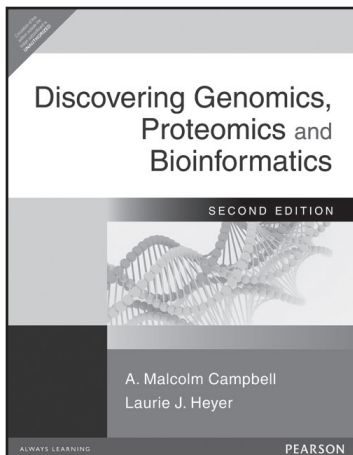
Dr. Waseem Ahmad Faridi

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.



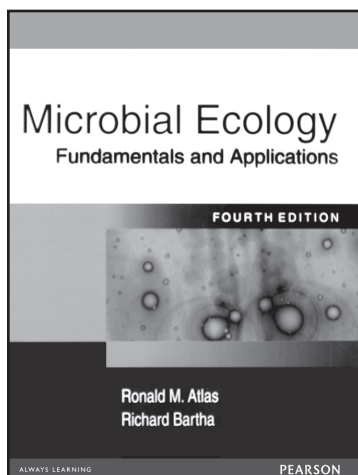
## Discovering Genomics, Proteomics and Bioinformatics, 2/e

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.



## 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

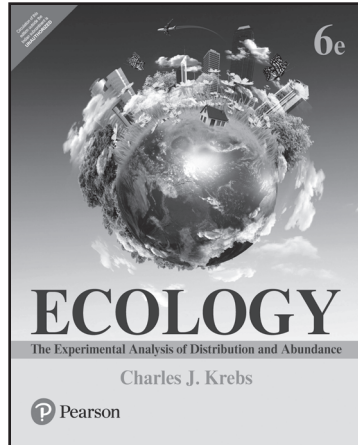
10. Biogeochemical Cycling: Carbon, Hydrogen, and Oxygen
11. Biogeochemical Cycling: Nitrogen, Sulfur, Phosphorus, Iron, and Other Elements

#### 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, 6/e

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

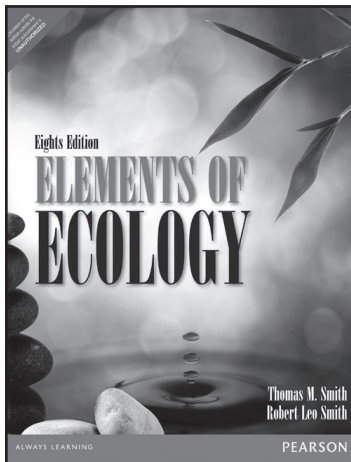
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| 5. Factors That Limit Distributions I: Biotic         | 18. Community Structure in Space: Biodiversity                                 |
| 6. Factors That Limit Distributions II: Abiotic       | 19. Community Structure in Time: Succession                                    |
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| 11. Species Interactions II: Predation                |  |
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| 13. Species Interactions IV: Disease and Parasitism   |  |

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

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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

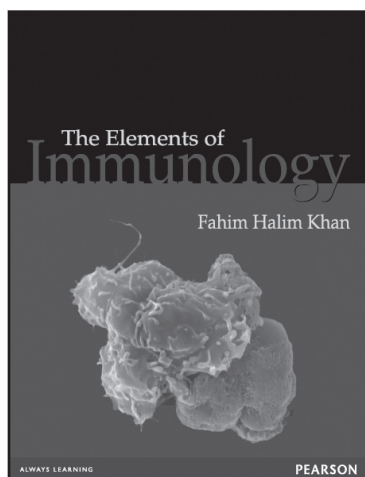
### VII. Biogeographical Ecology

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





## 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.

### 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

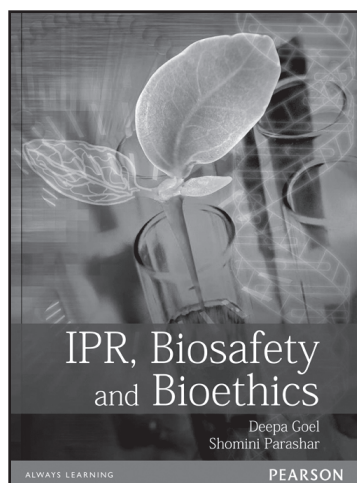
### CONTENTS

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

### ABOUT THE AUTHOR

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





## 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

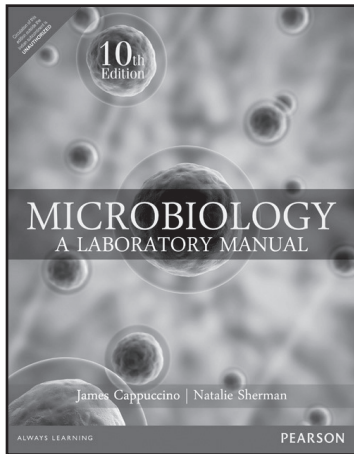
1. Meaning and Justification of Patenting an Invention
2. History and Evolution of Patent Law
3. Classification of Patents
4. Grant of Patent and Patenting Authorities
5. Patent Owner: Rights and Duties
6. Protection of Plant varieties and Farmers' Right Act, 2001
7. Patent law- Present Scenario
8. Introduction 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: 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, 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 Populations**

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

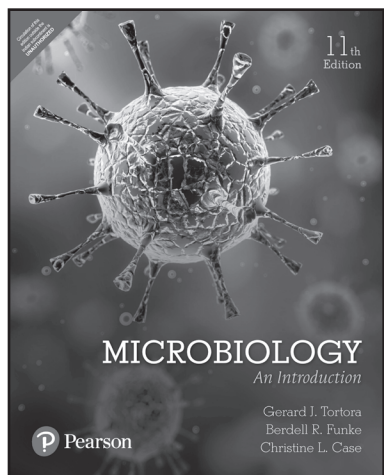
**Part 15: Medical Microbiology**

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 Immunoabsorbent 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

**NEW**

### 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.







## Microbiology with Diseases by Body System, 3/e

Robert W. Bauman

ISBN: TBA | © 2017 | Pages: 944

**NEW**

### ABOUT THE BOOK

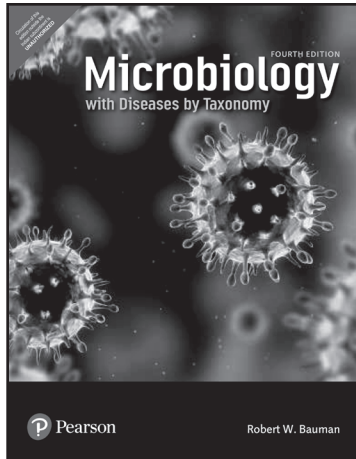
Designed for pre-nursing and allied health students (and also mixed-majors courses), *Microbiology with Diseases by Body System, Third Edition* retains the hallmark art program and clear writing style that have made Robert Bauman's book a success. This Third Edition features compelling clinical content related to students' future healthcare careers and abundant opportunities for applied student practice. Chapter-opening Clinical Cases, Emerging Diseases boxes, and Clinical Applications boxes introduce students to real-world clinical

situations. Student comprehension is ensured with end-of-chapter practice that encompasses applied, visual, and conceptual understa

### CONTENTS

1. A Brief History of Microbiology
2. Cell Structure and Function
3. Microscopy, Staining, and Classification
4. Microbial Metabolism
5. Microbial Nutrition and Growth
6. Microbial Genetics
7. Recombinant DNA Technology
8. Controlling Microbial Growth in the Environment
9. Controlling Microbial Growth in the Body: Antimicrobial Drugs
10. Characterizing and Classifying Prokaryotes
11. Characterizing and Classifying Eukaryotes
12. Characterizing and Classifying Viruses, Viroids, and Prions
13. Infection, Infectious Diseases, and Epidemiology
14. Innate Immunity
15. Adaptive Immunity
16. Immunization and Immune Testing
17. AIDS and Other Immune Disorders
18. Microbial Diseases of the Skin and Wounds
19. Microbial Diseases of the Nervous System and Eyes
20. Microbial Cardiovascular and Systemic Diseases
21. Microbial Diseases of the Respiratory System
22. Microbial Diseases of the Digestive System
23. Microbial Diseases of the Urinary and Reproductive Systems
24. Applied and Environmental Microbiology





## Microbiology with Diseases by Taxonomy, 4/e

Robert W. Bauman

ISBN: TBA | © 2017 | Pages: 900

**NEW**

### ABOUT THE BOOK

The *Fourth Edition of Microbiology with Diseases by Taxonomy, 4e* is the most cutting-edge microbiology book available, offering unparalleled currency, accuracy, and assessment. The state-of-the-art approach includes 18 new Video Tutors written and developed by the author to walk students through key microbiology concepts, bringing the textbook to life. QR codes in the textbook enable students to use their smartphone or tablet to instantly interact with these step-by-step tutorials and visualize important concepts and processes. Compelling clinical case studies and emerging disease case studies give students opportunities to apply new knowledge and explore real-world microbiology. Student comprehension is ensured with end-of-chapter practice that encompasses both visual and conceptual understanding. This edition retains the hallmark art program and clear writing style that have made Dr. Robert W. Bauman's book an engaging and successful introductory text.

