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11 Partial Budgeting
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4 Improving Management Skills
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20 Land—Control and Use
21 Human Resource Management
22 Machinery Management
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6th Edition
By Ronald Kay, Texas A&M University
2008 (April 2007) / 480 pages
ISBN: 9780073028293
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Animal Science

International Edition

ANIMAL SCIENCES
The Biology, Care, and Production of Domestic Animals, 4th Edition
By John R. Campbell, Oklahoma State U—Oklahoma City, M. Douglas Kenealy, Iowa State University and Karen L. Campbell, University of Illinois-Urbana-Champaign
2003 / 528 pages
ISBN: 9780073661759 (GOP)
http://www.mhhe.com/campbell

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1 Animal Agriculture
2 Breeds and Life Cycles of Livestock and Poultry
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MADER'S UNDERSTANDING HUMAN ANATOMY & PHYSIOLOGY
7th Edition
By Susannah N. Longenbaker, Columbus State Community College
2011 (February 2010) / 512 pages
ISBN: 9780073525624
ISBN: 9780071222013 [IE]
http://www.mhhe.com/longenbaker7

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Appendix B Understanding Medical Terminology

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2010 (January 2009)
ISBN: 9780077281533
www.mhhe.com/gunstream4

Designed for an introductory, one-semester course, the scope, organization, writing style, depth of presentation, and pedagogical aspects of this text have been tailored to meet the needs of students preparing for a career in allied health. This text does not assume any prior science knowledge on the part of the student and effectively presents students with the fundamentals of anatomy and physiology. It’s the only one-semester text available with a built-in study guide/workbook.

NEW TO THIS EDITION
- Portions of all chapters have been rewritten to update or clarify the subject matter, and new art has been added, or existing art modified, to correspond with the improved text.
- End-of-chapter questions and the Study Guide have been modified to correspond to these changes. These improvements will enhance student understanding of basic human anatomy and physiology. Significant areas of updating and clarification include the following.
  - Chapter 1: the role of negative feedback in regulating homeostasis.
  - Chapter 12: the regulation of cardiac output and the exchange of materials between blood in capillaries and tissue cells.
  - Chapter 13: the mechanisms of immunity.
  - Chapter 15: the microscopic structure of the liver and liver function.
  - Chapter 16: the regulation of glomerular filtration rate and the movement of materials between the renal tubule and the peritubular capillary.
  - Chapter 17: the hormonal regulation of reproduction.

CONTENTS
Part I Organization of the Body
1 Introduction to the Human Body
2 Chemical Aspects of Life
3 Cell
4 Tissues and Membranes

Part 2 Covering, Support, and Movement of the Body
5 Integumentary System
6 Skeletal System

15
NEW

International Edition

SEELEY'S ESSENTIALS OF ANATOMY AND PHYSIOLOGY
7th Edition

By Cinnamon VanPutte, Southwestern Illinois College, Jennifer Regan, Jones County Jr College and Andrew F Russo, University of Iowa-Iowa City

2010 (February 2009) / 704 pages
ISBN: 9780077276195
ISBN: 9780071220064 [IE]
www.mhhe.com/seeleyess7

Designed for the one-semester course, Seeley’s Essentials of Anatomy and Physiology is written to allow instructors the ability to accomplish one overall goal: to teach the basics of A&P while fostering the skill of problem solving. Through learning how to solve problems and think critically, students learn A&P based on two themes: the relationship between structure and function, and homeostasis.

NEW TO THIS EDITION

- Improved Art- The effectiveness of the art has been improved in several ways in this edition with the overall goal of clarifying the teaching point of each revised illustration.
- Homeostasis Figures have been markedly improved by adding visual representations of key anatomical references and simplifying the arrows and text. A "Start Here" icon and color-coded arrows make it easier to follow the events occurring when a variable increases or decreases. These simplified flow charts succinctly map out key homeostatic events, giving students a quick and effective summary of the mechanisms described in the text.
- The Process Figures have been fine-tuned by adding numbered circles to the explanations within the art, allowing students to make easier correlations to each important step within the illustration. Process Figures provide well-organized, self-contained visual explanations of how physiological mechanisms work. They help students learn physiological processes by combining illustrations with parallel descriptions of the major features of each process.
- Numerous changes to improve consistency and clarification were also made to art pieces.
- "Diseases and Disorders" Tables – Short, beneficial descriptions of various system disorders can now be found in an easy-to-use table placed conveniently in appropriate chapters. Clinical material like these tables is a hallmark of this text, and combined with the “Case in Point” boxes, the “Clinical Impact” readings, the “Systems Pathology” material, and the unique “Predict” questions, helps students bridge the two worlds of academia and their future allied health careers.
- Refined and Updated Textual Copy- The authors have used their own, and read other’s, research and papers to stay on top of new discoveries relevant to the field of anatomy and physiology. They’ve also used reviews from instructors who teach the course to keep in touch with the various challenges facing professors today. Finally, a developmental copyeditor was brought into the early stages of the revision to ensure the quality, accuracy, and consistency of the text. Some examples of this attention to detail follow:
- Many explanations have been rewritten or expanded to make topics easier for students to understand.
- By using examples students can relate to, many explanations have been made clearer.
- Terminology has been made more consistent throughout both the text and the illustrations.
- New information applicable to the discipline has been researched and included where appropriate.
- Factual data has been checked and updated, or corrected, if necessary.

CONTENTS
1 Human Organism
2 Chemical Basis of Life
3 Cell Structures and Their Functions
4 Tissues, Glands, and Membranes
5 Integumentary System
6 Skeletal System: Bones and Joints
7 Muscular System
8 Nervous System
9 Senses
10 Endocrine System
11 Blood
12 Heart
13 Blood Vessels and Circulation
14 Lymphatic System and Immunity
15 Respiratory System
16 Digestive System
17 Nutrition, Metabolism, and Body Temperature Regulation
18 Urinary System and Fluid Balance
19 Reproductive System
20 Development, Heredity, and Aging Appendixes A Table of Measurements B Some Reference Laboratory Values C Solution Concentrations D Answers to Critical Thinking Questions
ANATOMY & PHYSIOLOGY

International Edition

HOLE’S ESSENTIALS OF HUMAN ANATOMY & PHYSIOLOGY
10th Edition
By David N. Shier, Washtenaw Community College, Jackie I. Butler, Grayson County College and Ricki Lewis, Contributing Editor, “The Scientist”
2009 (January 2008)
ISBN: 9780077221355
ISBN: 9780071271219 [IE]
http://www.mhhe.com/shieress10

Designed for the one-semester anatomy and physiology course, Hole’s Essentials of Human Anatomy and Physiology assumes no prior science knowledge and supports core topics with clinical applications, making difficult concepts relevant to students pursuing careers in the allied health field. The unparalleled teaching system is highly effective in providing students with a solid understanding of the important concepts in anatomy and physiology.

CONTENTS

Unit 1 Levels of Organization
1 Introduction to Human Anatomy and Physiology
2 Chemical Basis of Life
3 Cells
4 Cellular Metabolism
5 Tissues

Unit 2 Support and Movement
6 Integumentary System
7 Skeletal System
8 Muscular System

Unit 3 Integration and Coordination
9 Nervous System
10 The Senses
11 Endocrine System

Unit 4 Transport
12 Blood
13 Cardiovascular System
14 Lymphatic System and Immunity

Unit 5 Absorption and Excretion
15 Digestion and Nutrition
16 Respiratory System
17 Urinary System
18 Water, Electrolyte, and Acid-Base Balance

Unit 6 The Human Life Cycle
19 Reproductive Systems
20 Pregnancy, Growth, and Development

NEW

ANATOMY & PHYSIOLOGY
LABORATORY TEXTBOOK
Essentials Version,
5th Edition
By Stanley E Gunstream, Pasadena City College
2010 (February 2009)
ISBN: 9780077283766
www.mhhe.com/labcentral

Gunstream’s manual presents the fundamentals of human anatomy and physiology in an easy-to-read manner appropriate for allied health students. Designed especially for a one-semester course, the Essentials Version features a concise writing style, 37 self-directing exercises, full-color photomicrographs in the Histology Atlas, and numerous illustrations in each exercise.

NEW TO THIS EDITION

- The art program has been substantially improved with new illustrations and, in addition, many existing figures have been upgraded.
- The text and laboratory reports have been rewritten to correlate with the figure changes. These improvements will enhance clarity and student understanding.
- Instructors have a choice of two popular computer-based laboratory systems to investigate muscle physiology. Exercise 20 The Physiology of Muscle Contraction Using the BIOPAC Student Lab System has been designed for those using the BIOPAC system. Exercise 21 The Physiology of Muscle Contraction Using the Intelitool Physiogrip has been updated for those using the Intelitool system. Both of these exercises guide the student through the computer protocols so they may focus on the physiology of muscle contraction.
- Exercise 37 The Endocrine Glands has been reorganized with a reduction in the histology figures. Expanded coverage now includes thymosin and T-cell maturation, calcitonin and parathyroid hormone maintaining calcium balance, and adrenal sex steroids.
- In Exercise 28 The Heart, coverage now includes coronary arteries and veins so students will have a better understanding of heart circulation as it relates to clinical situations.

CONTENTS

Part 1 Fundamentals
1 Introduction to Human Anatomy
2 Body Organization
3 The Microscope
4 Cell Anatomy
5 Mitotic Cell Division
6 Diffusion and Osmosis
7 Epithelial and Connective Tissues
8 The Integument

Part 2 The Skeletal System
9 The Skeletal Plan

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Website: www.mheducation.asia
10 The Skull
11 The Vertebral Column and Thorax
12 The Appendicular Skeleton
13 Articulations

Part 3 The Muscle System
14 Muscle Organization and Body Movements
15 Head and Trunk Muscles
16 Muscles of the Upper Limb
17 Muscles of the Lower Limb
18 Muscle and Nerve Tissues
19 The Nature of Muscle Contraction
20 The Physiology of Muscle Contraction: Using the BIOPAC Student Lab System
21 The Physiology of Muscle Contraction: Using the Intelitool Physiogrip (TM)

Part 4 The Nervous System
22 The Spinal Cord and Reflex Arcs
23 Brain Anatomy: External
24 Brain Anatomy: Internal
25 The Eye
26 The Ear

Part 5 The Circulatory System
27 Blood Tests
28 The Heart
29 Blood Vessels, Fetal Circulation, and Lymphatic System
30 Cardiovascular Phenomena

Part 6 The Respiratory System
31 The Respiratory Organs
32 Respiratory Physiology

Part 7 The Digestive System
33 The Digestive Organs
34 Digestion

Part 8 The Urinary System
35 The Urinary Organs
36 Urine and Urinalysis

Part 9 The Endocrine and Reproductive Systems
37 The Endocrine Glands
38 The Reproductive Organs

Appendices

Welcome to Anatomy and Physiology Laboratory
Histology Mini-reference
The Basics
1 The Microscope
2 Cell Anatomy
3 Transport through Cell Membranes
4 The Cell’s Life Cycle
5 Epithelial Tissue
6 Connective Tissue
7 Muscle and Nerve Tissue
8 Organization of the Body Support and Movement
9 The Skin
10 Overview of the Skeleton
11 The Skull
12 The Vertebral Column and Thoracic Cage
13 The Appendicular Skeleton
14 Joints
15 Organization of the Muscular System
16 Muscle Identification
17 Muscular Contractions Integration and Control
18 Nerves and Reflexes
19 The Spinal Cord and Spinal Nerves
20 The Brain and Cranial Nerves
21 The Eye and Vision
22 The Ear, Hearing, and Equilibrium
23 Endocrine Glands
24 Hormones Regulation and Maintenance
25 Blood
26 Structure of the Heart
27 Electrical Activity of the Heart
28 The Pulse and Blood Pressure
29 The Circulatory Pathway
30 The Lymphatic System and Immunity

LABORATORY MANUAL ESSENTIALS OF ANATOMY & PHYSIOLOGY
7th Edition

By Kevin T Patton, Saint Charles Community College

2010 (February 2009)
ISBN: 9780077283759

Kevin Patton divides the lab activities typically covered in A&P lab into 42 subunits, allowing instructors the flexibility to choose the units and sequence that integrates with lecture material. Basic content is introduced first, and gradually more complex activities are developed. Features include procedure check lists, coloring exercises, boxed hints, safety alerts, separate lab reports, and a full-color histology mini-reference.
ANATOMY & PHYSIOLOGY

LABORATORY MANUAL TO ACCOMPANY
HOLE’S ESSENTIALS OF HUMAN ANATOMY & PHYSIOLOGY
10th Edition
By Terry R. Martin, Kishwaukee College
2009 (February 2008) / 384 pages
ISBN: 9780072965674

This full-color manual is designed for students with minimal back-grounds in science who are pursuing careers in allied health fields. Designed to support the tenth edition of Hole’s Essentials of Human A&P by Shier, Butler, and Lewis, this manual contains 49 laboratory exercises and reports, which are integrated closely to the textbook. Exercises are planned to illustrate and review the anatomical and physiological facts and principles presented in the text and to help students investigate some of these ideas in greater detail.

CONTENTS

Fundamentals of Human Anatomy and Physiology
1 Scientific Method and Measurements
2 Body Organization and Terminology
3 Chemistry of Life
4 Care and Use of the Microscope
5 Cells
6 Movements Through Cell Membranes
7 Cell Cycle

Tissues
8 Epithelial Tissues
9 Connective Tissues
10 Muscle and Nervous Tissues

Integumentary System
11 Integumentary System

Skeletal System
12 Bone Structure
13 Organization of the Skeleton
14 Skull
15 Vertebral Column and Thoracic Cage
16 Pectoral Girdle and Upper Limb
17 Pelvic Girdle and Lower Limb
18 Joint Structure and Movements

Muscular System
19 Skeletal Muscle Structure
20 Muscles of the Face, Head, and Neck
21 Muscles of the Chest, Shoulder, and Upper Limb
22 Muscles of the Abdominal Wall and Pelvic Outlet
23 Muscles of the Hip and Lower Limb
24 Surface Anatomy

Nervous System
25 Nervous Tissue and Nerves
26 Spinal Cord and Meninges
27 Reflex Arc and Reflexes
28 Brain and Cranial Nerves
29 Dissection of the Sheep Brain

Special Senses
30 Ear and Hearing
31 Eye Structure
32 Visual Tests and Demonstrations

Endocrine System
33 Endocrine Histology and Diabetic Physiology

Cardiovascular System
34 Blood Cells and Blood Typing
35 Heart Structure
36 Cardiac Cycle
37 Blood Vessel Structure, Arteries, and Veins
38 Pulse Rate and Blood Pressure

Lymphatic System
39 Lymphatic System

Digestive System
40 Digestive Organs
41 Action of a Digestive Enzyme

Respiratory System
42 Respiratory Organs
43 Breathing and Respiratory Volumes and Capacities

Urinary System
44 Kidney Structure
45 Urinalysis

Reproductive System
46 Male Reproductive System
47 Female Reproductive System
48 Genetics

*Supplemental Laboratory Exercise
49 Blood Testing—A Demonstration (this lab is available on the Shier text website at aris.mhhe.com)

Appendix 1 Preparation of Solutions
Appendix 2 Assessments of Laboratory Reports

Two-Semester Anatomy & Physiology - Textbooks

SEELEY’S ANATOMY AND PHYSIOLOGY
9th Edition
By Cinnamon VanPutte, Southwestern Illinois College, Jennifer Regan, University of Southern Mississippi and Andrew F Russo, University of Iowa-Iowa City
2011 (January 2010)
ISBN: 9780077350031
ISBN: 9780071222105 [IE]
www.mhhe.com/seeley9

This text is designed to help students develop a solid, basic understanding of anatomy and physiology without an encyclopedic presentation of detail. Great care has been taken to select important concepts and to perfectly describe the anatomy of cells, organs, and organ systems. The plan that has been followed for nine editions of this popular text is to combine clear and accurate descriptions of anatomy with precise explanations of how structures function and examples of how they work together to maintain life. To emphasize the concepts of anatomy and physiology, the authors provide explanations of how the systems respond to aging, changes in physical activity, and disease, with a special focus on homeostasis and the regulatory mechanisms that maintain it. This text has more clinical content than any other A&P book on the market.

NEW TO THIS EDITION

★ New Author Team Joins Rod Seeley: Three authors (contributors on the eighth edition) have taken the lead on this revision. They bring a fresh, modern perspective and insights on cutting-edge research while maintaining the hallmarks of this popular textbook. Rod Seeley remains involved in updating the problem-solving learning system.

★ Learning Outcomes and Assessment: Carefully written to clearly outline expectations and testing comprehension, the Learning Outcomes and Assess Your Progress questions will assist instructors with
measuring standards for their A & P course and also help students gain the most they can from their textbook.

- CONNECT - the future in online course management is here!
- Fundamental Figures: Integrated with special CONNECT assets.
- Predict One and Predict Answer
- Homeostasis Figures
- Reorganization and Enhancement of Chapter 17: One of two Endocrine chapters, Chapter 17, has been reorganized so that the hormones are grouped by chemical make-up, allowing the student to follow the content in a more logical fashion.
- Other significant changes:
  - Process Figures
  - Diseases and Disorders Tables
  - Clinical Impact Readings

CONTENTS
Part 1 Organization of the Human Body
1 The Human Organism
2 The Chemical Basis of Life
3 Cell Biology and Genetics
4 Histology: The Study of Tissues
Part 2 Support and Movement
5 Integumentary System
6 Skeletal System: Bones and Bone Tissue
7 Skeletal System: Gross Anatomy
8 Articulations and Movement
9 Muscular System: Histology and Physiology
10 Muscular System: Gross Anatomy
Part 3 Integration and Control Systems
11 Functional Organization of Nervous Tissue
12 Spinal Cord and Spinal Nerves
13 Brain and Cranial Nerves
14 Integration of Nervous System Functions
15 The Special Senses
16 Autonomic Nervous System
17 Functional Organization of the Endocrine System
18 Endocrine Glands
Part 4 Regulations and Maintenance
19 Cardiovascular System: Blood
20 Cardiovascular System: The Heart
21 Cardiovascular System: Peripheral Circulation and Regulation
22 Lymphatic System and Immunity
23 Respiratory System
24 Digestive System
25 Nutrition, Metabolism, and Temperature Regulation
26 Urinary System
27 Water, Electrolytes, and Acid-Base Balance
Part 5 Reproduction and Development
28 Reproductive System
29 Development, Growth, and Aging
Appendix A Periodic Table
Appendix B Scientific Notation
Appendix C Solution Concentrations
Appendix D pH
Appendix E Answers to Review and Comprehension Questions
Appendix F Answers to Critical Thinking Questions
Appendix G Answers to Predict Questions

Memorable stories must be effective in multiple ways. The story must paint a strong visual picture. The story must weave in tools to make the reader remember important events and understand their impact. Ken Saladin weaves graceful descriptions of human anatomy and physiology processes together with carefully selected clinical applications and fascinating stories from the history of medicine and evolutionary medicine to create a multi-layered story about the human body. A consistent set of chapter learning tools helps students identify and retain key concepts while the stunning visual program provides a realistic view of body structures and processes. The fifth edition is further improved by a complete integration of the text with extensive digital teaching and learning tools. Saladin’s text requires no prior knowledge of college chemistry or cell biology, and is designed for a two-semester A&P course.

NEW TO THIS EDITION
- Chapter 20, The Circulatory System: Blood Vessels and Circulation has been reorganized with a regional approach—a more logical approach for students.
- Busy instructors can take advantage of a prepared set of assignable activities and practice quizzes that support the chapter learning objectives.
- Dr. Saladin methodically updated each chapter of the fifth edition based on reviewer feedback, the most current reference publications, and published research.
- Saladin’s stunning visuals are paired with Anatomy & Physiology Revealed’s acclaimed cadaver dissection photos and integrated into dynamic PowerPoint lecture presentations with embedded animations. Instructors can use the presentations as is or insert select slides into their existing lecture presentations.

CONTENTS
Part 1 Organization of the Body
1 Major Themes of Anatomy and Physiology
2 Atlas A General Orientation to Human Anatomy
3 The Chemistry of Life
4 Cellular Form and Function
5 Genetics and Cellular Function
6 Histology
Part 2 Support and Movement
7 The Integumentary System
8 Bone Tissue
9 The Skeletal System
10 Joints
11 The Muscular System
Appendix B Surface Anatomy
12 Muscular Tissue
Part 3 Integration and Control
12 Nervous Tissue
13 The Spinal Cord, Spinal Nerves, and Somatic Reflexes
ANATOMY & PHYSIOLOGY

14 The Brain and Cranial Nerves
15 The Autonomic Nervous System and Visceral Reflexes
16 Sense Organs
17 The Endocrine System

Part 4 Regulation and Maintenance
18 The Circulatory System: Blood
19 The Circulatory System: The Heart
20 The Circulatory System: Blood Vessels and Circulation
21 The Lymphatic and Immune Systems
22 The Respiratory System
23 The Urinary System
24 Water, Electrolyte, and Acid-Base Balance
25 The Digestive System
26 Nutrition and Metabolism

Part 5 Reproduction and Development
27 The Male Reproductive System
28 The Female Reproductive System
29 Human Development

NEW

International Edition

HOLE’S HUMAN ANATOMY AND PHYSIOLOGY
12th Edition
By David N Shier, Washtenaw Community College, Jackie L Butler, Grayson County College and Ricki Lewis

2010 (January 2009) / 1056 pages
ISBN: 9780077276188
ISBN: 9780071220095 [IE]
http://www.mhhe.com/shier12

Hole’s Human Anatomy and Physiology was created for the introductory level student and assumes no prior science knowledge by placing emphasis on the fundamentals. This new edition updates a great A&P classic while offering greater efficiencies to the user. The format for the 12th edition focuses on Learning Outcomes and Assessments. This will benefit the student along with the instructor. The 12th edition of Hole also continues to offer technology that combined with the text offer users an incredible Course Solution! Technology like Anatomy and Physiology Revealed and the new online Homework Manager bring unprecedented opportunities to the classroom whether on campus or at home!

NEW TO THIS EDITION

- Learning Outcomes and Assessments – An Outcomes and Assessments format has been incorporated throughout the text. The chapter starts with a list of outcomes for instructors and students. Outcomes are then directly tied to assessments found at the end of the chapter.

- Ancillary Correlation Guide – The authors have created a valuable ancillary correlation guide that will be available online. The guide will be organized by Learning Outcome. It will let instructors know what media or ancillary is available to support each specific Learning Outcome.

- Test Bank questions are being revised by the authors and will be correlated by Learning Outcome.

- The Instructor’s Manual has been revised and will be correlated to specific Learning Outcomes.

CONTENTS

Unit One Levels of Organization
1 Introduction to Human Anatomy and Physiology
2 Chemical Basis of Life
3 Cells
4 Cellular Metabolism
5 Tissues

Unit Two Support and Movement
6 Integumentary System
7 Skeletal System
8 Joints of the Skeletal System
9 Muscular System

Unit Three Integration and Coordination
10 Nervous System I: Basic Structure and Function
11 Nervous System II: Divisions of the Nervous System
12 Nervous System III: Senses
13 Endocrine System

Unit Four Transport
14 Blood
15 Cardiovascular System
16 Lymphatic System and Immunity

Unit Five Absorption and Excretion
17 Digestive System
18 Nutrition and Metabolism
19 Respiratory System
20 Urinary System
21 Water, Electrolyte, and Acid-Base Balance

Unit Six The Human Life Cycle
22 Reproductive Systems
23 Pregnancy, Growth, and Development
24 Genetics and Genomics

International Edition

SEELEY’S PRINCIPLES OF ANATOMY & PHYSIOLOGY
By Philip Tate, Phoenix College, Rod Seeley and Trent D Stephens of Idaho State University

2009 (January 2008) / 928 pages
ISBN: 9780077226480
ISBN: 9780071284653 [IE]
http://www.mhhe.com/tate

This new textbook will compete in both the “slim” segment and the full two-semester market. It will be a briefer, less-expensive alternative for instructors who have always liked Seeley et al’s Anatomy and Physiology, but struggled with the depth of the textbook, covering all of the necessary basics of anatomy and physiology.

CONTENTS

1. The Human Organism
2. The Chemical Basis of Life
3. Cell Structures and Their Functions
4. Tissues, Glands, and Membranes
5. Integumentary System
6. Histology and Physiology of Bones
7. Anatomy of Bones and Joints
8. Histology and Physiology of Muscles
9. Gross Anatomy and Functions of Muscles
10. Functional Organization of Nervous Tissue
11. Peripheral and Central Nervous Systems
12. Integration of Sensory and Motor Functions
13. Autonomic Nervous System
14. Special Senses
15. Endocrine System
16. Blood
LABORATORY MANUAL TO ACCOMPANY SEELEY’S ANATOMY AND PHYSIOLOGY 9th Edition

By Eric Wise, Santa Barbara City College

2011 (January 2010)
ISBN: 9780073250748

NEW TO THIS EDITION

❖ New cat dissection photos
❖ New Ph.I.L.S. correlated exercises

CONTENTS
1. Organs, Systems, and Organization of the Body
2. Microscopy
3. Cell Structure and Function
4. Tissues
5. Integumentary System
6. Introduction to the Skeletal System
7. Appendicular Skeleton
8. Axial Skeleton: Vertebrae, Ribs, Sternum, Hyoid
9. Axial Skeleton: Skull
10. Articulations
11. Muscle Physiology
12. Introduction to the Study of Muscles and Muscles of the Shoulder and Upper Extremity
13. Muscles of the Hip, Thigh, Leg, and Foot
14. Muscles of the Head and Neck
15. Muscles of the Torso
16. Introduction to the Nervous System
17. Brain and Cranial Nerves
18. Spinal Cord and Somatic Nerves
19. Nervous System Physiology: Stimuli and Reflexes
20. Introduction to Sensory Receptors
21. Taste and Smell
22. Eye and Vision
23. Ear, Hearing, and Balance
24. Endocrine System
25. Blood
26. Blood Tests and Typing
27. Structure of the Heart
28. Electrical Conductivity of the Heart
29. Functions of the Heart
30. Introduction to Blood Vessels and Arteries of the Upper Body
31. Arteries of the Lower Body
32. Veins and Special Circulations
33. Function of Vessels and the Lymphatic System
34. Blood Vessels and Blood Pressure
35. Structure of the Respiratory System
36. Respiratory Function, Breathing, and Respiration
37. Physiology of Exercise and Pulmonary Health
38. Anatomy of the Digestive System
39. Digestive Physiology
40. Anatomy of the Urinary System
41. Urinalysis
42. Male Reproductive System
43. Female Reproductive System
Appendix A Measurement Conversions
Appendix B Preparation of Materials
Appendix C Lab Reports
Index

LABORATORY MANUAL FOR HUMAN ANATOMY & PHYSIOLOGY Cat Version with PhILS 3.0 CD

By Terry R Martin, Kishwaukee College

2010 (January 2009)
ISBN: 9780077274351

http://www.mhhe.com/martinseries1

Author Terry Martin’s thirty years of teaching anatomy and physiology courses, authorship of three laboratory manuals, and active involvement in the Human Anatomy and Physiology Society (HAPS) drove his determination to create a lab manual with an innovative approach that would benefit students. Laboratory Manual for Human Anatomy and Physiology includes a cat version and a fetal pig version. Each of these versions includes sixty-one laboratory exercises, supplemental labs found online, and six cat or fetal pig dissection labs. The Main Version contains no dissection exercises. All three versions are written to work well with any anatomy and physiology text.

FEATURES

❖ In Touch with Students
Pre-lab preparation is included at the very beginning of the laboratory exercise so students are prepared to start lab procedures immediately. After students complete the pre-lab and answer the questions, the laboratory procedures will be easier to follow and understand.

The procedures are clear, concise, and easy to follow. Relevant lists and summary tables present the contents efficiently. Histology micrographs and cadaver photos are incorporated in the appropriate locations within the associated labs.

❖ In Touch with Instructor Needs
Each laboratory exercise can be completed during a single laboratory session. An annotated instructor’s guide is provided online. Also online, the instructor will find digital assets for use in creating customized lectures, visually enhanced tests and quizzes, and other printed support material.
In Touch with Educational Needs

Learning outcomes are listed to enable students to accomplish the assessments provided within each laboratory exercise and laboratory report. Students and instructors will be able to assess if the purpose of the laboratory exercise is accomplished and understood.

In Touch with Technology

Technology is integrated throughout the laboratory manual. Four BIOPAC labs on different body systems are included for enrichment. Physiology Interactive Lab Simulations (Ph.I.L.S.) is packaged with the laboratory manual and incorporated in eleven of the laboratory exercises and reports.