### FEATURES

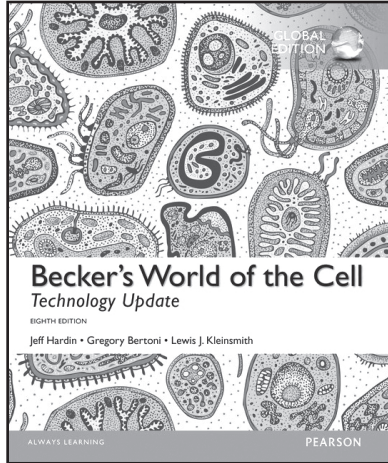
- Organization and Currency
  - The taxonomic organization of the disease chapters (Chapters 19—25) presents microbial diseases by type of pathogenic microbe, helping students recognize shared characteristics among categories of microbes.
  - Chapter 3 (Cell Structure and Function) de-emphasizes the term “prokaryote” (a term that is based on an outdated perception of taxonomy and is thus misleading to students) and instead emphasizes the three domains of living organisms, matching the latest taxonomic research. This state-of-the-science organization sets this book apart from all other allied health microbiology books.
  - The immunology chapters (Chapters 15—18), which have been and continue to be reviewed in-depth by immunology specialists, reflect the most current understanding of this rapidly-evolving field of any microbiology book available.
- Student Interest Features
  - Microbe-at-a-Glance boxes showcase representative microbes in each of the disease chapters. They feature an illustration of a microbe accompanied by very brief summaries of taxonomy, morphology, virulence factors, diseases caused, and treatment/prevention. These “snapshots” also appear as flashcards on the book's website, giving students extra “on-the-go” practice and review opportunities.
  - Beneficial Microbe boxes emphasize the practical or benevolent nature and uses of microbes and help students overcome the common misconception that all microbes cause disease.
  - Clinical Case Study and Emerging Disease Case Study boxes are written in an engaging narrative voice and feature a patient's experience with microbial diseases and follow-up critical thinking questions for students.
  - Highlight boxes appear throughout the text and focus on interesting topics in microbiology; e.g., what causes that “fishy” smell in fish markets, what allows some organisms to glow in the dark, how gold-mining microbes are used, and which cutting-edge molecular techniques are used in microbiology.
- Visually Superior Art Program
  - Half-illustration/half-micrograph 3D cellular art sets a new standard for teaching cellular structure.
  - Superior text-art integration breaks complex processes into smaller, more manageable pieces for students.
  - Colors and icons are used consistently throughout the text to make it easier for students to recognize structures and processes from chapter to chapter.
- Student Text Resources
  - Figure Legend Questions encourage critical thinking.

- ❑ Critical Thinking Questions appear throughout the chapters and in the EOC section.
- ❑ Answers to all end-of-chapter review questions (except Short Answers) are at the back of the book; answers to Short Answer questions are in the Instructor's Manual. The answer section and appendices in this edition are tabbed for easy reference.
- ❑ TEM/SEM Designations, a feature regularly requested by instructors, appear in all micrographs and many illustrations.
- ❑ Pronunciations and Etymology Guides help students with pronouncing and remembering vocabulary.
- ❑ Concept Mapping exercises appear in the end-of-chapter material, guiding students to create their own concept maps from a list of key terms focused around an important chapter topic.

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|--|---|
| 1. A Brief History of Microbiology                                   | 14. Infection, Infectious Disease, and Epidemiology         |
| 2. The Chemistry of Microbiology                                     | 15. Innate Immunity   |
| 3. Cell Structure and Function                                       | 16. Adaptive Immunity                                       |
| 4. Microscopy, Staining, and Classification                          | 17. Immunization and Immune Testing                         |
| 5. Microbial Metabolism  | 18. Immune Disorders  |
| 6. Microbial Nutrition and Growth                                    | 19. Pathogenic Gram-Positive Bacteria                       |
| 7. Microbial Genetics  | 20. Pathogenic Gram-Negative Cocci and Bacilli              |
| 8. Recombinant DNA Technology  | 21. Rickettsias, Chlamydias, Spirochetes, and Vibrios       |
| 9. Controlling Microbial Growth in the Environment                   | 22. Pathogenic Fungi  |
| 10. Controlling Microbial Growth in the Body:<br>Antimicrobial Drugs | 23. Parasitic Protozoa, Helminths, and Arthropod<br>Vectors |
| 11. Characterizing and Classifying Prokaryotes                       | 24. Pathogenic DNA Viruses                                  |
| 12. Characterizing and Classifying Eukaryotes                        | 25. Pathogenic RNA Viruses                                  |
| 13. Characterizing and Classifying Viruses, Viroids,<br>and Prions   | 26. Applied and Environmental Microbiology                  |





## Becker's World of the Cell Technology Update, 8/e

Jeff Hardin • Gregory Paul Bertoni • Lewis J. Kleinsmith

ISBN: 9781292081663 | © 2015 | Pages: 912

### ABOUT THE BOOK

Widely praised for its strong biochemistry coverage, *Becker's World of the Cell, Eighth Edition Technology Update* provides a clear, up-to-date introduction to cell biology concepts, processes, and applications. Informed by many years of teaching the introductory cell biology course, the authors have added new emphasis on modern genetic/genomic/proteomic approaches to cell biology while using clear language to ensure that students comprehend the material. *Becker's World of the Cell* provides accessible and authoritative descriptions

of all major principles, as well as unique scientific insights into visualization and applications of cell biology. Media icons within the text and figures call attention to an enhanced media selection—350 up-to-date animations, videos, and activities—that helps students visualize concepts.

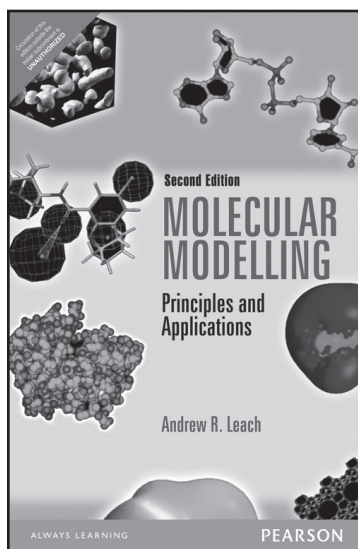
### FEATURES

- Up-to-date information has been added on the tools that modern cell biologists use, includes model organisms, bioinformatics, and genomics/proteomics.
- Major reorganization of the cell cycle and apoptosis material
- Discussions of modern genetic and molecular techniques provide important insights on cell biology and regenerative medicine including knockout and transgenic mice, stem cells, and the yeast two-hybrid system.
- A greater focus is placed on new technologies, such as nanotechnology, bioluminescence, x-ray crystallographic data, and genetic engineering of animals and transgenic plants
- Multi-level Problem Sets at the end of each chapter help to develop students' abilities to analyze data, make generalizations and predictions, and apply their understanding to new situations.

### CONTENTS

- |  |  |
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| 1. A Preview of the Cell                               | 14. Signal Transduction Mechanisms: II.                |
| 2. The Chemistry of the Cell                           | Messengers and Receptors                               |
| 3. The Macromolecules of the Cell                      | 15. Cytoskeletal Systems                               |
| 4. Cells and Organelles                                | 16. Cellular Movement: Motility and Contractility      |
| 5. Bioenergetics: The Flow of Energy in the Cell       | 17. Beyond the Cell: Cell Adhesion, Cell Junctions,    |
| 6. Enzymes: The Catalysts of Life                      | and Extracellular Structures                           |
| 7. Membranes: Their Structure, Function, and Chemistry | 18. The Structural Basis of Cellular Information:      |
| 8. Transport Across Membranes: Overcoming the          | DNA, Chromosomes, and the Nucleus                      |
| Permeability Barrier                                   | 19. The Cell Cycle, DNA Replication, and Mitosis       |
| 9. Chemotrophic Energy Metabolism: Glycolysis          | 20. Sexual Reproduction, Meiosis, and Genetic          |
| and Fermentation                                       | Recombination  |
| 10. Chemotrophic Energy Metabolism:                    | 21. Gene Expression: I. The Genetic Code and           |
| Aerobic Respiration                                    | Transcription  |
| 11. Phototrophic Energy Metabolism: Photosynthesis     | 22. Gene Expression: II. Protein Synthesis and Sorting |
| 12. The Endomembrane System and Peroxisomes            | 23. The Regulation of Gene Expression                  |
| 13. Signal Transduction Mechanisms: I. Electrical      | 24. Cancer Cells                                       |
| and Synaptic Signaling in Neurons                      |  |





## 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

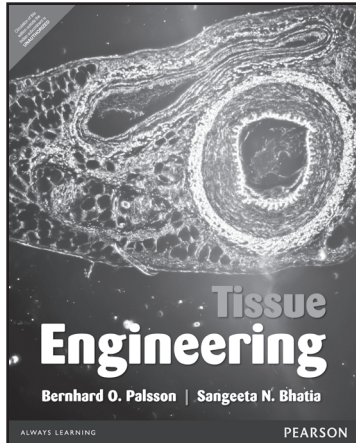
### CONTENTS

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.





## 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  
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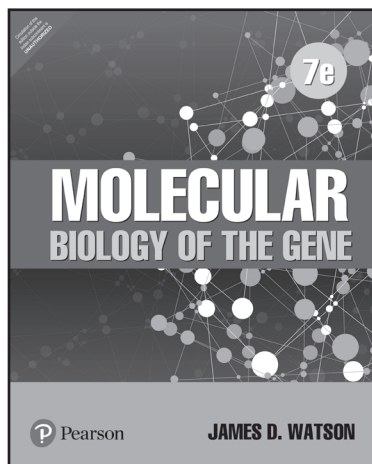
### ABOUT THE AUTHOR

**Bernhard O. Palsson**

**Sangeeta N. Bhatia**







## Molecular Biology of the Gene, 7/e

James D. Watson

ISBN: 9789332585478 | © 2017 | Pages: 912

**NEW**

### ABOUT THE BOOK

Now completely up-to-date with the latest research advances, the Seventh Edition of James D. Watson's classic book, *Molecular Biology of the Gene* retains the distinctive character of earlier editions that has made it the most widely used book in molecular biology. Twenty-two concise chapters, co-authored by six highly distinguished biologists, provide current, authoritative coverage of an exciting, fast-changing discipline.