- Histology incorporated throughout where appropriate.
- BIOPAC® exercises included.
- Labeling exercises throughout lab – not just in lab report.
- Stand alone – can go with any text book.
- Pre-Lab questions provided on lab manual’s website.
- Exercises appropriate size for one lab session.
- Cadaver images from APR.
- Annotated instructor’s manual provided online.
- Universal terminology utilizing Terminologia Anatomica.
- Correlation guides available for Ph.I.L.S. 3.0 and Anatomy and Physiology Revealed.
- Clear, concise writing style.
- Outstanding artwork.
- Unique labs include “Scientific Method and Measurements”, “Chemistry of Life”, “Fetal Skeleton”, “Surface Anatomy”, “Diabetic Physiology”, and “Genetics”.
- Ph.I.L.S. 3.0 exercises are incorporated throughout the lab manual where they are appropriate.
- The cat reference plates are incorporated within the appropriate system of dissection. All cat dissection figures are in full color.
- Incorporates outcomes and assessments with matching icons for each laboratory exercise.

CONTENTS

Fundamentals of Human Anatomy and Physiology
1 Scientific Method and Measurements
2 Body Organization, Membranes, and Terminology
3 Chemistry of Life
4 Care and Use of the Microscope

Cells
5 Cell Structure and Function (Ph.I.L.S. 3.0 #2 Size and Basal Metabolic Rate)
6 Movements Through Cell Membranes (Ph.I.L.S. 3.0 #1 Varying Extracellular Concentration)
7 Cell Cycle

Tissues
8 Epithelial Tissues
9 Connective Tissues
10 Muscle and Nervous Tissues
Integumentary System
11 Integumentary System

Skeletal System
12 Bone Structure and Classification
13 Organization of the Skeleton
14 Skull
15 Vertebral Column and Thoracic Cage
16 Pectoral Girdle and Upper Limb
17 Pelvic Girdle and Lower Limb
18 Fetal Skeleton
19 Joint Structure and Movements
Muscular System
20 Skeletal Muscle Structure and Function (Ph.I.L.S. 3.0 #4 Stimulus-Dependent Force Generation)
21 Electromyography: BIOPAC Exercise
22 Muscles of the Head and Neck
23 Muscles of the Chest, Shoulder, and Upper Limb
24 Muscles of the Deep Back, Abdominal Wall, and Pelvic Outlet
25 Muscles of the Hip and Lower Limb

Surface Anatomy

26 Surface Anatomy

Nervous System
27 Nervous Tissue and Nerves
28 Spinal Cord and Meninges
29 Reflex Arc and Reflexes
30 Brain and Cranial Nerves
31 Electroencephalography: BIOPAC Exercise
32 Dissection of the Sheep Brain
General and Special Senses
33 General Senses
34 Smell and Taste
35 Eye Structure
36 Visual Tests and Demonstrations
37 Ear and Hearing
38 Equilibrium

Endocrine System
39 Endocrine Structure and Function (Ph.I.L.S. 3.0 #17 Thyroid Gland and Metabolic Rate)
40 Diabetic Physiology

Cardiovascular System
41 Blood Cells
42 Blood Testing (Ph.I.L.S. 3.0 #31 pH & Hb-Oxygen Binding)
43 Blood Typing
44 Heart Structure
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S-3 Factors Affecting the Cardiac Cycle (Ph.I.L.S. 3.0 #18 Thermal and Chemical Effects)
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ANATOMY & PHYSIOLOGY

LABORATORY MANUAL FOR HUMAN ANATOMY & PHYSIOLOGY
Pig Version with PhILS 3.0 CD

By Terry R Martin, Kishwaukee College

2010 (January 2009)
ISBN: 9780077274368
http://www.mhhe.com/martinseries1

Terry Martin, author of the best-selling laboratory manuals to accompany the Hole’s Human Anatomy & Physiology texts, has written a new stand alone laboratory manual. This series of laboratory manuals (main – no dissection, cat dissection, and fetal pig dissection) will incorporate Terry’s clear, concise writing style. They are not associated with any text so can be used with any anatomy and physiology text. The artwork and photos will be second to none. It will also come with a Ph.I.L.S. 3.0 CD-Rom.

FEATURES
- Versions Available: Main, Cat, Fetal Pig
- The cat reference plates are incorporated within the appropriate system of dissection. All cat dissection figures are in full color.
- Incorporates outcomes and assessments with matching icons for each laboratory exercise.
- Clear, concise writing style.
- Outstanding artwork – utilized a lot of artwork from Saladin.
- CD-Rom Included: Ph.I.L.S. 3.0
- Ph.I.L.S. 3.0 exercises are incorporated throughout the lab manual where they are appropriate.
- Histology incorporated throughout where appropriate.
- BIOPAC® exercises included.
- Introductory text concise and appropriate for lab.
- Labeling exercises throughout lab – not just in lab report.
- Stand alone – can go with any text book.
- Pre-Lab questions provided on lab manual’s website.
- Exercises appropriate size for one lab session.
- Cadaver images from APR.
- Lab manuals digital assets will be available online.
- Annotated instructor’s manual provided online.
- Scientific Methods & Measurements lab included.
- Chemistry of Life lab included.
- Complete Fetal Skeleton lab included.
- Diabetic Physiology lab included.
- Universal terminology utilizing Terminologia Anatomica.
- Sample assessment rubrics for laboratory reports are in an appendix.
- Lab Cam videos available on website.

- The following exercises are available online, giving instructors the option of continuing to use live specimens in these experiments if desired: Skeletal Muscle Contractions, Nerve Impulse Simulation, Factors Affecting the Cardiac Cycle.
- Correlation guides available for Ph.I.L.S. 3.0 and Anatomy and Physiology Revealed.

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- S-3 Factors Affecting the Cardiac Cycle (Ph.I.L.S. 3.0 #18 Thermal and Chemical Effects)

**Appendix 1 Preparation of Solutions**

**Appendix 2 Anatomy & Physiology Revealed (correlation to laboratory exercises)**

**Appendix 3 Ph.I.L.S. Physiology Interactive Lab Simulations (correlation to laboratory exercises)**

**Appendix 4 Assessments of Laboratory Reports**

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**Features**

- In Touch with Students
- Pre-lab preparation is included at the very beginning of the laboratory exercise so students are prepared to start lab procedures immediately. After students complete the pre-lab and answer the questions, the laboratory procedures will be easier to follow and understand.

- The procedures are clear, concise, and easy to follow. Relevant lists and summary tables present the contents efficiently. Histology micrographs and cadaver photos are incorporated in the appropriate locations within the associated labs.

- In Touch with Instructor Needs
- Each laboratory exercise can be completed during a single laboratory session. An annotated instructor’s guide is provided online. Also online, the instructor will find digital assets for use in creating customized lectures, visually enhanced tests and quizzes, and other printed support materials.

- In Touch with Educational Needs
- Learning outcomes are listed to enable students to accomplish the assessments provided within each laboratory exercise and laboratory report. Students and instructors will be able to assess if the purpose of the laboratory exercise is accomplished and understood.

- In Touch with Technology
- Technology is integrated throughout the laboratory manual. Four BIOPAC labs on different body systems are included for enrichment. Physiology Interactive Lab Simulations (Ph.I.L.S.) is packaged with the laboratory manual and incorporated in eleven of the laboratory exercises and reports.
  - Histology incorporated throughout where appropriate.
  - BIOPAC® exercises included.
  - Labeling exercises throughout lab – not just in lab report.
  - Stand alone – can go with any text book.
  - Pre-Lab questions provided on lab manual’s website.
  - Exercises appropriate size for one lab session.
  - Cadaver images from APR.
  - Annotated instructor’s manual provided online.
  - Universal terminology utilizing Terminologia Anatomica.
  - Correlation guides available for Ph.I.L.S. 3.0 and Anatomy and Physiology Revealed.
  - Clear, concise writing style.
  - Outstanding artwork.
  - Unique labs include “Scientific Method and Measurements”, “Chemistry of Life”, “Fetal Skeleton”, “Surface Anatomy”, “Diabetic Physiology”, and “Genetics”.

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Appendix 3 Correlation of Laboratory Exercises and Ph.I.L.S. 3.0
Lab Simulations

NEW TO THIS EDITION

- An Outcomes and Assessments format has been incorporated throughout the lab manual. The exercise starts with a list of outcomes for instructors and students. Outcomes are then directly tied to assessments.
- A new Exercise 24: Surface Anatomy has been added based upon feedback from current users and reviews.
- The following exercise has been moved to the text web site, giving instructors the option of using the exercise or not: Blood Testing.

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ANATOMY & PHYSIOLOGY

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INVITATION TO PUBLISH

McGraw-Hill is interested in reviewing textbook proposal for publication. Please contact your local McGraw-Hill office or email to asiapub@mcgraw-hill.com

Visit McGraw-Hill Education (Asia) Website: www.mheducation.asia

NEW

LABORATORY MANUAL
HOLE’S HUMAN A&P
Fetal Pig, 12th Edition

By Terry R. Martin, Kishwaukee College

2010 (February 2009)
ISBN: 9780077231453

www.mhhe.com/labcentral

This best-selling Laboratory Manual, written by Terry R. Martin, has been updated throughout. The new 12th edition is now available in a Cat version or a Fetal Pig version. Both versions of the 12th edition are organized into units that correlate directly with the text and include new and updated art to match Hole’s Human Anatomy and Physiology, 12e.

NEW TO THIS EDITION

- An Outcomes and Assessments format has been incorporated throughout the lab manual. The exercise starts with a list of outcomes for instructors and students. Outcomes are then directly tied to assessments.
- A new Exercise 24: Surface Anatomy has been added based upon feedback from current users and reviews.
- The following exercise has been moved to the text website, giving instructors the option of using the exercise or not: Blood Testing.
- Instructors can download Instructor’s Manual and other materials at: www.mhhe.com/labcentral

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Surface Anatomy
ANATOMY & PHYSIOLOGY

NEW

LABORATORY MANUAL TO ACCOMPANY ANATOMY & PHYSIOLOGY
The Unity of Form and Function, 5th Edition
By Eric Wise, Santa Barbara City College

2010 (February 2009)
ISBN: 9780077283797
www.mhhe.com/labcentral

This manual (utilizing the cat as the primary dissection specimen) uses the same four-color art program as the fifth edition of Saladin’s Anatomy & Physiology and follows the same order of presentation. The 47 exercises provide a comprehensive overview of the human body and present the core elements of the subject matter.

NEW TO THIS EDITION
- The fifth edition includes many new and revised illustrations and photographs. Several photographs in the manual have been enlarged and enhanced to show better detail and consistency. This is particularly true regarding the photographs of cat dissections. The artwork and the photographs in the fifth edition were carefully matched not only for visual comparisons but also for terminology as well.
- Appendix D has been added to include common prefixes, suffixes, and root words commonly used in the anatomy and physiology course.
- Instructors can download Instructors Manual's and other materials at: www.mhhe.com/labcentral
- Exercise 1 now includes an introduction to lab science and chemistry and has retained its section on measurement.

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32. Veins and Special Circulations
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ANATOMY & PHYSIOLOGY REVEALED CD-ROM
(ALLIED HEALTH VERSION)
By Medical College of Ohio
2009 (September 2008)
ISBN: 9780073378312
Anatomy & Physiology Revealed is the ultimate interactive cadaver dissection experience. This state-of-the-art program uses cadaver photos combined with a layering technique that allows the student to peel away layers of the human body to reveal structures beneath the surface. Anatomy & Physiology Revealed also offers animations, histologic and radiologic imaging, audio pronunciations, and a comprehensive quizzing tool. It can be used as part of any one or two semester undergraduate anatomy & physiology or human anatomy course; it is available as a stand-alone or can be combined with any of McGraw-Hill's Anatomy & Physiology textbooks.

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ANATOMY & PHYSIOLOGY REVEALED VERSION 2.0 ONLINE
By Medical College of Ohio
2009 (January 2008)
ISBN: 9780073378039
www.aprevealed.com
Anatomy & Physiology Revealed is the ultimate interactive cadaver dissection experience. This state-of-the-art program uses cadaver photos combined with a layering technique that allows the student to peel away layers of the human body to reveal structures beneath the surface. Anatomy & Physiology Revealed also offers animations, histologic and radiologic imaging, audio pronunciations, and a comprehensive quizzing tool. It can be used as part of any one or two semester undergraduate anatomy & physiology or human anatomy course; it is available as a stand-alone or can be combined with any of McGraw-Hill's Anatomy & Physiology textbooks.

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STUDENT ACCESS CARD PH.I.L.S (PHYSIOLOGY INTERACTIVE LAB SIMULATIONS) ONLINE
By Phillip Stephens, Villanova University
2009 (September 2008)
ISBN: 9780073349329
www.mhhe.com/phils
Ordering this ISBN will give you online access to the product-specific site where you’ll find study and self-testing tools. Created by Dr. Phil Stephens at Villanova University, the Ph.I.L.S (physiology interactive lab simulations) offers 37 laboratory simulations. This revolutionary learning tool may be used to supplement or substitute for wet labs. Students can use Ph.I.L.S. to adjust variables, view outcomes, make predictions, and draw conclusions. This easy-to-use software offers each student the flexibility to change the parameters of the lab experiment. There is no limit to the amount of times a student can repeat the experiment or change variables within the experiments. Ph.I.L.S. allows students to perform experiments without having to use expensive lab equipment (like Biopac, IWORX or Intellitool). Students can work individually to perform the experiments on their own time without harming themselves or live animals. Ph.I.L.S. is the perfect way reinforce key Physiology concepts with powerful lab experiments.

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12. Action Potentials and Refractory Periods
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Synaptic Potentials
14. Facilitation & Depression
15. Temporal Summation of EPSPs
16. Spatial Summation of EPSPs
Endocrine Function
17. Thyroid Gland and Metabolic Rate
NEW TO THIS EDITION

- Most of former “Atlas A” from previous editions has been rolled into chapter 1, making it a fully self-contained introduction to the foundational knowledge needed throughout the study of anatomy. Chapter 1 has been extensively reorganized and now includes information about general anatomical terms, regions, cavities, membranes, and body systems.
- A new question set titled “Building Your Medical Vocabulary” has been added at the end of each chapter. These questions are intended to encourage students to learn familiar word roots, which will lead to success in many courses related to careers in health professions.
- A number of pedagogical changes have been made to address the increasing trend toward assessment-driven teaching and instructor and institutional accountability.

- The main sections in each chapter are now numbered, making it more convenient to reference book sections when building assignments. Ancillary material is organized around this section numbering system.
- To make students take a more active role in their learning, the end-of-chapter summary (now called “Study Guide”) has been converted from a summative format to an indicative format. The Study Guide acts as a review of the concepts students should know, instead of acting “cliff’s notes” that could be substituted for reading the full chapter.

- The following features have been renamed to better coincide with the emphasis on learning outcomes: “Objectives” are now “Expected Learning Outcomes”; “Review of Key Concepts” is now “Assess Your Learning Outcomes”; “Chapter Review” is now “Study Guide”; “Think About It” is now “Apply What You Know”.

- Ken Saladin has carefully evaluated content coverage throughout the book and pared back sections that included too much detail for the undergraduate level or too much physiology for the 1-semester anatomy course. This content “pruning,” combined with Ken’s careful word-smithing to make each passage as clear and concise as possible, has resulted in an overall reduction in book length.

- CONNECT: the future in online course management is here!
- Instructors can deliver assignments, quizzes, and tests easily online
- Students have 24/7 online access to an eBook
- Instructors can deliver assignments, quizzes, and tests easily online
- Online study assets are specifically tied to every illustration in the textbook
- Study-on-the-Fly downloadable art and audio files for students

HUMAN ANATOMY
3rd Edition
By Kenneth S Saladin, Georgia College and State University
2011 (January 2010)
ISBN: 9780077349998
ISBN: 9780071222075 [IE]
http://www.mhhe.com/saladinha3

Read it: Ken Saladin explains human anatomy in an engaging, yet efficient way. He puts a premium on the words, and uses student-relevant analogies to motivate the reader.

See it: Saladin’s collection of illustrations and photos are carefully chosen to support the text discussion. Vibrant and realistic presentations engage students.

Master it: With Connect and A&P Revealed, students can practice and improve their understanding of concepts.

From the most pedagogically sound organization to the exceptional art, to the integration of text with technology, Saladin has formed a teaching system that will both motivate and enable students to understand and appreciate the wonders of human anatomy. This distinctive text was developed to stand apart from all other anatomy texts with an approach borne out of more than 30 years of teaching, unparalleled art, and a writing style that has been acclaimed by reviewers. Designed for a one-semester college anatomy course, Saladin requires no prior knowledge of chemistry or cell biology.
International Edition

HUMAN ANATOMY

2nd Edition
By Michael McKinley, Glendale Community College and Valerie O'Loughlin, Indiana University-Bloomington
2008 (October 2007)
ISBN: 9780077213404
ISBN: 9780071283205 [IE]
http://www.mhhe.com/mckinley2

With its unrivaled art program and accessible writing style, McKinley/O'Loughlin's Human Anatomy stands apart from other anatomy texts. High-quality photographs paired with brilliantly rendered illustrations help students visualize, understand, and appreciate the wonders of human anatomy. Student-friendly Study Tips, Clinical View boxes, and progressive question sets motivate students to internalize and apply what they've learned. The second edition has been refined based on reviewer feedback to offer an even stronger version of this highly acclaimed textbook.

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International Edition

HUMAN ANATOMY

6th Edition
By Kent Van De Graaff, Weber State University
2002
ISBN: 9780072486650 (Mandatory Package) - Out of Print
ISBN: 9780071122849 [IE]
www.mhhe.com/vdg

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22 Developmental Anatomy, Postnatal Growth, and Inheritance Appendix A Answers to Objective Questions with Explanations

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New to this Edition

- Chapter One contains five new clinical boxes, including osteoporosis, achondroplasia and osteoarthritis, text and art revisions.
- Chapter Two contains five new clinical boxes, including spina bifida and cervical spondylitis, as well as new text on terminology and costal articulations.
- Chapter Three contains nine new clinical boxes, including hyperparathyroidism, radial head subluxation (Nursemaid’s elbow) and Colles fracture, as well as updated artwork on the bones of the forearm and the wrist joint.
- Chapter Four has eleven new clinical boxes, including congenital hip dysplasia, diabetic neuropathy and thrombophlebitis; it also includes revised terminology in regard to certain leg muscles, and contains updated artwork.
- Chapter Five contains five new clinical boxes and new text on the hyolaryngeal muscles.
- Chapter Six has four new clinical boxes and revision to artwork on the tongue musculature.
- Chapter Seven contains six new clinical boxes, including encephalitis, gigantism and acromegaly, and bell’s Palsy, as well as a new exercise box pertaining to the cranial nerves.
- Chapter Eight contains four new clinical boxes and revised artwork on the inner ear.
- Chapter Nine has seven new clinical boxes, including pericarditis/cardiac tamponade, Wolff-Parkinson-White Syndrome and metastasizing breast cancer, together with updated artwork on the movement of the ribs during respiration and on coronary vasculature.
- Chapter Ten has thirteen new clinical boxes, including peritonitis, volvulus, pyloric stenosis, diverticulosis/diverticulitis, gallstones, cirrhosis and hypertension, new text pertaining to the gonadal arteries, and new artwork on the abdominal muscles.
- Chapter Eleven contains nine new clinical boxes, including varicoceles, benign prostatic hyperplasia and prostate cancer, episiotomy, endometriosis, and pudendal nerve block.
LABORATORY MANUAL TO ACCOMPANY SALADIN’S HUMAN ANATOMY
3rd Edition
By Eric Wise, Santa Barbara City College
2011 (January 2010) / 480 pages
ISBN: 9780073250526

This laboratory manual is expressly written to coincide with the chapters of Human Anatomy, 3/e by Kenneth Saladin. This lab manual has clear explanations of anatomy experiments. Other features include a set of review questions at the end of each lab, plus numerous outstanding color photographs and artwork.

CONTENTS
1. Organs, Systems, and Organization of the Body
2. Microscopy
3. Cell Structure
4. Tissues
5. The Integumentary System
6. Introduction to the Skeletal System
7. Appendicular Skeleton
8. Axial Skeleton: Vertebras, Ribs, Sternum, Hyoid
9. Axial Skeleton: Skull
10. Articulations
11. Introduction to the Study of Muscles and Muscles of the Shoulder and Upper Extremity
12. Muscles of the Hip, Thigh, Leg, and Foot
13. Muscles of the Head and Neck
14. Muscles of the Trunk
15. Introduction to the Nervous System
16. Brain and Cranial Nerves
17. Spinal Cord and Somatic Nerves
18. Introduction to Sensory Receptors
19. The Endocrine System
20. Blood Cells
21. The Heart
22. Introduction to the Blood Vessels and Arteries of the Upper Body
23. Arteries of the Lower Body
24. Veins and Special Circulations
25. The Respiratory System
26. The Digestive System
27. The Urinary System
28. The Male Reproductive System
29. The Female Reproductive System and Development CAT
ANATOMY Appendix: Preparation of Materials

WORKBOOK TO ACCOMPANY ANATOMY & PHYSIOLOGY REVEALED VERSION 2 CD
By Robert Broyles, Butler County Community College
2009 (January 2008) / 480 pages
ISBN: 9780073378145

The Workbook to Accompany Anatomy and Physiology Revealed, Version 2 by Robert Broyles is a workbook/study guide designed to help students get the most they can out of the Anatomy and Physiology Revealed (APR), and out of their anatomy and physiology course. The Table of Contents closely follows both the new DVD set and the online adaptation, and is organized along the lines of a typical Anatomy and Physiology course. The individual exercises include art from APR and also have review questions, tables, coloring exercises, terminology quiz questions, and reminders on key content.

CONTENTS
Chapter 1: Introduction: Becoming Familiar with Anatomy and Physiology Revealed
Chapter 2: Histology (Detailed information to come)
Chapter 3: The Integumentary System (Detailed information to come)
Chapter 4: The Skeletal System with Articulations (Detailed information on articulations to come)
Chapter 5: The Muscular System
Chapter 6: The Nervous System
Chapter 7: The Cardiovascular System
Chapter 8: The Lymphatic System
Chapter 9: The Respiratory System
Chapter 10: The Digestive System
Chapter 11: The Urinary System
Chapter 12: The Reproductive System
Chapter 13: The Endocrine System

LABORATORY ATLAS OF ANATOMY & PHYSIOLOGY
6th Edition
By Douglas J Eder, University of North Florida
2009 (June 2008) / 192 pages
ISBN: 9780073525679

This full-color atlas is intended to effectively supplement the A&P laboratory course and aid students in their studies. Eder’s high-quality visuals, in combination with its unique tables, make it a valuable supplement in any lab course. Tables include terms and definitions as well as descriptions of the origin, insertion, action, and innervation of muscles. This atlas illustrates the dissection structures as they actually exist, so students will be able to easily recognize the parts when they are dissecting or taking an exam.

CONTENTS
Chapter 1: Histology
Chapter 2: Human Skeletal Anatomy
Chapter 3: Human Muscular Anatomy
Chapter 4: Dissections
Chapter 5: Specialized Organs
Chapter 6: Reference Tables
The 6th edition includes changes reflecting modern understanding, terminology and teaching of the musculoskeletal system. There are changes on 42 different pages including many new or enhanced notes on function and 20 new descriptions or explanations of anatomical relationships.

**Contents**

Chapter 1: The Skeleton
Chapter 2: Movements of the Body
Chapter 3: Muscles of the Face and Head
Chapter 4: Muscles of the Neck
Chapter 5: Muscles of the Trunk
Chapter 6: Muscles of the Shoulder and Arm
Chapter 7: Muscles of the Forearm and Hand
Chapter 8: Muscles of the Hip and Thigh
Chapter 9: Muscles of the Leg and Foot

ANATOMY & PHYSIOLOGY REVEALED

**Version 2.0 Online**

By Medical College of Ohio

2009 (January 2008)

ISBN: 9780073378039

www.aprevealed.com

Anatomy & Physiology Revealed is the ultimate interactive cadaver dissection experience. This state-of-the-art program uses cadaver photos combined with a layering technique that allows the student to peel away layers of the human body to reveal structures beneath the surface. Anatomy & Physiology Revealed also offers animations, histologic and radiologic imaging, audio pronunciations, and a comprehensive quizzing tool. It can be used as part of any one or two semester undergraduate anatomy & physiology or human anatomy course; it is available as a stand-alone or can be combined with any of McGraw-Hill’s Anatomy & Physiology textbooks.

**Contents**

Integumentary System
Skeletal System
Muscular System
Nervous System
Endocrine System
Cardiovascular System
Respiratory System
Lymphatic System
Digestive System
Urinary System
Reproductive System

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Human Physiology - Textbooks

**ANATOMY & PHYSIOLOGY**

**International Edition**

**HUMAN PHYSIOLOGY**

*By Stuart Ira Fox, Los Angeles Pierce CLG*

*2009 (October 2008) / 832 pages*

ISBN: 9780077265878

ISBN: 9780071281065 [IE]

http://www.mhhe.com/fox11

Clear explanations and a solid learning framework have been market tested and refined. Fox helps students master the fundamentals by providing appropriate anatomical detail. Human Physiology, Eleventh Edition, is intended for the one-semester Human Physiology course often taken by allied health and biology students. The beginning chapters introduce basic chemical and biological concepts to provide students with the framework they need to comprehend physiological principles. The chapters that follow promote conceptual understanding rather than rote memorization of facts. Health applications are included throughout the book to heighten interest, deepen understanding of physiological concepts, and help students relate the material to their individual career goals. Every effort has been made to help students integrate related concepts and understand the relationships between anatomical structures and their functions.

**CONTENTS**

1. The Study of Body Function
2. Chemical Composition of the Body
3. Cell Structure and Genetic Control
4. Enzymes and Energy
5. Cell Respiration and Metabolism
6. Interactions Between Cells and the Extracellular Environment
7. The Nervous System: Neurons and Synapses
8. The Central Nervous System
9. The Autonomic Nervous System
10. Sensory Physiology
11. Endocrine Glands: Secretion and Action of Hormones
12. Muscle: Mechanisms of Contraction and Neural Control
13. Blood, Heart and Circulation
14. Cardio Output, Blood Flow, and Blood Pressure
15. The Immune System
16. Respiratory Physiology
17. Physiology of the Kidneys
18. The Digestive System
19. Regulation of Metabolism
20. Reproduction

**International Edition**

**FUNDAMENTALS OF HUMAN PHYSIOLOGY**

*By Stuart Ira Fox, Los Angeles Pierce CLG*

*2009 (January 2008)*

ISBN: 9780077226250

ISBN: 9780071270373 [IE]

http://www.mhhe.com/foxfundamentals

Fundamentals of Human Physiology was conceived to meet the needs of students and professors struggling with the complexity and depth of the larger, more detailed human physiology textbooks currently available. In addition to being more concise and focusing on the basics of human physiology, this text is smaller in physical size, allowing for a cheaper, easier choice for instructors.

**CONTENTS**

1. Introduction to Human Physiology
2. From Cells to Systems
3. Interactions Between Cells and Their Environment
4. Nervous System: Neurons and Synapses
5. Central Nervous System
6. Peripheral Nervous System
7. Sensory System
8. Endocrine System
9. Muscle Physiology
10. Blood and Circulation
11. The Immune System
12. The Lungs, Gas Transport, and Acid/Base Balance
13. The Kidneys and Urinary System
14. The Digestive System
15. The Reproductive System

Appendix 1: Calculations of chemical concentrations.
Appendix 2: Pathways of cell respiration.
Appendix 3: Mathematical concepts of selected topics in physiology.
Appendix 4: Answers to multiple choice questions.

**International Edition**

**VANDER'S HUMAN PHYSIOLOGY**

*The Mechanisms of Body Function with ARIS, 11th Edition*

*By Eric P Widmaier, Boston University, Hershel Raff, Medical College of Wisconsin and Kevin T Strang, University of Wisconsin Madison*

*2008 (November 2007)*

ISBN: 9780077216092

ISBN: 9780071283663 [IE]

http://www.mhhe.com/widmaier11e

Eric Widmaier (Boston University), Hershel Raff (Medical College of Wisconsin), and Kevin Strang (University of Wisconsin Madison) have taken on the challenge of maintaining the strengths and reputation of Vander’s Human Physiology: The Mechanisms of Body Function. Moving beyond the listing of mere facts, it stressed the causal chains of events that constitute the mechanisms of body function. The fundamental purpose of this textbook is to present the principles and facts of human physiology in a format that is suitable for undergraduates regardless of academic background or field of study. Vander’s Human Physiology, eleventh edition, carries on the tradition of clarity and accuracy, while refining and updating the content to meet the needs of today’s instructors and students. The eleventh edition features a streamlined, clinically oriented focus to the study of human body systems. It has also responded to reviewer requests for more clinical applications. Chapter 19 is new and contains three complete case studies. Physiology inquiries have also been added to many figures throughout the chapters. These critical-thinking questions are just one more opportunity to add to the student’s learning experience.