### FEATURES

- Balanced coverage of prokaryotic and eukaryotic systems is included.
- To support the concise narrative, additional material can be found in essay boxes that are labeled in four categories:
- Key or Classic Experiments highlight influential experimental strategies that show students how we know what we know.
- Techniques include recent methods from the fields of bioinformatics and genomics.
- Advanced Concepts provide further discussions of key theories and principles.
- Medical Connections highlight how understanding basic mechanisms sheds light on—and may lead to treatment of—medical conditions and human diseases.

### CONTENTS

#### I. History

1. Mendelian View of the World
2. Nucleic Acids Convey Genetic Information

#### II. Structure and Study of Macromolecules

3. Weak and strong chemical bonds
4. The Structure of DNA
5. The Structure of RNA
6. The Structure of Proteins and Protein: Nucleic Acid Interactions
7. Techniques of Molecular Biology

#### III. Maintenance of the Genome

8. Genome Structure, Chromatin and the Nucleosome
9. The Replication of DNA
10. The Mutability and Repair of DNA
11. Homologous Recombination at the Molecular Level

12. Site Specific Recombination and Transposition of DNA

#### IV. Expression of the Genome

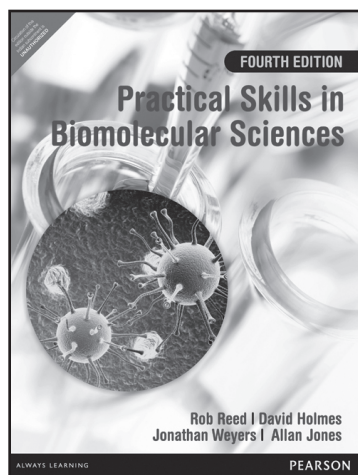
13. Mechanisms of Transcription
14. RNA Splicing
15. Translation
16. The Genetic Code
17. Origins and early evolution of life

#### V. Regulation

18. Transcriptional Regulation in Prokaryotes
19. Transcriptional Regulation in Eukaryotes
20. Regulatory RNAs
21. Gene Regulation in Development and Evolution
22. Systems Biology



## Also Available



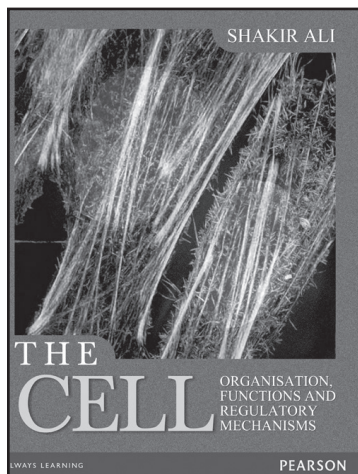
## Practical Skills in Biomolecular Sciences, 4/e

Jonathan Weyers

ISBN: 9789332517387 | © 2014 | Pages: 576

### ABOUT THE BOOK

If you are a 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.



## The Cell: Organization, Functions and Regulatory Mechanisms

Shakir Ali

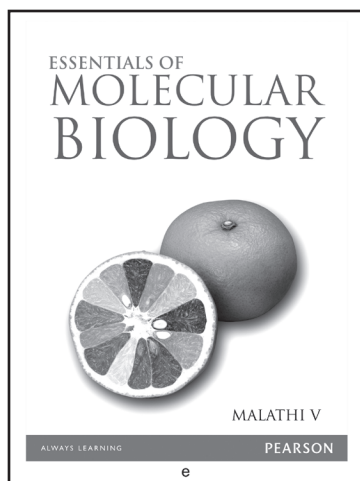
ISBN: 9788131773284 | © 2014 | Pages: 376

### 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.

Also Available



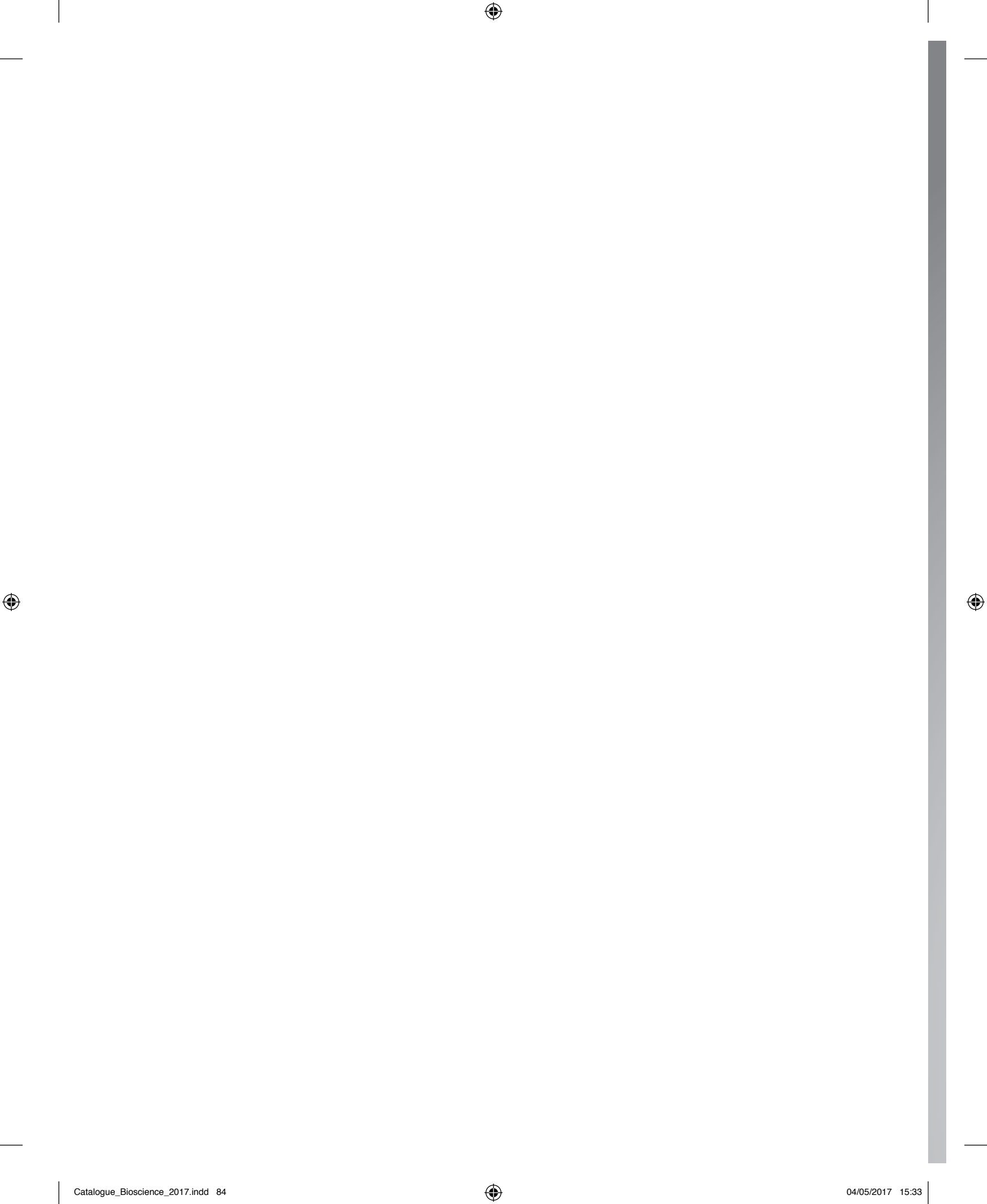
## Essentials of Molecular Biology

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.

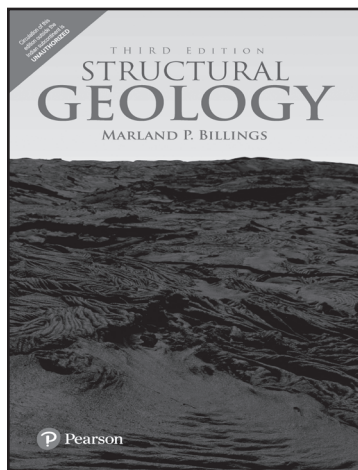


# GEOLOGY & EARTH SCIENCE









## Structural Geology, 3/e

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, diapirism, 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.