**CONTENTS**

Homeostasis: A Framework for Human Physiology
Chemical Composition of the Body
Cellular structure, proteins, and Metabolism
Movement of Molecules Across Cell Membranes
Control of Cells by Chemical Messengers
Neuronal Signaling and the Structure of the Nervous System
Sensory Physiology
Consciousness, the Brain, and Behavior
Muscle
Control of Body Movement
The Endocrine System
Cardiovascular Physiology
Respiratory Physiology
The Kidneys and Regulation of Water and Inorganic Ions
ANATOMY & PHYSIOLOGY REVEALED
VERSION 2.0 ONLINE
By Medical College of Ohio
2009 (January 2008)
ISBN: 9780073378039
www.aprevealed.com

Anatomy & Physiology Revealed is the ultimate interactive cadaver dissection experience. This state-of-the-art program uses cadaver photos combined with a layering technique that allows the student to peel away layers of the human body to reveal structures beneath the surface. Anatomy & Physiology Revealed also offers animations, histologic and radiologic imaging, audio pronunciations, and a comprehensive quizzing tool. It can be used as part of any one or two semester undergraduate anatomy & physiology or human anatomy course; it is available as a stand-alone or can be combined with any of McGraw-Hill’s Anatomy & Physiology textbooks.

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Respiratory System
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Urinary System
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PH.L.I.S (PHYSIOLOGY INTERACTIVE LAB SIMULATIONS) 3.0 24 MONTH STUDENT ONLINE ACCESS CARD
By Phillip J Stephens, Villanova University
2009 (September 2008)
ISBN: 9780073349329
www.mhhe.com/phils

Ph.I.L.S. (Physiology Interactive Lab Simulations) software is the perfect way to reinforce key physiology concepts with powerful lab experiments. Created by Dr. Phil Stephens of Villanova University, this online or CD program offers 37 self-contained laboratory simulations that may be used either to supplement or replace wet labs. Ph.I.L.S. allows students to perform experiments according to their own schedules, without risk of harm to themselves or live animals, and also without having to use expensive lab equipment (like Biopac, IWORX or Intellitool). Students can adjust variables, view outcomes, make predictions, draw conclusions, quiz themselves, and print lab reports. There is no limit to the number of times students can repeat each exercise, and the results differ every time the student changes the variables.

CONTENTS
Osmosis and Diffusion
1. Varying Extracellular Concentration
Metabolism
2. Size and Basal Metabolic Rate
3. Cyanide and Electron Transport
Skeletal Muscle Function
4. Stimulus Dependent Force Generation
5. The Length-Tension Relationship
6. Principles of Summation and Tetanus
7. EMG and Twitch Amplitude
Resting Potentials
8. Resting Potential and External Potassium Concentration
9. Resting Potential and External Sodium Concentration
Action Potentials
10. The Compound Action Potential
11. Conduction Velocity and Temperature
12. Action Potentials and Refractory Periods
13. Measuring Ion Currents
Synaptic Potentials
14. Facilitation & Depression
15. Temporal Summation of EPSPs
16. Spatial Summation of EPSPs
Endocrine Function
17. Thyroid Gland and Metabolic Rate
Frog Heart Function
18. Thyroid and Chemical Effects
19. Refractory Period of the Heart
20. Starling’s Law of the Heart
21. Heart Block
ECG and Heart Function
22. ECG and Exercise
23. The Meaning of Heart Sounds
24. ECG and Finger Pulse
25. Electrical Axis of the Heart
26. ECG and Heart Block
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29. Blood Pressure and Gravity
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Blood
31. pH & Hb-oxygen Binding
32. DPG & Hb-oxygen Binding
Respiration
33. Altering Body Position
34. Altering Airway Volume
35. Exercise-Induced Changes
36. Deep Breathing and Cardiac Function
Digestion
37. Glucose Transport

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20. Endocrine Glands: Pituitary Gland (Hypophysis) / Adrenal Glands / Pancreatic Islets / Diffuse Neuroendocrine System / Thyroid Gland / Parathyroid Gland / Pineal Gland
21. The Male Reproductive System: Testes / Intratesticular Ducts / Excretory Genital Ducts / Accessory Glands / Penis
22. The Female Reproductive System: Ovaries / Uterine Tubes / Uterus / Vagina / Mammary Glands
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SCHAUM'S OUTLINE OF HUMAN ANATOMY AND PHYSIOLOGY
3rd Edition
By Kent Van De Graaff, R. Ward Rhees, Brigham Young University and Sidney L. Palmer
2010 (August 2009) / 432 pages
ISBN: 9780071623308
A Schaum's Publication
Schaum’s Outline of Human Anatomy and Physiology provides a systematic review of anatomy and physiology with clear and concise explanations, accompanied by numerous exercises that help you learn and test yourself. The revised edition will include comprehensive review of the human body’s cellular chemistry and structure, tissues, systems, immunity, and reproduction process.

CONTENTS
1. Introduction to the Human Body
2. Cellular Chemistry
3. Cell Structure and Function
4. Tissues
5. Integumentary System
6. Skeletal System
7. Muscle Tissue and Mode of Contraction
8. Muscular System
9. Nervous Tissue
10. Central Nervous System
11. Peripheral and Autonomic Nervous System
12. Sensory Organs
13. Endocrine System
14. Cardiovascular System: Blood
15. Cardiovascular System: The Heart
16. Cardiovascular System: Vessels and Blood Circulation
17. Lymphatic System and Body Immunity
18. Respiratory System
19. Digestive System
20. Metabolism, Nutrition, and Temperature Regulation
21. Urinary System
22. Water and Electrolyte Balance
23. Reproductive System

SCHAUM'S EASY OUTLINE OF HUMAN ANATOMY AND PHYSIOLOGY
By Kent M. Van De Graaff, Weber State University and R. Ward Rhees, Brigham Young University—Provo
2001 / 160 pages
ISBN: 9780071369763
A Schaum's Publication
http://doi.contentdirections.com
What could be better than the bestselling Schaum’s Outline series? For students looking for a quick nuts-and-bolts overview, it would have to be Schaum’s Easy Outline series. Every book in this series is a pared-down, simplified, and tightly focused version of its predecessor. With an emphasis on clarity and brevity, each new title features a streamlined and updated format and the absolute essence of the subject, presented in a concise and readily understandable form. Graphic elements such as sidebars, reader-alert icons, and boxed highlights stress selected points from the text, illuminate keys to learning, and give students quick pointers to the essentials.

- Designed to appeal to underprepared students and readers turned off by dense text
- Cartoons, sidebars, icons, and other graphic pointers get the material across fast
- Concise text focuses on the essence of the subject
- Delivers expert help from teachers who are authorities in their fields
- Perfect for last-minute test preparation
- So small and light that they fit in a backpack!

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Textbook

NEW

International Edition

THE LIVING WORLD
6th Edition

By George B Johnson and Jonathan Losos, Washington University-St Louis

2010 (January 2009) / 832 pages
ISBN: 9780077280086
ISBN: 9780070167773 [IE]

The Living World is often considered a student favorite. George Johnson has written this non-majors textbook from the ground up to be an engaging and accessible learning tool with an emphasis on “how things work and why things happen the way they do”. The Living World focuses on concepts rather than terminology and technical information, and features a straightforward, clear writing style and a wide variety of media assets to enhance the content of the textbook.

NEW TO THIS EDITION

- Art Tie-Ins -- Throughout the text, descriptions of the art have been incorporated into the textual discussion, encouraging the students to look at the art as they are reading the textual descriptions. In many cases, the artwork has been revised to make these art tie-ins in the text clearer and more meaningful. A numbering system has been placed within the figures allowing the text to guide the student through particular areas of a figure.

- Inquiry and Analysis -- This new feature appears at the end of all chapters and is intended to help students with developing their skills in analyzing and interpreting data.

- The author provides a 2-page discussion on the presentation of data in Chapter 1, introducing the students to the concepts of variables, relationships between variables, and presentation of data in various types of graphs. To reinforce this concept, the Inquiry and Analysis sections present the student with experimental data and help them analyze the data with a set of questions that walks them through the data.

- New Boxed Readings! -- The addition of boxes readings in the previous edition (i.e. Author’s Corner, Science in Action and A Closer Look) were very well received, so additional topics have been added.

- UPDATED TEXT WEBSITE! -- McGraw-Hill’s ARIS - Assessment, Review, and Instruction System for The Living World, 5/e is a complete electronic homework and course management system. Instructors can create and share course materials and assignments with colleagues with a few clicks of the mouse. Instructors can edit questions and algorithms, import their own content, and create announcements and due dates for assignments. ARIS has automatic grading and reporting of easy-to-assign algorithmically generated homework, quizzing, and testing. Once a student is registered in the course, all student activity within McGraw-Hill’s ARIS is automatically recorded and available to the instructor through a fully integrated grade book that can be downloaded to Excel. Contact your local McGraw-Hill Publisher’s representative for more information on getting started with ARIS.

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Chapter 2 Evolution and Ecology

Part 2 The Living Cell
Chapter 3 The Chemistry of Life
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Chapter 5 Cells
Chapter 6 Energy and Life
Chapter 7 Photosynthesis: Acquiring Energy from the Sun
Chapter 8 How Cells Harvest Energy from Food

Part 3 The Continuity of Life
Chapter 9 Mitosis
Chapter 10 Meiosis
Chapter 11 Foundations of Genetics
Chapter 12 DNA: The Genetic Material
Chapter 13 How Genes Work

Part 4 The New Biology
Chapter 14 Gene Technology
Chapter 15 Genomics

Part 5 The Evolution and Diversity of Life
Chapter 17 Evolution and Natural Selection
Chapter 18 How We Name Living Things
Chapter 19 The First Single-Celled Creatures
Chapter 20 Advent of the Eukaryotes
Chapter 21 Fungi Invade the Land

Part 6 Plant Life
Chapter 22 Evolution of Plants
Chapter 23 Plant Form and Function
Chapter 24 Plant Reproduction and Growth

Part 7 Evolution of Animal Life
Chapter 25 Evolution of the Animal Phyla
Chapter 26 History of the Vertebrates
Chapter 27 How Humans Evolved

Part 8 Animal Life
Chapter 28 The Animal Body and How It Moves
Chapter 29 Circulation
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Chapter 31 The Path of Food Through the Animal Body
Chapter 32 Maintaining the Internal Environment
Chapter 33 How the Body Defends Itself
Chapter 34 The Nervous System
Chapter 35 Chemical Signaling Within the Animal Body
Chapter 36 Reproduction and Development

Part 9 The Living Environment
Chapter 37 Ecosystems
Chapter 38 Populations and Communities
Chapter 39 Behavior and the Environment
Chapter 40 Planet Under Stress
A student favorite, this engaging text, now presented with a new single column format, is rich with student-oriented applications and illustrations that drive the learning. Written from scratch to be an appealing and accessible learning tool with an emphasis on “how things work and why things happen the way they do”, this Essentials text features a straightforward, clear writing style with ample use of analogies to help students relate new material to familiar things. NEW digital assets for the 3rd edition include high interest video clips and animations of key biological concepts.

NEW TO THIS EDITION
- New more accessible design
- Linking to Related Topics. Link arrows point a student to an earlier place in the text where an important related concept or finding has been discussed.
- Chapter Zero
- Updated Content;
  - p. 210 RNA Interference,
  - p. 449 Ethanol and Biofuels,
  - p. 138 Curing Cancer,
  - P. 233 Transforming Adult Tissue Cells into Embryonic-like Stem Cells.
- Inquiry & Analysis Boxed Features

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27 Maintaining the Internal Environment
28 How the Body Defends Itself
29 The Nervous System
30 Chemical Signaling Within the Animal Body
31 Reproduction and Development
32 Plant Form and Function
33 Plant Reproduction and Growth

Essentials of Biology is an introductory biology text for non-major students that combines Dr. Sylvia Mader’s superb and accessible writing style with clear visuals, a comprehensive learning system, and abundant supplements. Essentials of Biology explains the principles of biology clearly and illustrates them in a captivating, easy-to-understand manner. It emphasizes the relevance of biology to students’ lives within a framework of biodiversity and is organized around the major concepts of biology—cells theory, gene theory, evolution, the theory of homeostasis, and ecosystems. The three key features of Essentials of Biology include:

1. Dr. Sylvia Mader’s succint, precise writing style. Sylvia’s writing is what has earned her a reputation as one of the most successful introductory biology textbook author ever, and it is what will be most compelling in this text.
2. A comprehensive learning system to help students get the most out of each chapter’s text content and an incredible instructional visual program.
3. Our package would not be complete without our robust media technology package with quality animations, digitized videos, OLC, and student interactive CD-ROM.

Each chapter features numerous pedagogical tools that are carefully developed to help students grasp challenging concepts. These include:
- A numbered outline at the beginning of each chapter with accompanying concept statements for the main topics in each chapter.
- Check Your Progress questions and answers at the end of each major heading within the chapter to help students assess their understanding of the previous section.
- The boldface terms in each chapter are page referenced in an Understanding the Terms list at the end of the chapter, and a matching exercise allows students to test their knowledge of the terms.
- A Thinking Scientifically section at the end of each chapter gives students the opportunity to use critical thinking skills to respond to scientific questions.
- The Bioethical Issue at the end of each chapter briefly discusses a controversial issue confronting society and poses questions to help students fully consider the issue and arrive at an opinion.
- Numbered summary at the end of the chapter to help students review.
- Testing Yourself objective questions at the end of the chapter to help students prepare for the test.

NEW TO THIS EDITION

- THE AUTHOR STORY: Sylvia Mader is the subject matter expert and learning system architect in one. Dr. Mader represents the student by paging the book and striking the proper balance of art, photo, text, and application. • Sylvia has taught millions of non-majors students the language of biology. • Her teaching experience at Mass Bay CC is what led Sylvia to making the time to design her text layout specifically to the non-majors market.
- MADER HALLMARK WRITING STYLE-Each chapter features numerous learning aids that are carefully developed to help students grasp challenging concepts. Examples include:
  • A numbered outline at the beginning of each chapter with accompanying concept statements for the main topics in each chapter.
  • Check Your Progress questions and answers at the end of each major heading within the chapter to help students assess their understanding of the previous section.
  • Testing Yourself questions at the end of the chapter to help students prepare for the test.
  • The boldface terms in each chapter are page referenced in an Understanding the Terms list at the end of the chapter, and a matching exercise allows students to test their knowledge of the terms.
  • A Thinking Scientifically section at the end of each chapter gives students the opportunity to use critical thinking skills to respond to scientific questions.
  • The Bioethical Issue at the end of each chapter briefly discusses a controversial issue confronting society and poses questions to help students fully consider the issue and arrive at an informed opinion.