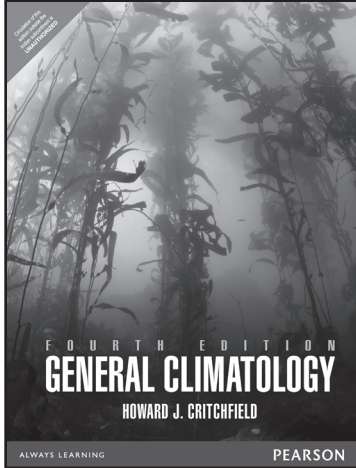
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| 1. Structural Geology                              | 15. Extrusive Igneous Rocks  |
| 2. Mechanical Principles                           | 16. Intrusive Igneous Rocks  |
| 3. Description of Folds                            | 17. Emplacement of Large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

### 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.





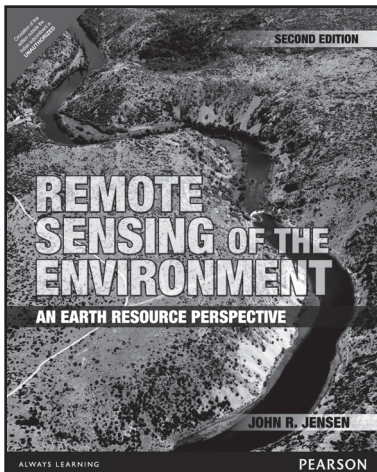
## General Climatology, 4/e

Howard J. 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, 2/e

John R. 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

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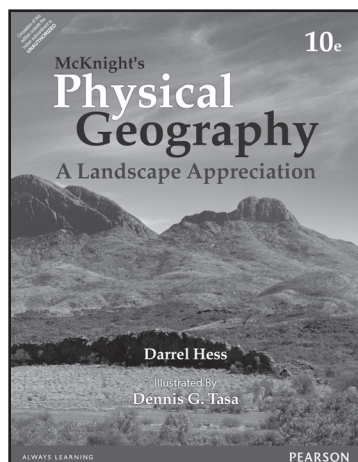
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1. Remote Sensing of the Environment
  2. Electromagnetic Radiation Principles
  3. Aerial Photography - Vantage Point, Cameras, Filters, and Film
  4. Elements of Visual Image Interpretation
  5. Photogrammetry
  6. Multispectral Remote Sensing Systems
  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, 10/e

Darrel Hess • Dennis G. Tasa

ISBN: 9789332551909 | © 2016 | Pages: 624

**NEW**

### 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

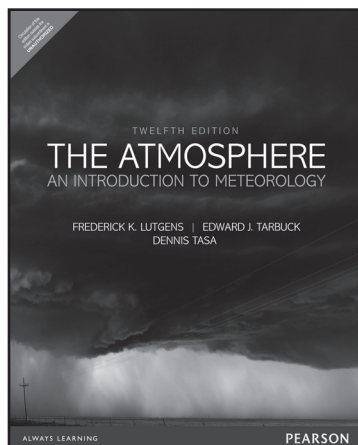
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| 1. Introduction to Earth                 | 11. Terrestrial Flora and Fauna                           |
| 2. Portraying Earth                      | 12. Soils   |
| 3. Introduction to the Atmosphere        | 13. Introduction to Landform Study                        |
| 4. Insolation and Temperature            | 14. The Internal Processes                                |
| 5. Atmospheric Pressure and Wind         | 15. Preliminaries to Erosion: Weathering and Mass Wasting |
| 6. Atmospheric Moisture                  | 16. Fluvial Processes                                     |
| 7. Atmospheric Disturbances              | 17. Solution Processes and Karst Topography               |
| 8. Climate and Climate Change            | 18. The Topography of Arid Lands                          |
| 9. The Hydrosphere                       | 19. Glacial Modification of Terrain                       |
| 10. Cycles and Patterns in the Biosphere | 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, 12/e

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

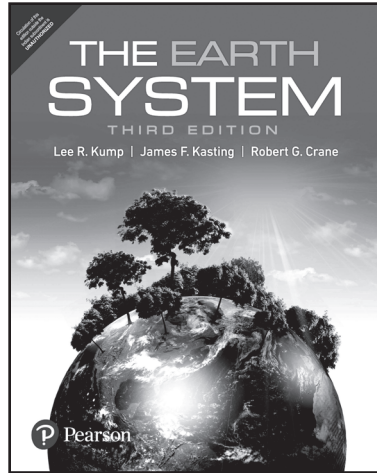
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| 1 Introduction to the Atmosphere          | 9 Weather Patterns                  |
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| 8 Air Masses                              | 16 Optical Phen                     |

### 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

**NEW**

### 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

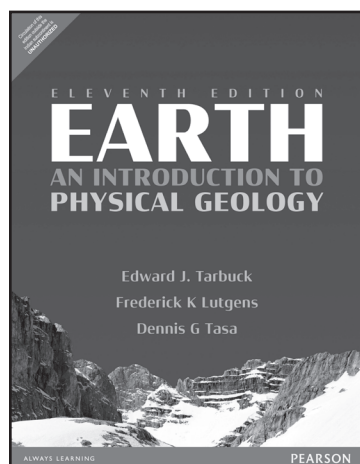
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| 1. Global Change   | 11. Effect of Life on the Atmosphere: The Rise of Oxygen and Ozone |
| 2. Daisyworld: An Introduction to Systems                      | 12. Long-Term Climate Regulation                                   |
| 3. Global Energy Balance: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

### 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

**NEW**

### 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.

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| 2. Plate Tectonics: A Scientific Revolution Unfolds | 4. Magma, Igneous Rocks, and Intrusive Activity |





5. Volcanoes and Volcanic Hazards
6. Weathering and Soil
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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.





## Essentials of Geology, 11/e

Frederick K Lutgens • Edward J. Tarbuck • Dennis G. Tasa

ISBN: TBA | © 2017 | Pages: 608

**NEW**

### ABOUT THE BOOK

With the renowned readability of the Lutgens/Tarbuck/Tasa team, the Eleventh Edition of *Essentials of Geology, 11e* continues to enhance both the approach and the visual presentation that have made this text a best-seller. This revision incorporates a new active learning approach throughout each chapter, which offers students a structured learning path and provides a reliable, consistent framework for mastering the chapter concepts. It also includes new additions to the visual program and current issues, such as climate change, are thoroughly updated.

### FEATURES

- **Writing style** — The language of this book is straightforward and written to be understood. Clear, readable discussions with a minimum of technical language are the rule.
- **Art** — Dennis Tasa, a gifted artist and respected geoscience illustrator, continues his outstanding illustrations in this edition, where they are truly an extension of the written story of geology.
- **Dependability** — Without question, Lutgens and Tarbuck textbooks have an unblemished reputation as the most dependable texts for geology and Earth science. Instructors can count on having a well-written, reliable book and thoroughly integrated and tested supplementary resources.
- **GEODE: Essentials of Geology** — Created by Dennis Tasa for visual and active learners, GEODE: Essentials of Geology provides narrated tutorials that integrate photography, animations, and video for interactive reinforcement of key concepts — now in an online format with this edition.

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## Elemental Geosystems

Robert W. Christopherson

ISBN: TBA | © 2013 | Pages: 600

### ABOUT THE BOOK

Among the most highly regarded in physical geography, Robert Christopherson's bestselling *Elemental Geosystems* is known for currency, accuracy, rich integration of climate change science, and a dynamic multimedia program. *Elemental Geosystems, Seventh Edition* is organized around the natural flow of energy, materials, and information, presenting subjects in the same sequence in which they occur in nature – an organic, holistic approach that is unique in this discipline. Each chapter also includes strong pedagogical tools and a structured learning path that consists of Key Learning Concepts presented at the start of the chapter, Key Learning Concepts Review at the end of the

chapter, and Critical Thinking questions integrated throughout.

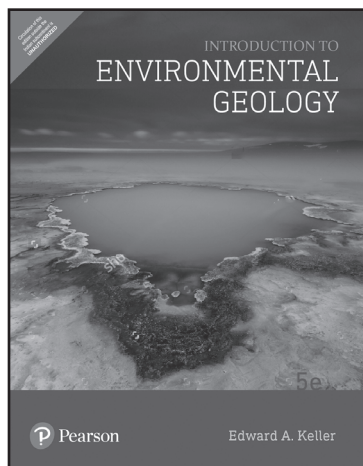
Offering current examples and modern science within a one-of-a-kind Earth systems organization, Christopherson combines student-friendly writing, the most current applications, outstanding art, and a strong multimedia program for a truly unique physical geography experience.

### FEATURES

- The unique Earth systems organization organizes the chapters around atmosphere, hydrosphere, lithosphere, and biosphere, following the natural flow of energy, materials, and information to present topics in the same sequence in which they occur in nature.
- Christopherson's structured learning path and tightly integrated pedagogy give students a reliable, consistent framework for mastering the chapter concepts.
- Emphasis on climate change science and currency: Christopherson is recognized as a champion of environment and climate change issues, and *Elemental Geosystems* has the most up-to-date and comprehensive coverage of climate change science available.
- Christopherson's focus on relevance speaks directly to students, intriguing them with interesting case studies and factoids from history, science, and current news articles.
- An unparalleled visual program includes a variety of illustrations, photographs, and composites. Over 400 photographs were composed in the field during expeditions by the author and his wife specifically for use in the text, providing authoritative examples and applications of physical geography and Earth systems science.
- A strong level of rigor is maintained throughout while still remaining accessible and engaging to students.
- Over 200 embedded urls are integrated throughout the text, allowing students to link directly to source material.