Feature: Dynamic Art Program. The art in Essentials of Biology is presented in several different formats: Multilevel perspective art that provides macroscopic and microscopic views to help orient students; combination art that pairs the clarity of line drawings with the realism of micrographs; and process art that breaks down complex processes into smaller steps. In addition, consistent use of color throughout the entire art program helps students focus on the content rather than being distracted by the color.

A comprehensive learning system Every chapter begins with a list of key concepts that will be covered in the chapter, and Check Your Progress questions are presented throughout the chapter so students can periodically assess their understanding of those concepts. The chapter is summarized using text and figures, and questions of varying levels of difficulty are provided at the end of each chapter to help students gauge their cumulative understanding of the material.

Applications to Real Life Each chapter opens with several captivating photos and an accompanying brief vignette that relates to students' lives.

Bioethical Issues The Bioethical Issue at the end of each chapter briefly discusses a controversial issue confronting society and poses questions to help students fully consider the issue and arrive at an opinion.

- Short, cost efficient paperbound text
- Outstanding media study tools for students.
- The Online Learning Center (OLC) provides study aids such as chapter quizzes, art exercises, flashcards, case studies, and access to an online tutor.

- The quizzes and other tutorial exercises from the OLC, as well as animations of key biological processes, are on the Student Interactive CD.

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27 The Control Systems
28 Sensory Input and Motor Output
29 Reproduction and Development
Part 7 Ecology
30 Ecology of Populations
31 Communities and Ecosystems
32 Human Impact on the Biosphere

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Website: www.mheducation.asia
Basic biological concepts and processes with a human emphasis. From the unique delivery of biology content, to the time tested art program, to the complete integration of the text with technology, Dr. Sylvia Mader has formed a teaching system that will both motivate and enable your students to understand and appreciate the wonders of all areas of biology. Inquiry into Life, 13/e emphasizes the application of all areas of biology to knowledge of human concerns, what the students are able to relate to. This distinctive text was developed to stand apart from all other non-majors texts with a unique approach, unparalleled art, and a straightforward, succinct writing style that has been acclaimed by both users and reviewers.

NEW TO THIS EDITION

- More Critical Thinking Emphasis -- Discussion questions have been provided at the end of each “Focus” boxed reading and at the end of each chapter. Is it important that your students be able to apply what they’ve learned to real-life applications? Do you think this better prepares them for the future?
- Integrated Disease Coverage -- More human disease coverage will be integrated throughout the text. Each of the systems chapter will have a new Disease and Disorder section.
- An Emphasis on the Scientific Process -- The introductory chapter begins with a new and expanded explanation of the scientific process. New art contributes to this expanded coverage; Science Focus readings occur throughout the text. These readings discuss recent biological research in the area under discussion.
- Enhanced Art Program -- The content and clarity of the art program within Inquiry Into Life have always been a hallmark of the text. Great care has been taken to maintain this high standard in making this revision. Vibrant colors and added dimension have been put into place to help create an even more beneficial art program.
- Content Revised Throughout -- Content has been revised throughout the book by contributing experts in the field.
- eInstruction questions are available with this project and can be found on the A.R.I.S. site. eInstruction is a wireless student response system that allows for the ultimate in classroom participation, giving you immediate feedback from every student.

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1 The Study of Life
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5 Cell Division
6 Metabolism: Energy and Enzymes
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8 Photosynthesis
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International Edition

BIOLOGY

Concepts and Investigations
By Marielle Hoefnagel, University of Oklahoma-Norman
2009 (January 2008)
ISBN: 9780073342528
ISBN: 9780071270434 [IE]
http://www.mhhe.com/hoefnagel

This new non-majors biology textbook offers an engaging writing style, strong focus on scientific inquiry and evolution, an emphasis on applications and a superior pedagogical system within a concepts format.

Content: This text takes a concepts approach, with up-to-date content delivered at a nonmajors level. Each chapter is built around a set of core concepts.

Authorship: This is the only single-authored, non-majors text written by a Ph.D. biologist, who is an active, tenured, award-winning teacher from a well-respected research university.

Scientific Inquiry: This text emphasizes science as a process and how scientists do their work.

Evolution: Evolution is the central theme of the text and addressed in multiple way throughout.

Media: This text includes a multitude of media assets include learning outcomes, animations, videos, and quizzing.

Applications: The text several features that highlight the relevance of topics to readers, including an opening essays, Burning Questions boxed readings, Can You Relate boxed readings, and applications woven throughout all chapters in the narrative.

Art/Visuals: This text includes a brand new art program with a 3-dimensional look and feel, using consistent color and style throughout.

Pedagogy: Learning tools in this text include two-page chapter openers, numbered concepts, boxed readings, Mastering Concepts questions at the end of major sections, and substantive end-of-chapter assessment material.
BIOLOGY

4th Edition

By Bruce Knox (Deceased), Pauline Ladiges and Barbara Evans of University of Melbourne and Robert Saint, Australian National University

2009 (October 2009)
ISBN: 9780070274402
McGraw-Hill Australia Title

www.mhhe.com/knox4e

Biology: An Australian Focus is the only local ground-up introductory text. Now in its fourth edition, the text has been written by our region’s leading academic scientists. The unique nature of Australian and New Zealand flora, fauna and ecosystems is integrated into discussion and exploration of the general principles and topics of introductory biology.

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International Edition

CONCEPTS OF BIOLOGY

By Sylvia S Mader

2009 (January 2008)
ISBN: 9780077229979
ISBN: 9780071283151 [IE]

http://www.mhhe.com/maderconcepts

Instructors consistently ask for a textbook that helps students understand the relationships between the main concepts of biology, so they are not learning facts about biology in isolation. Mader’s Concepts of Biology was developed to fill this void. Organized around the main themes of biology, Concepts of Biology guides students to think conceptually about biology and the world around them. Just as the levels of biological organization flow from one level to the next, themes and topics in Concepts of Biology are tied to one another throughout the chapter, and between the chapters and parts. Combined with Dr. Mader’s hallmark writing style, exceptional art program, and pedagogical framework, difficult concepts become easier to understand and visualize, allowing students to focus on understanding how the concepts are related.

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Chapter 1: Biology is the Study of Life
Part I: Organisms are Composed of Cells
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Chapter 4: Structure and Function of Cells
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Chapter 6: Pathways of Cellular Respiration
Part II: Genes Control the Traits of Organisms
Chapter 8: Cell Division and Reproduction
Chapter 9: Patterns of Genetic Inheritance
Chapter 10: Molecular Biology of Inheritance
Chapter 11: Regulation of Gene Activity
Chapter 12: Biotechnology and Genomics
Part III: Organisms are Related and Adapted to their Environment
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Chapter 23: Regulation of Growth and Responses in Plants
Chapter 24: Reproduction and Development of Plants
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6 provides an introduction to energy, enzymes, and metabolism. It includes added material on ribozymes and a novel section at the end of the chapter that describes the important topic of how cells recycle the building blocks of their organic macromolecules.

- Chapter 7. Cellular Respiration, Fermentation, and Secondary Metabolism: In the second edition, Chapter 7 is now divided into three sections called Cellular Respiration in the Presence of Oxygen, Anaerobic Respiration and Fermentation, and Mitosis and Meiosis.

- Chapter 15. The Eukaryotic Cell Cycle, Mitosis, and Meiosis: This chapter now begins with a section on the eukaryotic cell cycle, which was in Chapter 9 of the first edition. This new organization allows students to connect how the cell cycle is related to mitosis and meiosis. Also, a new Genomes and Proteomes Connection on cytokinesis has also been added which explains new information on how cells divide.

- Chapter 16. Simple Patterns of Inheritance: To make the topics stand out better for students, this chapter has been subdivided into six sections entitled Mendel’s Laws of Inheritance, The Chromosome Theory of Inheritance, Pedigree Analysis of Human Traits, Sex Chromosomes and X-Linked Inheritance Patterns, Variations in Inheritance Patterns and Their Molecular Basis, and Genetics and Probability.

- Chapter 21. Genomes, Proteomes, and Bioinformatics: This chapter has been updated with the newest information regarding genome sequences. Students are introduced to the NCBI website, and a collaborative problem at the end of the chapter asks the students to identify a mystery gene sequence using the BLAST program.

- Chapter 23. An Introduction to Evolution: To help the students make connections between genes and traits, newly discovered examples, such as the role of allelic differences in the Igf2 gene among dog breeds, have been added.

- Chapter 26. Taxonomy and Systematics: The chapter begins with a modern description of taxonomy that divides eukaryotes into eight supergroups. To make each topic easier to follow, the chapter is now subdivided into five sections entitled Taxonomy, Phylogenetic Trees, Cladistics, Molecular Clocks, and Horizontal Gene Transfer.

- Chapter 33. The Invertebrates: With the huge number of invertebrate species and the medical importance of many, a new Genomes and Proteomes Connection discusses DNA barcoding, which may allow for rapid classification of species. The taxonomy of the annelids, arthropods and chordates has been updated.

- Chapter 60. Biodiversity and Conservation Biology: The link between biodiversity and ecosystem function has been underscored by better explaining Tilman’s field experiments. The chapter also provides a new section on climate change as a cause of species extinction and loss of biodiversity. A new discussion of bioremediation has been provided in the restoration ecology section.

- Outstanding Media
  - Connect
    - * Enhanced Image and Lecture PPT
    - * New Animations
    - * Active Learning Exercises
  - Learn
    - * Engaging, Interactive Questions and Activities
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3 The Chemical Basis of Life II: Organic Molecules

Unit 2 Cell
4 General Features of Cells
This edition continues the evolution of Raven & Johnson’s Biology. The author team is committed to continually improving the text, keeping the student and learning foremost. We have integrated new pedagogical features to guide the student through the learning process. This latest edition of the text maintains the clear, accessible, and engaging writing style of past editions with the solid framework of pedagogy that highlights an emphasis on evolution and scientific inquiry that have made this a leading textbook for students majoring in biology. This emphasis on the organizing power of evolution is combined with an integration of the importance of cellular, molecular biology and genomics to offer our readers a text that is student friendly and current.

NEW TO THIS EDITION

❖ Committed to Students

New pedagogical features to guide student learning
- Each chapter begins with an outline of the chapter.
- Learning outcomes are included for every major topic to help students see the forest for the trees and focus on the main concepts and relationships of the details being presented to them.
- Scientific Thinking illustrations are highlighted and provide students with questions, as well as a hypothesis, prediction, observation, experiment, etc., as appropriate to guide their thought process and teach them to think like a scientist.
- Inquiry questions are found throughout the text to push the students further in their ability to think scientifically.
- Learning outcomes are revisited with a short review prior to moving on to the next major topic.
- A logically organized summary is available at the end of each chapter for students to use as a quick study tool.
- End of chapter review questions include Understanding, Applying, and Synthesizing levels.

❖ Committed to Biology Educators

The dynamic author team comprised of Jonathan Losos, Evolutionary Biologist at Harvard University, Ken Mason, Molecular Biologist at University of Iowa, and Susan Singer, Plant Geneticist, Carleton College, have joined forces to move this high-quality textbook forward in a significant way for a new generation of students. All three authors have extensive experience teaching undergraduate biology and have used this knowledge as a guide in producing a text that is up-to-date, beautifully illustrated, and pedagogically sound for the student. They have provided clear, explicit learning objectives, and more closely integrate the text with its media support materials to provide instructors with an excellent complement to their teaching.

❖ Committed to Today’s Learning Environment
- Connect
- Learn
- Succeed

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BIOLOGY

10th Edition

By Sylvia S Mader

2010 (January 2009)
ISBN: 9780077274337
ISBN: 9780071288866 [IE]

www.mhhe.com/maderbiology10

Biology is a comprehensive introductory biology textbook for non-majors or mixed-majors courses that covers biology in a traditional order from the structure and function of the cell to the organization of the biosphere. The book, which centers on the evolution and diversity of organisms, is appropriate for a one- or two-semester course. It's not an accident that Sylvia Mader’s Biology continues to be a text that's appreciated as much by instructors as it is by the students who use it. The ninth edition is the epitome of Mader’s expertise: Its concise, succinctly and clearly as possible, thereby enabling students -- even non-majors -- to understand the concepts without necessarily asking the instructor to explain further.

NEW TO THIS EDITION

- THE MADER AUTHOR STORY• Sylvia Mader is the subject matter expert and learning system architect in one. Dr. Mader represents the student by paging the book and striking the proper balance of art, photo, text, and application. • Sylvia has taught millions of non-majors the language of biology. • Her teaching experience at Mass Bay CC is what led Sylvia to making the time to design her text layout specifically to the non-majors market.

- Phonetic pronunciations have been added to the Glossary.

- KEY CONTENT UPDATES - These are based on reviewer suggestions and biological discoveries: Overview of Change to Biology, Tenth Edition

  - Visuals: The brilliant visual program of the previous edition is enhanced even more by the addition many new micrographs and innovative page layouts.

  - Cellular Biology: Cell signaling receives expanded coverage as a mechanism of cellular metabolism and cell division control.

  - Genetics: Reorganization of the genetics chapters results in increased genome coverage including the role of small RNA molecules in regulation

  - Systematics: Cladistics is better explained and new evolutionary trees are presented for protists, plants, and animals.

  - Evolution: A new chapter “Speciation and Microevolution” points to the possible role of Hox genes in punctuated evolution.

  - Plant Evolution: A reorganization of chapter 23 better describes the evolution of plants from an aquatic green algal ancestor.

  - Animal Evolution: Reorganization of part VI results in two new animal diversity chapters: the invertebrates and the vertebrates.

  - Approximately 70 animations of key biological processes accompany Biology 10e. Approximately 50 of these animations are available in a Spanish version.

  - McGraw-Hill's Biology Digitized Video Clips DVD. Licensed from some of the highest-quality science video producers in the world, these brief segments range from 15 seconds to two minutes in length and cover all areas of general biology from cells to ecosystems.

- All text, artwork, and photos necessary to understand a particular concept (e.g., prokaryotic vs. eukaryotic replication) appear either on the same page or facing pages.