### CONTENTS

- |   |   |
|---|---|
| 1. Essentials of Geography                          | 10. Weathering, Karst Landscapes, and Mass Movement |
| <b>Part I: The Energy-Atmosphere System</b>         | 11. River Systems and Landforms                     |
| 2. Solar Energy, Seasons, and the Atmosphere        | 12. The Oceans, Coastal Systems, and Wind Processes |
| 3. Atmospheric Energy and Global Temperatures       | 13. Glacial and Periglacial Landscapes              |
| 4. Atmospheric and Oceanic Circulations             | <b>Part IV: Soils, Ecosystems, and Biomes</b>       |
| <b>Part II: Water, Weather, and Climate Systems</b> | 14. The Geography of Soils                          |
| 5. Atmospheric Water and Weather                    | 15. Ecosystem Essentials                            |
| 6. Water Resources                                  | 16. Terrestrial Biomes                              |
| 7. Climate Systems and Climate Change               | 17. Earth and the Human Denominator                 |
| <b>Part III: The Earth—Atmosphere Interface</b>     | Appendix A Maps in this Text and Topographic Maps   |
| 8. The Dynamic Planet                               | Appendix B The Köppen Climate Classification System |
| 9. Tectonics, Earthquakes and Volcanoes             | Appendix C Common Conversions                       |



## Introduction to Environmental Geology, 5/e

Edward A. Keller

ISBN: TBA | © 2012 | Pages: 792

**NEW**

### ABOUT THE BOOK

This text focuses on helping non-science majors develop an understanding of how geology and humanity interact. Ed Keller—the author who first defined the environmental geology curriculum—focuses on five fundamental concepts of environmental geology: Human Population Growth, Sustainability, Earth as a System, Hazardous Earth Processes, and Scientific Knowledge and Values. These concepts are introduced at the outset of the text, integrated throughout the text, and revisited at the end of each chapter. The Fifth Edition emphasizes currency, which is essential to this dynamic subject, and strengthens Keller's hallmark “Fundamental Concepts of Environmental Geology,” unifying the

text's diverse topics while applying the concepts to real-world examples.

### FEATURES

- Five Fundamental Concepts of Environmental Geology are introduced in Chapter 1 to unify the diverse topics in the text: Human Population Growth, Sustainability, Earth as a System, Hazardous Earth Processes, and Scientific Knowledge and Values. The connections are reinforced at the end of each chapter, where the chapter's topic is summarized in terms of these concepts (see “Revisiting Fundamental Concepts”).
- An accessible, friendly writing style engages students and includes a wealth of examples.
- Student-focused chapter structure includes consistent learning aids to maximize students' understanding of the material and review of major topics:
  - Learning objectives
  - Chapter summary
  - Detailed references at the end of each chapter
  - Key terms at the end of each chapter
  - Review questions
  - Critical-thinking questions that stimulate students to think about some of the important issues in the text and relate these to their lives and society.
- Environmental considerations are balanced with a solid presentation of the fundamental concepts and processes of physical geology, so that concepts covered later in the text are easier for students to understand.
- Case History and A Closer Look selected features help students relate topics in the text to their world.
- Comprehensive appendices help students grasp some of the more applied aspects of environmental geology and are also useful for supplementing laboratory exercises and field exercises. Appendices include:
  - Identification of rocks and minerals with accompanying tables and suggestions
  - Strength of rocks
  - Introduction to topographic and geologic maps with specific information concerning how to read topographic maps, construct topographic profiles, and understand geologic maps
  - Introduction to Digital Elevation Models (DEMs) and Global Positioning System instrumentation (GPS)
  - Discussion of how geologists determine and interpret geologic time
  - A glossary of terms used in the field of environmental geology

»»

## CONTENTS

### **Part One: Foundations of Environmental Geology**

1. Philosophy and Fundamental Concepts
2. Internal Structure of Earth and Plate Tectonics
3. Minerals and Rocks
4. Ecology and Geology

### **Part Two: Earth Processes and Natural Hazards**

5. Introduction to Natural Hazards
- 6 Earthquakes and Related Phenomena
7. Tsunami (new chapter)
8. Volcanic Activity
9. Rivers and Flooding
10. Slope Processes, Landslides, and Subsidence
11. Coastal Processes
12. Impact of Extraterrestrial Objects

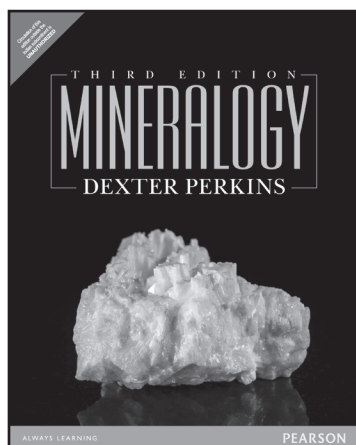
### **Part Three: Resources and Pollution**

13. Water Resources
14. Water Pollution
15. Mineral Resources
16. Energy Resources
17. Soils and Environment

### **Part Four: Environmental Management, Global Perspective, and Society**

18. Global Climate Change
19. Geology, Society, and the Future





## Mineralogy, 3/e

Dexter Perkins

ISBN: 9789332550421 | © 2015 | Pages: 453

### 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:

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

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

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

#### Part III: Mineral Descriptions

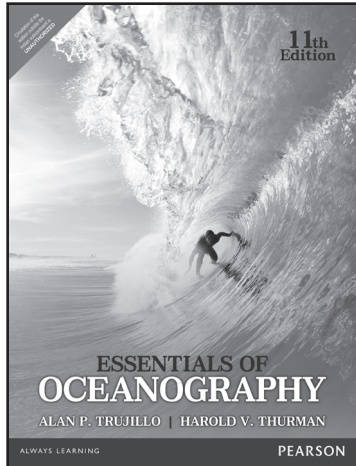
14. Descriptions of Minerals

### 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).







## 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:
  - Link the narrative to state-of-the-art computer animations created by Al Trujillo and a panel of geoscience educators.
  - Help students visualize some of the most challenging oceanographic concepts.
  - 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

- |  |   |
|--|---|
| 1. Introduction to Planet "Earth"      | 9. Tides  |
| 2. Plate Tectonics and the Ocean Floor | 10. The Coast: Beaches and Shoreline Processes  |
| 3. Marine Provinces                    | 11. The Coastal Ocean                           |
| 4. Marine Sediments                    | 12. Marine Life and the Marine Environment      |
| 5. Water and Seawater                  | 13. Biological Productivity and Energy Transfer |
| 6. Air–Sea Interaction                 | 14. Animals of the Benthic Environment          |
| 7. Ocean Circulation                   | 15. Animals of the Pelagic Environment          |
| 8. Waves and Water Dynamics            | 16. The Oceans and Climate Change               |

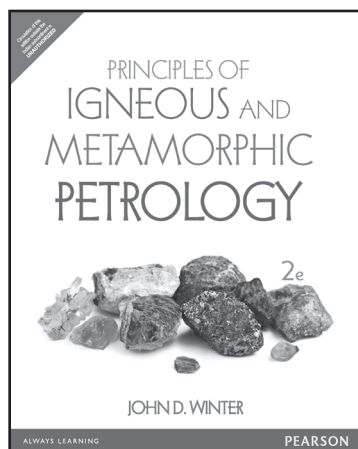


### ABOUT THE AUTHOR

**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*.





## 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

- |   |   |
|---|---|
| 1. Some Fundamental Concepts                          | 11. Magma Diversity   |
| 2. Classification and Nomenclature of Igneous Rocks   | 12. Layered Mafic Intrusions                                      |
| 3. Textures of Igneous Rocks                          | 13. Mid-Ocean Ridge Volcanism                                     |
| 4. Igneous Structures and Field Relationships         | 14. Oceanic Intraplate Volcanism                                  |
| 5. An Introduction to Thermodynamics                  | 15. Continental Flood Basalts                                     |
| 6. The Phase Rule and One- and Two-Component Systems  | 16. Subduction-Related Igneous Activity Part I: Island Arcs       |
| 7. Systems with More than Two Components              | 17. Subduction-Related Igneous Activity Part II: Continental Arcs |
| 8. Chemical Petrology I: Major and Minor Elements     | 18. Granitoid Rocks   |
| 9. Chemical Petrology II: Trace Elements and Isotopes | 19. Continental Alkaline Magmatism                                |
| 10. Generation of Basaltic Magmas                     | 20. Anorthositic  |

**Part II Metamorphic Petrology**

- |   |  |
|---|--|
| 21. An Introduction to Metamorphism                     | 27. Thermodynamics of Metamorphic Reactions                |
| 22. A Classification of Metamorphic Rocks               | 28. Metamorphism of Pelitic Sediments                      |
| 23. Structures and Textures of Metamorphic Rocks        | 29. Metamorphism of Calcareous and Ultramafic Rocks        |
| 24. Stable Mineral Assemblages in Metamorphic Rocks     | 30. Metamorphic Fluids, Mass Transport and<br>Metasomatism |
| 25. Metamorphic Facies and Metamorphosed<br>Mafic Rocks | Appendix A: Units and Constants                            |
| 26. Metamorphic Reactions                               | 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.



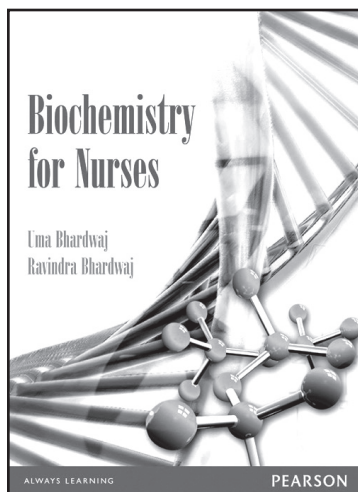


# NURSING









## 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

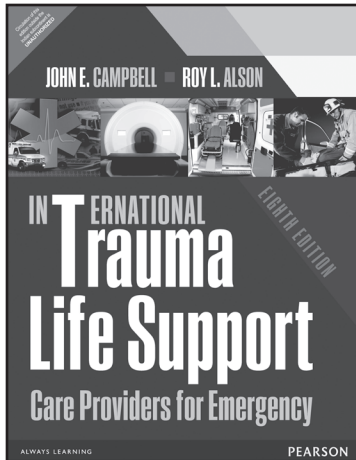
### CONTENTS

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.





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

John E Campbell • Roy L Alson

ISBN: 9789332573857 | © 2016 | Pages: 432

### 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.

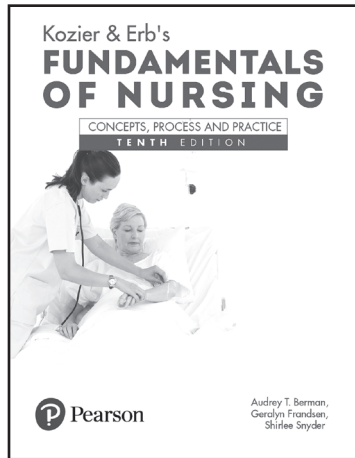
## CONTENTS

- 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.





## Kozier & Erb's Fundamentals of Nursing: Concepts, Process and Practice, 10/e

Audrey Berman • Shirlee J. Snyder • GERALYN FRANDSEN

ISBN: TBA | © 2017 | Pages: 1530

**NEW EDITION**

### ABOUT THE BOOK

Fundamentals of Nursing sets the foundation for nursing excellence. Coverage of the key concepts of contemporary nursing, as well as the latest nursing evidence, standards, and competencies, helps prepare readers to become effective nurses. To help students develop their clinical-reasoning abilities, new QSEN features draw connections to actual nursing practice. All basic and fundamental skills for the registered nurse are described within the nursing process. Students will learn to think like nurses as they see how the material

they are reading is applied in nursing practice.

### FEATURES

- Clear, consistent presentation of nursing skills
- Evidence-Based Practice, Safety Alerts, and Interprofessional Practice
- Anatomy and Physiology Reviews and Assessment Interviews
- Concept Maps and Critical Thinking Checkpoints
- Nursing Care Plans with Applying Critical Thinking Questions

### CONTENTS

#### Unit 1: The Nature of Nursing

- Historical and Contemporary Nursing Practice
- Evidence-Based Practice and Research in Nursing
- Nursing Theories and Conceptual Frameworks
- Legal Aspects of Nursing
- Values, Ethics, and Advocacy

#### Unit 2: Contemporary Health Care

- Health Care Delivery Systems
- Community Nursing and Care Continuity
- Home Care
- Electronic Health Records and Information Technology

#### Unit 3: The Nursing Process

- Critical Thinking and Clinical Reasoning
- Assessing
- Diagnosing
- Planning
- Implementing and Evaluating
- Documenting and Reporting

#### Unit 4: Health Beliefs and Practices

- Health Promotion
- Health, Wellness, and Illness

- Culturally Responsive Nursing Care
- Complementary and Alternative Healing Modalities

#### Unit 5: Lifespan Development

- Concepts of Growth and Development
- Promoting Health from Conception Through Adolescence
- Promoting Health in Young and Middle-Aged Adults
- Promoting Health in Older Adults
- Promoting Family Health

#### Unit 6: Integral Aspects of Nursing

- Caring
- Communicating
- Teaching
- Leading, Managing, and Delegating

#### Unit 7: Assessing Health

- Vital Signs
- Health Assessment

#### Unit 8: Integral Components of Client Care

- Asepsis
- Safety
- Hygiene
- Diagnostic Testing

- Medications
- Skin Integrity and Wound Care
- Perioperative Nursing

**Unit 9: Promoting Psychosocial Health**

- Sensory Perception
- Self-Concept
- Sexuality
- Spirituality
- Stress and Coping
- Loss, Grieving, and Death

**ABOUT THE AUTHOR**

**Audrey Berman**, PhD, RN Professor, Dean, Nursing, Samuel Merritt University, Oakland, California

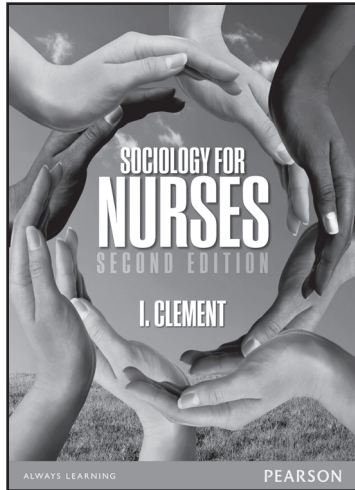
**Shirlee J. Snyder**, EdD, RN, Former Dean and Professor, Nursing, Nevada State College, Henderson, Nevada

**Geralyn Frandsen**, EdD, RN, Professor of Nursing, Maryville University St. Louis, Missouri

**Unit 10: Promoting Physiological Health**

- Activity and Exercise
- Sleep
- Pain Management
- Nutrition
- Urinary Elimination
- Fecal Elimination
- Oxygenation
- Circulation
- Fluid, Electrolyte, and Acid—Base Balance





## 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

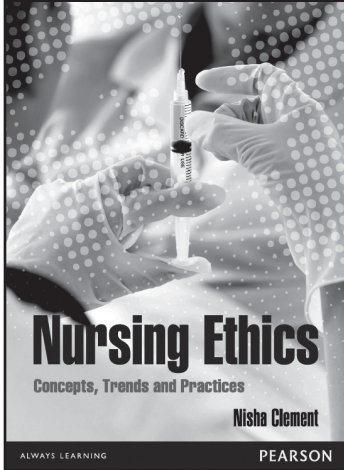
### CONTENTS

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.

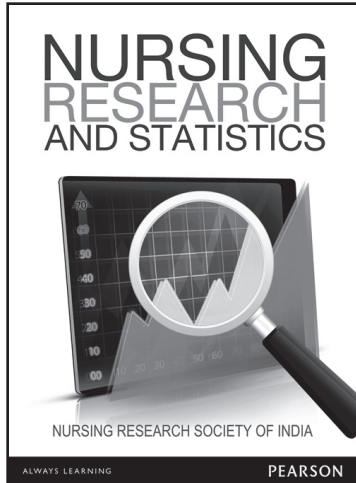
### CONTENTS

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.





## 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
- 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.





## Nursing Basics for Clinical Practice

Audrey T. Berman • Shirlee Snyder • Debra S. McKinney

ISBN: TBA | © 2011 | Pages: 1272

**NEW**

### ABOUT THE BOOK

Turn your students into competent and confident nurses by getting back to basics. *Nursing Basics for Clinical Practice* is a new approach to learning the fundamentals of nursing. With a solid grounding in client-focused nursing care, critical thinking, evidence based practice, clinical practice and NCLEX success, your students will get vital information in a practical format, so they can learn it today, and practice it tomorrow

### FEATURES

- Client-Focused Nursing Care, Critical Thinking and Evidence-Based Practice Features
  - Nursing Care Plans help organize care around the nursing process.
  - Applying Critical Thinking questions come at the end of each sample Nursing Care Plan to encourage further reflection and analysis.
  - Concept Maps! Sample concept maps throughout the textbook provide a visual representation of the nursing process, nursing care plans, and the relationships in different concepts.
  - Identifying Nursing Diagnoses, Outcomes, and Interventions boxes provide guidelines for establishing diagnoses, outcomes and interventions for situations and conditions.
  - Critical Thinking Checkpoints provide a brief case study followed by questions that encourage students to analyze, compare, contemplate, interpret and evaluate information.
  - Research Notes focus on evidence-based practice. These boxes highlight relevant nursing research and implications for nursing care.
- Features to Promote Success in Clinical Practice
  - A Case Scenario gives chapter content a clinically relevant perspective. Critical thinking questions around the case are provided at the end of the chapter.
  - Step-by-step skills. An easy-to-follow format helps students understand techniques and practice sequences.
  - Clearly labeled Delegation boxes assist you in assigning tasks appropriately.
  - Includes a complete Equipment list for easy preparation.
  - Critical steps are visually represented with full-color photographs and illustrations!
  - Easy-to-find rationales give you a better understanding of why things are done.
  - Practice Guidelines provide summaries of clinical do's and don'ts.
  - Unique! Drug Capsules provide a brief overview of drug information, nursing responsibilities, and client teaching.
  - Assessment Interview boxes help students learn the type and range of what to ask in particular client situations.
  - Culturally Competent Care boxes focus on how situations may have different approaches when considering the client's cultural heritage.
  - Home Care Considerations, Long Term Care Considerations (Unique!), and Physician Office Considerations (Unique!) help students think beyond the hospital and consider client issues in other client settings.
  - Lifespan Considerations highlight how nursing care is adapted for infants, children, adolescents, and elders.
  - Client Teaching boxes give tips and tools to help clients facilitate self-care, monitor potential problems, perform prescribed therapies, and assist in other client teaching experiences.
  - Understanding the Chapter

>>

- The end of each chapter summarizes and applies chapter information.
- Chapter Highlights focus the student's attention and review critical concepts as they relate to the learning outcomes.
- Think About It refers to the chapter-opening scenario and provides critical thinking questions. Answers are located on MyNursingKit.
- Test Your Knowledge helps you prepare for the NCLEX exam. Alternative style questions are also included.
- Each chapter provides a reminder to visit MyNursingKit ([www.mynursingkit.com](http://www.mynursingkit.com)) for additional chapter review and resources.
- Detailed References and Selected Bibliography provide the basis for evidence-based nursing practice and support the currency and accuracy of textbook content.