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44 Population Ecology
45 Community and Ecosystem Ecology
46 Major Ecosystems of the Biosphere
47 Conservation of Biodiversity
The lead author of eight successful previous editions has brought together a team that combined, has well over 60 years experience in offering beginning biology labs to several thousand students each year at Iowa State University. Their experience and diverse backgrounds assure that this extensively revised edition will meet the needs of a new generation of students. Designed to be used with all majors-level general biology textbooks, the included labs are investigative, using both discovery- and hypothesis-based science methods. Students experimentally investigate topics, observe structure, use critical thinking skills to predict and test ideas, and engage in hands-on learning. Students are often asked, “what evidence do you have that…” in order to encourage them to think for themselves. By emphasizing investigative, quantitative, and comparative approaches to the topics, the authors continually emphasize how the biological sciences are integrative, yet unique. An instructor’s manual, available through McGraw-Hill Lab Central, provides detailed advice based on the authors’ experience on how to prepare materials for each lab, teaching tips and lesson plans, and questions that can be used in quizzes and practical exams. This manual is an excellent choice for colleges and universities that want their students to experience the breadth of modern biology.

CONTENTS

With revision descriptions

Lab Topic 1 Science: A Way of Knowing -New section on discovery-based science added to better correlate with textbooks; -New experiment in hypothesis-based science section reduces time needed; -Clarified section on evaluating published information.

Lab Topic 2 Using Microscopes -Completely reorganized as a quick introduction to microscopes; -Can be used at same time as another lab topic; -Includes basic as well as advanced skills.

Lab Topic 3 Cellular Structure Reflects Function -Reorganized to reflect Prokaryotic versus Eukaryotic cell differences; -Representative cell types chosen to illustrate that form reflects function; -Cellular ultrastructure section added.

Lab Topic 4 Membranes, Diffusion and Osmosis -Completely rewritten with several new experiments to meet needs of reviewers; -Emphasis on osmotic challenges that cells encounter and cellular responses; -Emphasizes hypothesis testing.

Lab Topic 5 Using Quantitative Techniques -New emphasis on topics of precision and accuracy in measurements; -Simplified statistical analysis of data; -Clarification of spectrophotometric assay descriptions.

Lab Topic 6 Visualizing Biological Molecules Only lab in commercially available manuals using new bioinformatics visualization techniques; -Rewritten to use open source Jmol Molecular Visualization program; -Three dimensional molecular structures are manipulated to reveal their properties.

Lab Topic 7 Determining the Properties of an Enzyme -Reviewers have given this experiment an “A” for years because it works; -Improved directions on making derivative graphs; -Excellent results for lab report.

Lab Topic 8 Measuring Cellular Respiration -Given an “A” by reviewers; -Introduction rewritten to give better background on experiments; -New experiment on respiratory efficiency in yeasts added; -Aerobic respiration experiment analysis clarified; -Excellent results for lab report.

Lab Topic 9 Investigating Photosynthesis -Formely in plant biology section, topic moved to metabolism section to better coordinate with textbooks; -New experiment added on visualizing chloroplasts; -Analysis section rewritten to reflect hypothesis testing; -Excellent results for lab report.

Lab Topic 10 Mitosis and Chromosome Number -Only commercial lab manual to look at mitosis experimentally and to apply statistical analysis; -Given an A by reviewers; -New introduction with more modern emphasis; -Procedures and analysis sections clarified; -Excellent results for lab report.

Lab Topic 11 Modeling Meiosis and Determining Cross-Over Frequency -Ascaris observations replaced with hands-on chromosome simulation activity emphasizing sources of hereditary variability; -Only commercial lab manual to look at crossing over experimentally and to use quantitative analysis of results; -Excellent results for lab report.

Lab Topic 12 Determining Genotypes of Fruit Flies -Introduces students to classical genetic system; -New simplified experiment added, challenging students to determine parental genotype from progeny phenotype; -Excellent results for lab report.

Lab Topic 13 Isolating DNA and Working with Plasmids -Students get to work directly with DNA and to test experimental hypotheses; -Plasmid procedure rewritten to include use of jellyfish green fluorescent protein to illustrate potential of genetic engineering, introduce reporter gene concept, and estimate transformation efficiency; -Excellent results for lab report.

Lab Topic 14 Testing Assumptions in Microevolution and Inducing Mutations -Rewritten to use new BioQuest version of computer simulation; -Section added to illustrate the role of camouflage in natural selection; -Includes experimental induction of mutations in E. coli; -Excellent results for lab report.

Lab Topic 15 Working with Bacterial Diversity -New introduction, capturing the diverse biology of this prokaryote group; -Procedures heavily edited to clarify student activities; -Several experiments yield data that are excellent for lab reports.

Lab Topic 16 Diversity Among Protists -Class and phylum names updated to go with Campbell et al., Raven et al. and Brooker et al.; -Discovery science at its best as student investigate the diversity of the group.

Lab Topic 17 Investigating Plant Phylogeny: Seedless Plants -Given an “A” by reviewers for its major theme of adaptation to the terrestrial environment; -Headings were added to allow instructors greater flexibility in assigning sections to be completed; -More accurate fern section and focus on discovery science; -Excellent opportunity for thematic lab report.

Lab Topic 18 Investigating Plant Phylogeny: Seed Plants -Reviewers give it an “A” for its terrestrial adaptation theme; -Angiosperm reproduction has been moved from the plant functional anatomy section to here at reviewers’ suggestion; -Excellent opportunity for thematic lab report.

Lab Topic 19 Observing Fungal Diversity and Symbiotic Relationships -Reviewers gave this lab an A as it was written, but it was extensively reorganized to promote comparisons between phyla based on body plans; -Better investigation of what constitutes a fungus was added; -Deleted powdery mildews and added section on Penicillium; -Tax-
Lab Topic 20 From Basal to Bilateral Animals - Discusses revision of animal phylogeny that is occurring among evolutionary biologists; - Uses modern idea of ancestral and derived characters to discuss sponges, cnidarians and flatworms while introducing students to their interesting biology; - Students test phylogenetic hypotheses.

Lab Topic 21 Ancestral and Derived Characteristics of Lophotrochozoans - Illustrates the basis for new animal clades, while reconciling modern classification with traditional; - Organ systems in annelids and mollusks thoroughly explored; - Comparative approach is emphasized; - Students test phylogenetic hypotheses.

Lab Topic 22 Ancestral and Derived Characteristics of Ecdysozoans - Explores the basis for this new animal clade; - Nematodes moved to this section reflecting new DNA classification; - Illustrates the diversity of arthropods; - Students test phylogenetic hypotheses.

Lab Topic 23 Ancestral and Derived Characteristics of Deuterostomes - Rewritten to emphasize ancestral and derived characteristics of group; - Echinoderms dissection rewritten with a more systems approach; - Invertebrate chordate sections given a more comparative approach; - Students test phylogenetic hypotheses.

Lab Topic 24 Investigating Plant Cells, Tissues, and Primary Growth - Reviews give this an A; - Rewritten to emphasize structure-function relationships

Lab Topic 25 Primary-Secondary Growth and Transport in Roots and Stems - Rewritten to emphasize structure-function relationships

Lab Topic 26 Angiosperm Germination, and Development - Rewritten to focus on seed development, hormonal control of development, seeds and fruits, dispersal, plant-animal interaction. - Sections on gametogenesis and fertilization moved to Lab Topic 18.

Lab Topic 27 Investigating Digestive, Urogenital and Reproductive Systems - For dissection efficiency, digestive, renal and reproductive systems have been grouped in this reorganization of the fetal pig dissection; - Emphasis has been added on digestive processes and function of liver and pancreas.

Lab Topic 28 Investigating Circulatory Systems - Added measurements of blood pressure/pulse and exercise response using ADI computer interfaced data collection; - Blood pressure protocols updated to include modern measurement systems and effects of exercise; - Added emphasis on health relevance of cardiac structure and blood pressure measurements; - Computer-based blood pressure protocols are integrated into physiology portion of lab.

Lab Topic 29 Ventilation and Gas Exchange System - Rewritten to emphasize structure-function relationships of respiratory organs; - Protocols on ventilation measurements updated to include widely used computer-based systems; - Expanded coverage of gill systems.

Lab Topic 30 Investigating the Properties of Muscle and Skeletal Systems - Rewritten to include structure-function comparisons of vertebrate groups; - Computer-based muscle contraction protocols are integrated into physiology portion of lab.

Lab Topic 31 Investigating Nervous and Sensory Systems - Rewritten to update treatment of glial cells and functional specialization of brain regions; - Retinal neural wiring discussion improved; - Eye and ear sections rewritten to focus attention structural adaptation for sensitivity, acuity and color in eyes and frequency, amplitude, and direction in ears.

Lab Topic 32 Investigating Early Events in Animal Development - Topic moved to animal functional anatomy section; - Genetic control of development added to introduction;

Lab Topic 33 Estimating Population Size and Growth - Rewritten to better illustrate population dynamics, using computer simulation.
19 Human Evolution: Skull Examination
20 Ecology: Diversity and Interaction in Plant Communities
21 Community Succession
22 Population Growth: Limitations of the Environment
23 Pollution: The Effect of Chemical, Thermal, and Acid Pollution
24 Survey of Bacteria: Kingdoms Archaebacteria and Bacteria
25 Survey of the Kingdom Protista: The Algae
26 Survey of the Kingdom Protista: Protozoa and Slime Molds
27 Survey of the Kingdom Fungi: Molds, Sac Fungi, Mushrooms, and Lichens
28 Survey of the Plant Kingdom: Liverworts, Mosses, and Hornworts of Phyla Hepaticophyta, Bryophyta, and Anthocerotophyta
29 Survey of the Plant Kingdom: Seedless Vascular Plants of Phyla Pterophyta and Lycophyta
30 Survey of the Plant Kingdom: Gymnosperms of Phyla Cycadophyta, Ginkgophyta, Coniferophyta, and Gnetophyta
31 Survey of the Plant Kingdom: Angiosperms
32 Plant Anatomy: Vegetative Structure of Vascular Plants
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34 Plant Physiology: Tropisms, Nutrition, and Growth Regulators
35 Bioassay: Measuring Physiologically Active Substances
36 Survey of the Animal Kingdom: Phyla Porifera and Cnidaria
37 Survey of the Animal Kingdom: Phyla Platyhelminthes and Nematoda
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51 Animal Behavior: Taxis, Kinesis, and Agonistic Behavior
Human Biology

Textbook

International Edition

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By Sylvia S Mader

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Biology

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INTRODUCTORY MICROBIOLOGY
- Non Majors Text

International Edition

MICROBIOLOGY
A Systems Approach, 2nd Edition
By Marjorie Kelly Cowan, Miami University of OH-Oxford and Kathleen Park Talaro, Pasadena Area Community College
2009 (February 2008) / 896 pages
ISBN: 9780077266868
ISBN: 9780071269834 [IE]
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Microbiology: A Systems Approach is a non-majors/allied health microbiology textbook that has quickly become known for its unique organization, appealing writing style, and current medical applications. Cowan/Talaro utilizes an organ systems approach, but unlike any other book, this text first describes the clinical presentation (the particular set of symptoms) and then all of the organisms that could cause the symptom as opposed to just providing a long list of organisms to study. This treatment is unique and represents a real difference in the method of teaching microbiology.

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Appropriate for the non-major/allied health student, this authoritative text carefully explains the fundamentals of microbiology, providing a general overview of the principles followed by more detailed explanations. With its clear and concise writing style, Microbiology: A Human Perspective offers modern coverage on such topics as genomics, biofilms, and quorum sensing. A body systems approach is used in the coverage of diseases.

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BENSON'S MICROBIOLOGICAL APPLICATIONS
Laboratory Manual in General Microbiology, Short Version, 11th Edition
By Alfred Brown, Auburn University--Auburn
2009 (January 2008) / 480 pages
ISBN: 9780073522548

The classic resource for undergraduate microbiology laboratory courses just keeps getting better. The 60 self-contained clearly illustrated exercises, and four-color format makes Microbiological Applications: Laboratory Manual in General Microbiology, the ideal lab manual. Appropriate for either a majors or non-majors lab course, this lab manual assumes no prior organic chemistry course has been taken.

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LABORATORY APPLICATIONS IN MICROBIOLOGY
A Case Study Approach
By Barry Chess, Pasadena Area Community College
2009 (September 2008) / 576 pages
ISBN: 9780073375250

http://www.mhhe.com/chess

Laboratory Applications in Microbiology: A Case Study Approach is designed to use real life case studies as the basis for exercises in the laboratory. This is the only microbiology lab manual focusing on this means of instruction, an approach particularly applicable to the microbiology laboratory. The author has carefully organized the exercises so that students develop a solid intellectual base beginning with a particular technique, moving through the case study, and finally applying new knowledge to unique situations beyond the case study.

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ICEL 2009 Microbiology

ACCOMPANY MICROBIOLOGY EXPERIMENTS TO

MICROBIOLOGY EXPERIMENTS TO ACCOMPANY MICROBIOLOGY
6th Edition
By John Kleyn and Mary Ricknell of University of Washington
2009 (November 2008) / 352 pages
ISBN: 9780072995497
www.mhhe.com/labcentral

All experiments are correlated to Nester’s Microbiology: A Human Perspective, 6/e, but can be used with any non-majors/allied health microbiology textbook.

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NEW

AIDS UPDATE 2010
19th Edition
By Gerald J Stine, University of North Florida

2010 (December 2009) / 512 pages
ISBN: 9780073527611
http://www.mhcls.com/text-data/catalog/0073527610.mhtml
AIDS UPDATE 2010 presents a balanced review of current research and information on HIV infection, HIV disease, and AIDS. AIDS UPDATE 2010 places discussion within a biological, medical, and social framework, helping readers more fully understand this devastating pandemic.

NEW TO THIS EDITION
✓ Information on the first 29 years and counting on HIV/AIDS.
✓ Estimated data and information out to years 2015 and 2025 are provided.
✓ Many photographs, figures, tables, highlighted or boxed ancillary information, and line art are new, revised, or relocated.
✓ New global data reduction in HIV/AIDS cases from the WHO/UNAIDS is presented. The increase in HIV case data for the United States from the Centers for Disease Control and Prevention (CDC) is also presented.
✓ A testbank is available for instructors.

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Molecular Biology

International Edition

MOLECULAR BIOLOGY
4th Edition
By Robert Weaver, University of Kansas-Lawrence
2008 (January 2007)
ISBN: 9780073319940
ISBN: 9780071275484 [IE]
http://www.mhhe.com/weaver4

Molecular Biology, 4/e by Robert Weaver, is designed for an introductory course in molecular biology. The text is geared not only toward presenting concepts of molecular biology, but also the experiments that led to those concepts. Guided by this experimental approach, Dr. Weaver has been published by National Institutes as well as National Geographic.