## CONTENTS

### Unit I: The Nature of Nursing

1. Principles of Nursing and Evidence-Based Practice
2. Legal and Ethical Aspects of Nursing
3. Health Care Delivery Systems
4. Cultural and Heritage
5. Health Beliefs and Practices

### Unit II: The Nursing Process

6. Critical Thinking and Clinical Reasoning
7. The Nursing Process
8. Informatics, Documentation and Reporting

### Unit III:

9. Promoting Health Throughout the Lifespan
10. Promoting Health in Elders
11. Promoting Health in the Family

### Unit IV: Integral Aspects of Nursing

12. Caring
13. Communicating
14. Teaching
15. Leading, Managing, and Delegating

### Unit V: Assessing Health

16. Vital Signs
17. Health Assessment

18. Pain Assessment and Management

### Unit VI: Integral Components of Client Care

19. Asepsis
20. Diagnostic Testing
21. Safety
22. Hygiene
23. Medications
24. Skin Integrity and Wound Care
25. Perioperative Nursing

### Unit VII: Promoting Psychosocial Health

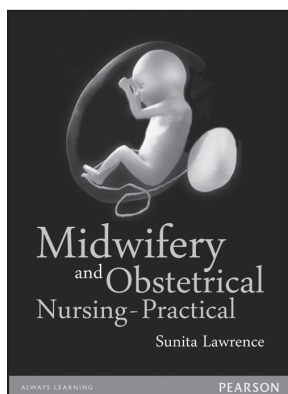
26. Sensory Perception
27. Self-Concept
28. Sexuality
29. Spirituality
30. Coping with Stress, Loss, and Death

### Unit VIII: Promoting Physiologic Health

31. Activity, Exercise, and Sleep
32. Nutrition
33. Urinary Elimination
34. Fecal Elimination
35. Oxygenation and Circulation
36. Fluid, Electrolyte, and Acid-Base Balance



## Also Available



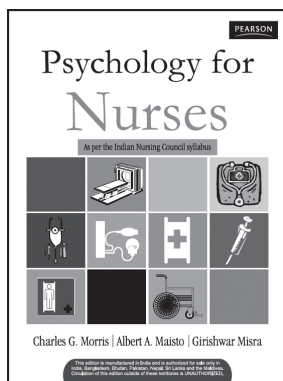
## Midwifery and Obstetrical Nursing - Practical, 1/e

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.



## Psychology for Nurses

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

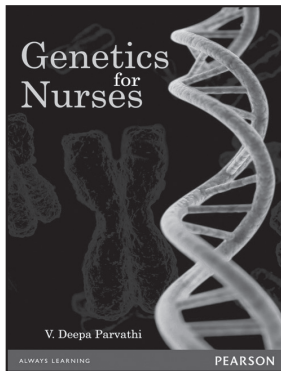
ISBN: 9788131732168 | © 2010 | Pages: 260

### 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.



## Also Available



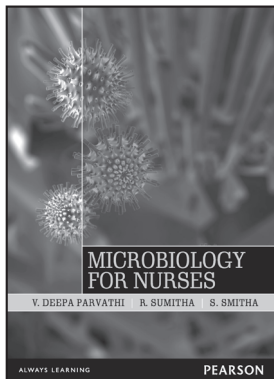
## Genetics for Nurses

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.



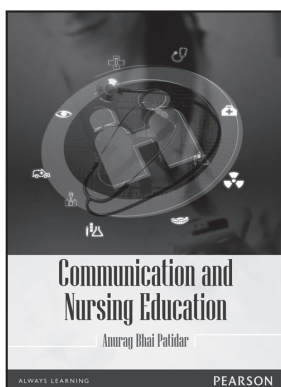
## Microbiology for Nurses

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.



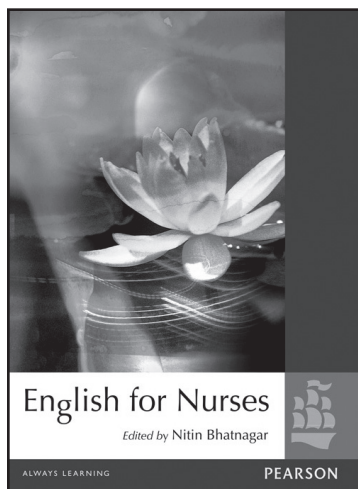
## Communication and Nursing Education

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.



## 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

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

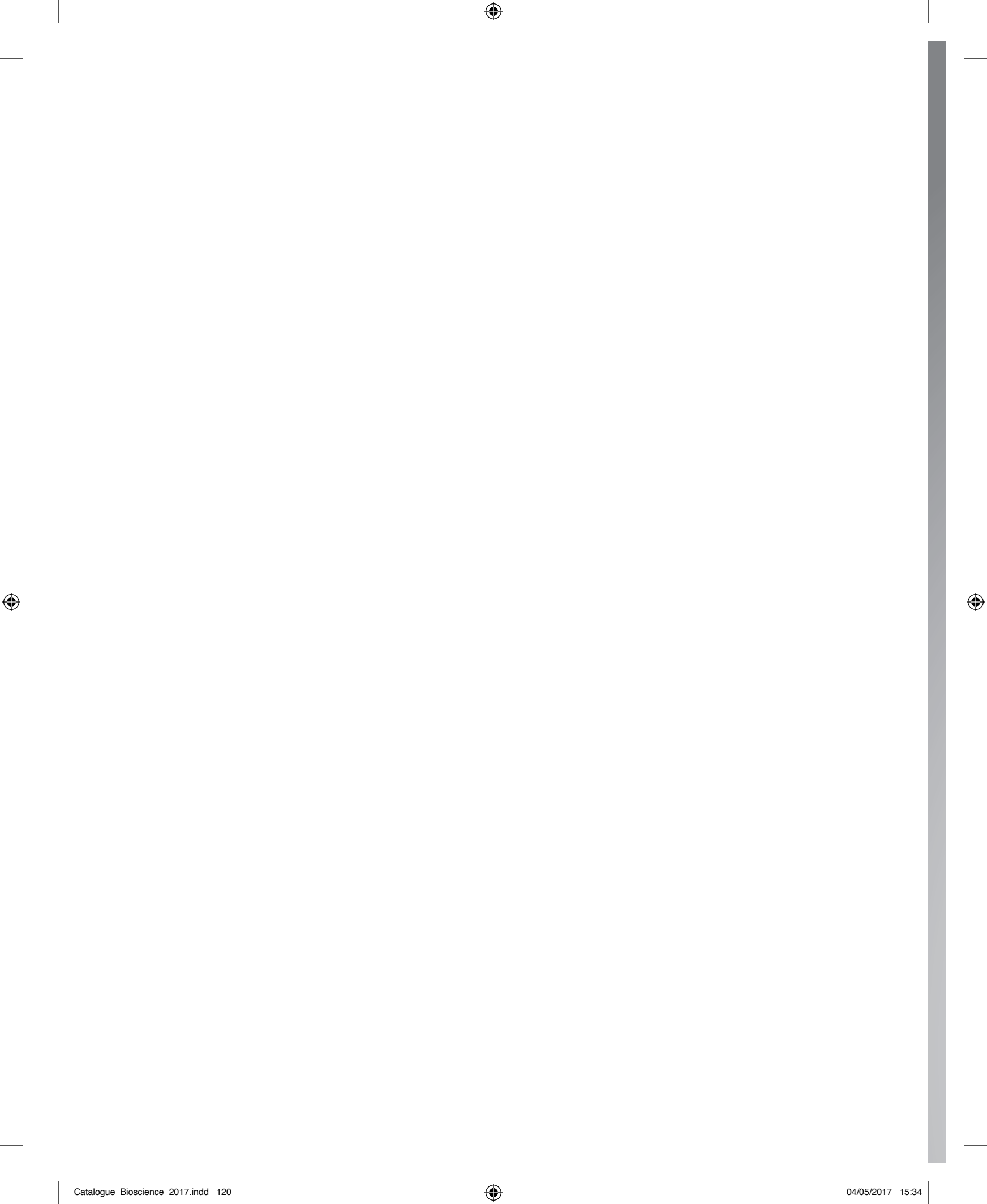
### CONTENTS

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 Nambsian)
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.

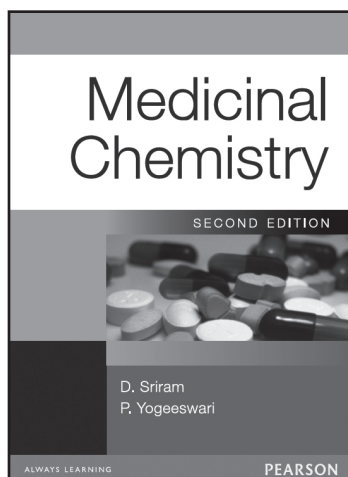




# PHARMACY







## 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

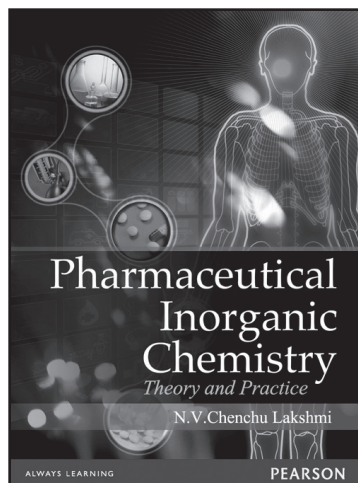
### CONTENTS

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: Theory and practice

N. V. 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

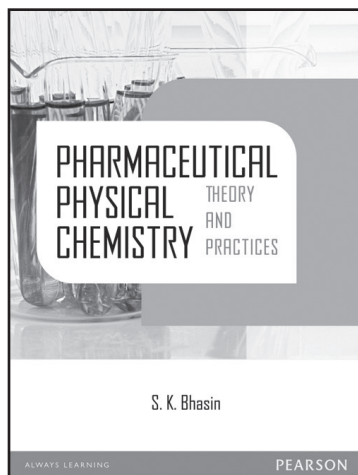
### CONTENTS

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 KVSR Siddhartha College of Pharmaceutical sciences, Vijayawada.





## 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

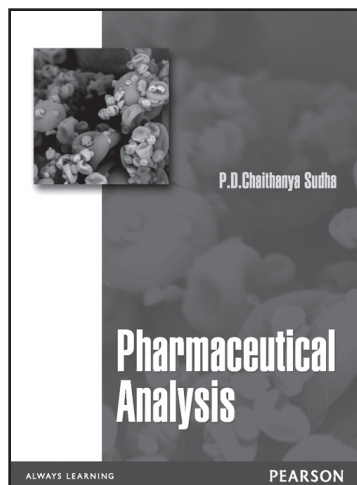
#### Part B

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

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.

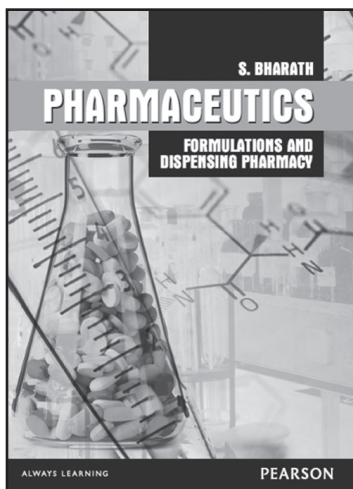
### CONTENTS

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





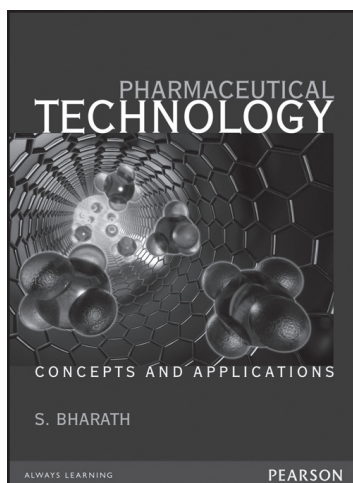
## Pharmaceutics: Formulations and Dispensing Pharmacy

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.



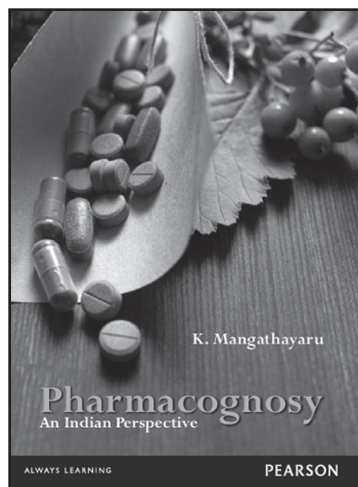
## Pharmaceutical Technology: Concepts and Applications

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.



## 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

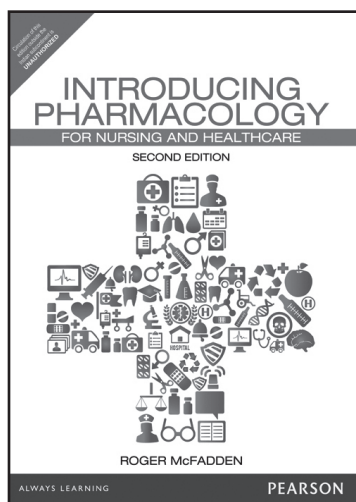
### CONTENTS

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 alumna 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.





## 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 as 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










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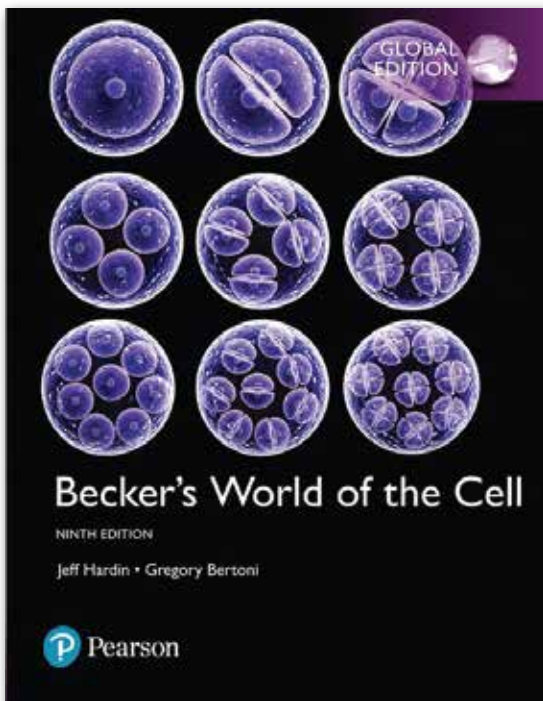
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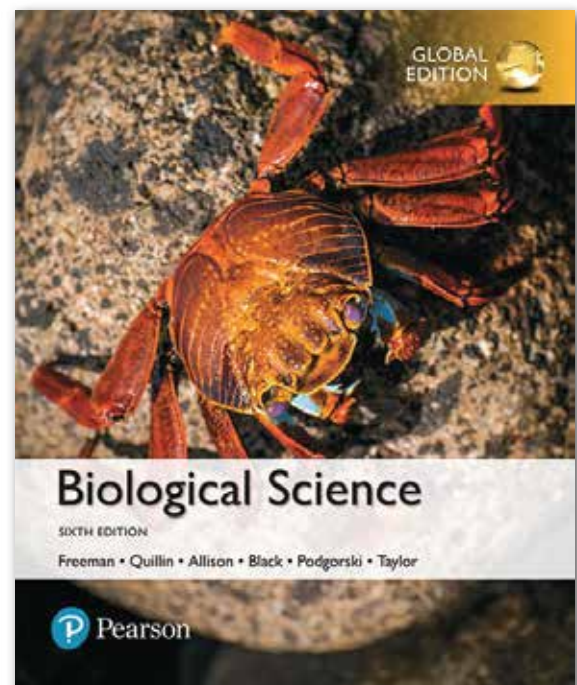
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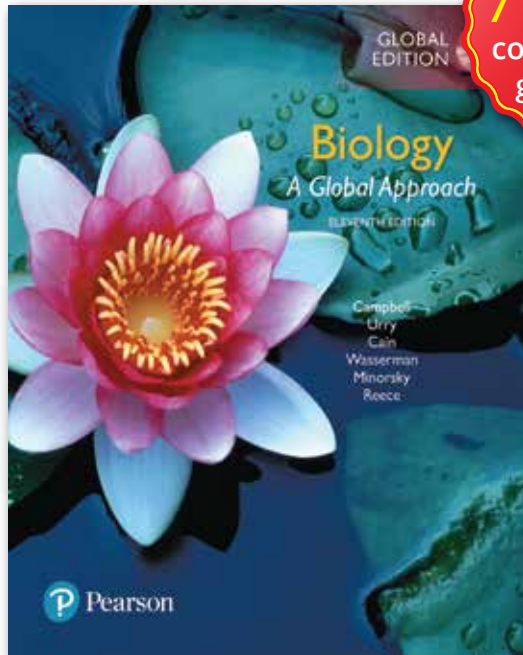
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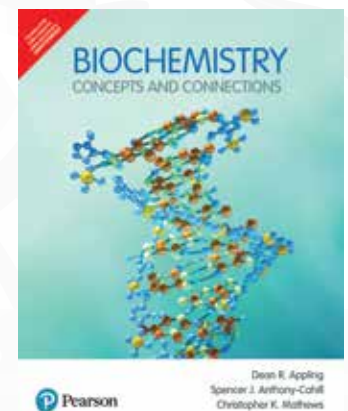
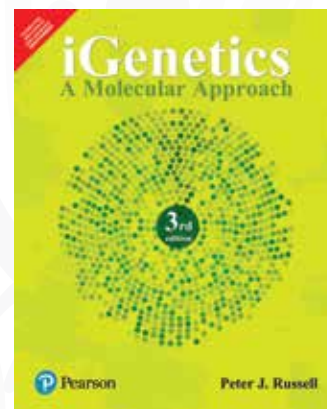
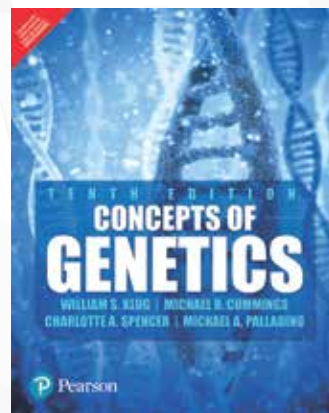
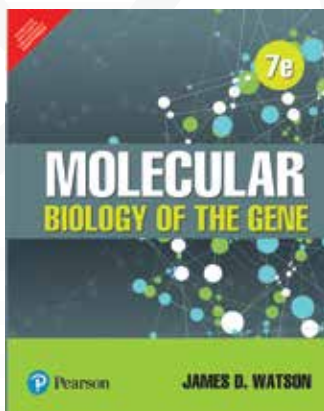
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