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Developmental Biology / Embryology

International Edition

ANALYSIS OF BIOLOGICAL DEVELOPMENT
2nd Edition
By Klaud Kalffoff, University of Texas at Austin
2001 /816 pages
ISBN: 9780071253567 [IE]
www.mhhe.com/kalffoff

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Genetics

International Edition

GENETICS Analysis and Principles, 3rd Edition
By Robert J Brooker, University of Minnesota--Minneapolis
2009 (January 2008)
ISBN: 9780077229726
ISBN: 9780071287647 [IE]
http://www.mhhe.com/brookergenetics3e

Hyde's Introduction to Genetics teaches the principles of genetics with an innovative approach that emphasizes the basic concepts involved in solving problems as well as teaching students how to manipulate genetic data. While most genetics textbooks provide some examples and several problems for the student to work, the texts primarily stress facts and historical information. It is often left to the student to make the connection from what is in the text to elucidating the approaches to solve problems. Dr. David Hyde presents these skills to the students throughout the narrative in a stepped-out fashion, making an explicit tie between the facts and their application. This text maintains the rigor that faculty require in a genetics book, while incorporating a student-friendly presentation style that helps the reader comprehend the material.

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25 Population Genetics
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27 Evolutionary Genetics

International Edition

INTRODUCTION TO GENETICS
By David Hyde, University of Notre Dame
2009 (January 2008)
ISBN: 9780073224817
ISBN: 9780071106757 [IE]
http://www.mhhe.com/hyde

Hyde's Introduction to Genetics teaches the principles of genetics with an innovative approach that emphasizes the basic concepts involved in solving problems as well as teaching students how to manipulate genetic data. While most genetics textbooks provide some examples and several problems for the student to work, the texts primarily stress facts and historical information. It is often left to the student to make the connection from what is in the text to elucidating the approaches to solve problems. Dr. David Hyde presents these skills to the students throughout the narrative in a stepped-out fashion, making an explicit tie between the facts and their application. This text maintains the rigor that faculty require in a genetics book, while incorporating a student-friendly presentation style that helps the reader comprehend the material.

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Genetics: From Genes to Genomes is a cutting-edge, introductory genetics text authored by an unparalleled author team, including Nobel Prize winner, Leland Hartwell. The Third Edition continues to build upon the integration of Mendelian and molecular principles, providing students with the links between early genetics understanding and the new molecular discoveries that have changed the way the field of genetics is viewed.

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1. Genetics: The Study of Biological Information
2. Mendel's Breakthrough: Patterns, Particles, and Principles of Heredity
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22. Evolution at the Molecular Level

Schaum's Outline of Genetics
5th Edition
By Susan Elrod, California Polytechnic State University - San Luis Obispo
2010 (February 2010) / 560 pages
ISBN: 9780071625036
A Schaum's Publication
Schaum's Outline of Genetics provides a systematic review of anatomy and physiology with clear and concise explanations, accompanied by numerous exercises that will allow you to work on your own, for both initial learning and review. The revised edition will include comprehensive review of the chromosome theory of heredity, linkage, gene interactions, maternal inheritance, molecular knowledge, transmission genetics, and the biochemical basis of heredity.
Human Genetics

9th Edition

By Ricki Lewis, SUNY at Albany

2010 (October 2009) / 512 pages
ISBN: 9780073525273
ISBN: 9780071220040 [IE]

http://www.mhhe.com/lewisgenetics9

Human Genetics: Concepts and Applications, ninth edition, is a non-science major’s human genetics text that clearly explains what genes are, how they function, how they interact with the environment, and how our understanding of genetics has changed since completion of the human genome project. Meticulously updated, focused on concepts, and rich with personal stories from people whose lives are dramatically affected by the principles being discussed, Human Genetics is a textbook that will prepare the next generation of citizens for the decisions that lie ahead.

NEW TO THIS EDITION

- Accurate and updated: Cutting-edge scientific coverage is incorporated throughout the book. Dr. Lewis’ experience as a scientific journalist enables her to keep current with breaking topics in genetics, giving students the most up-to-date human genetics text on the market.
- Clear human focus: Compelling, human interest examples from the author’s extensive experience as a genetic counselor and hospice volunteer keep students interested in the narrative through stories about real people dealing with real genetic issues.
  - Case studies at the beginning of each chapter and Reading boxes provide students with real-life applications of the concepts to be discussed in the chapter.
  - Individuals tell of their experience with genetic conditions through In Their Own Words essays.
  - Bioethics: Choices for the Future Boxes, found at the ends of appropriate chapters, encourage students to ask difficult questions of themselves, and to predict how the new science of genetics might impact their lives.
- New pedagogy: Author added new Forensic Focus questions at the end of relevant chapters and new Questions for Discussion to Bioethics boxes. These question sets are in addition to the existing pedagogical tools:
  - chapter opening outline
  - summary of key concepts at the end of each numbered section
  - step-by-step strategies for solving genetics problems at relevant places in the text
  - end-of-chapter summary
  - short answer Review Questions that test knowledge and comprehension
- Applied Questions that require higher-level thinking
- Author wrote key supplements: Author wrote the test bank to accompany the ninth edition. Completely new Case Workbook to accompany Human Genetics has been rewritten to emphasize the multifactorial nature of traits and disorders, use more examples of normal variation than of very rare diseases, incorporate the latest technology such as genome-wide association (GWA) studies, and achieve continuity and familiarity by focusing on one extended family with mixed ancestry.
- Extensive media package: Adopters can access electronic files for every piece of line art, all tables and select photos from Human Genetics, 9e, as well as animations and videos chosen to complement the content in this book. Instructors can download line art from other McGraw-Hill textbooks and choose from our entire library of animations through Presentation Center. Students have access to practice multiple-choice quizzes, BioTutorial quizzes, genetics interactives, and key term flashcards through the Human Genetics website www.mhhe.com/lewisgenetics9.

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SCHAUM’S OUTLINE OF MICROBIOLOGY
2nd Edition
By Edward Alcamo, Farmingdale State College and Jennifer M Warner
2009 (July 2009) / 464 pages
ISBN: 9780071623261
A Schaum’s Publication

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BIOTECHNOLOGY DEMYSTIFIED
By Sharon Walker
2007 (Sept 2006) / 320 pages
ISBN: 9780071448123
A Professional Publication

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Chapter 10: Infectious Disease: Bacteria and viruses and prions, oh my!
Chapter 11: Immunology: How the body protects itself from invasion
Chapter 12: Genetic Disease: When good genes go bad

Part 4: Applications of Biotechnology
Chapter 13: The Human Genome Project: What it is and what it’s used for
Chapter 14: Reproductive Cloning: Understanding the controversy
Chapter 15: Genetically Modified (GM) Crops: The new way to make a better tomato
Chapter 16: Drug Discovery: The accelerated pace of finding new drugs
Chapter 17: Future Prospects for Biotechnology: Is it bright or a lack of foresight?

SCHAUM’S OUTLINE OF IMMUNOLOGY
By George Pinchuk
2002 / 304 pages
ISBN: 9780071373661
A Schaum’s Publication

CONTENTS
1. Overview of Immunity and the Immune System
2. Cells, Tissues, and Organs of the Immune System
3. Antibodies and Antigens
4. Maturation of B Lymphocytes and Expression of Immunoglobulin Genes
5. The Major Histocompatibility Complex
6. Antigen Processing and Presentation
7. T-Lymphocyte Antigen Recognition and Activation
8. B-Lymphocyte Activation and Antibody Production
9. Immunologic Tolerance
10. Cytokines
11. Innate Immunity
12. Effector Mechanisms of Cell-Mediated Immunity
13. Effector Mechanisms of Humoral Immunity
14. Immunity to Microbes
15. Transplantation Immunology
16. Immunity to Tumors
17. Autoimmunity and Autoimmune Diseases
18. Immunodeficiencies

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### NUTRITION

#### 2011

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<td>Schiff</td>
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<td>Wardlaw</td>
<td>9780077354817</td>
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<td>Williams</td>
<td>9780073375557</td>
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Nutrition for Healthy Living takes an innovative approach to basic nutrition. With its uniquely concise organization and a distinct focus on consumerism, this engaging, fun-to-read text will provide students with the scientific foundation needed to make informed nutritional lifestyle decisions well beyond the classroom.

NEW TO THIS EDITION

- New Real People/Real Stories have been expanded to include real-life stories of celiac disease and weigh-loss.
- Recipes for Healthy Living will feature more recipes with ingredients/skills geared for average college student. Recipes feature various ethnic cuisines and now also include a Daily Value graph of key nutrients. The Daily Value graph is in addition to the protein/fat/carbohydrate pie charts already in the textbook and give additional science content to those who want it.
- Eating Well for Less: New content has been added to address this issue especially during current economic crisis. Examples will found in Ch. 3 and Ch. 7.
- New Highlight box on Cancer in Ch. 8. This expands coverage of cancer and nutritional aspects related to the disease.
- Over 100 new/revised Photos and Figures help students more easily comprehend new science content. Dynamic, modern-looking art along with expanded coverage of nutrition science and practical advice are interwoven to provide today’s students with the tools they need to learn and apply knowledge to their own lives.
- CONNECT Plus-the future in online course management is here!
  - Interactive Learning platform allows instructors to deliver auto-graded assignments, quizzes, and tests easily online.
  - Instructors can assign readings via an interactive, media-rich eBook; Students have 24/7 online access.
  - Sophisticated reporting allows instructors to analyze class performance against a variety of criteria such as learning outcome and difficulty level.
  - LearnSmart-Help your students to Learn Fast, Learn Easy, Learn Smart!
    - Artificially intelligent adaptive diagnostic tool.

CONTENTS

PART ONE: Laying the Foundation for Better Health
1. The Basics of Nutrition
2. Evaluating Nutrition Information
3. Planning Nutritious Diets
4. Body Basics

PART TWO: Nutrients and Your Health
5. Carbohydrates
6. Fats and Other Lipids
7. Proteins
8. Vitamins
9. Water and Minerals

PART THREE: Applying Your Nutrition Knowledge
10. Energy Balance and Weight Control
11. Nutrition for Physically-Active Lifestyles
12. Food Safety Concerns
13. Nutrition for a Lifetime

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Visit McGraw-Hill Education
Website: www.mheducation.asia
Contemporary Nutrition is designed for students with little or no background in college-level biology, chemistry or physiology. It provides the ideal balance of reliable nutrition information and practical consumer-oriented knowledge. With a friendly writing style, the authors act as the student’s personal guide to dispelling common misconceptions and to gaining a solid foundation for making informed nutrition choices. Contemporary Nutrition emphasizes that a population consists of individuals with varying genetic and cultural backgrounds, and these individuals will have varying responses to diet. The knowledge gained from this text will allow students to personalize nutrition information and make smart choices.

NEW TO THIS EDITION

- Over 200 new or revised figures and photos have been added to the already fantastic instructional art program in this edition to appeal to today’s visual learners.
- New and updated content includes a discussion of the economic factors related to food choices, the latest Mediterranean Diet Pyramid, the American Heart Association’s new “Meet the Fats” program, and more.
- Concept Maps have been added to help students better make the mental connections between key aspects of the macronutrients (see Ch. 4, 5, and 6)
- Daily Values have been added to the food source graphs for each nutrient.
- CONNECT Plus-the future in online course management is here!
  - Interactive Learning platform allows instructors to deliver auto-graded assignments, quizzes, and tests easily online
  - Instructors can assign readings via an interactive, media-rich eBook; Students have 24/7 online access
  - Sophisticated reporting allows instructors to analyze class performance against a variety of criteria such as learning outcome and difficulty level.
  - LearnSmart-Help your students to Learn Fast, Learn Easy, Learn Smart!
    - Artificially intelligent adaptive diagnostic tool.
    - Creates individual learning plan for each student based on their individual knowledge level and decay of knowledge over time.
    - Intelligently varies questions to match and improve students’ knowledge.
    - Students actively learn the required concepts more easily and efficiently.
  - Tegrity Campus-100% of students rate their professor’s lecture notes as their #1 study resource!

The average instructor speaks 120 words per minute while the average student writes only 20 requiring the student to decide between listening or taking notes. With Tegrity Campus students no longer have to make that decision. Tegrity Campus is a student achievement system that impacts learning by improving student efficiency, retention, and satisfaction. It makes class time available all the time by automatically capturing, storing, and indexing every lecture. A simple one-click start and stop process automatically captures audio, PowerPoint, all computer screens, video, and more. Tegrity Campus offers automatic creation of enhanced podcasts including slides, indexing, and text titles with zero production work.

CONTENTS

NUTRITION: A KEY TO HEALTH
Chapter 1: What You Eat and Why
Chapter 2: Guidelines for Designing a Healthy Diet
Chapter 3: The Human Body: A Nutrition Perspective

THE ENERGY NUTRIENTS AND ENERGY BALANCE
Chapter 4: Carbohydrates
Chapter 5: Lipids
Chapter 6: Proteins
Chapter 7: Energy Balance and Weight Control

VITAMINS, MINERALS AND WATER
Chapter 8: Vitamins
Chapter 9: Water and Minerals

NUTRITION: BEYOND THE NUTRIENTS
Chapter 10: Nutrition: Fitness and Sports
Chapter 11: Eating Disorders: Anorexia Nervosa, Bulimia Nervosa, and Other Conditions
Chapter 12: Undernutrition Throughout the World
Chapter 13: Safety of Food and Water

NUTRITION: A FOCUS ON THE LIFE STAGES
Chapter 14: Pregnancy and Breastfeeding
Chapter 15: Nutrition from Infancy through Adolescence
Chapter 16: Nutrition during Adulthood

WARDLAW’S PERSPECTIVES IN NUTRITION

8th Edition

By Carol Byrd-Bredbenner, Jacqueline Berning, University of Colorado, Donna Beshgetoor, San Diego State University and Gaile Moe, Seattle Pacific University

2009 (September 2008) / 960 pages
ISBN: 9780077263201
ISBN: 9780071284462 [IE]

http://www.mhhe.com/wardlawpers8

Perspectives in Nutrition, 8th edition, is an introductory nutrition text appropriate for nutrition and science majors, as well as mixed majors/non-majors nutrition courses. This text has the richly deserved reputation of providing an accurate, current, in-depth and thoughtful introduction to the dynamic field of nutrition. The 8th edition introduces a new author team whose primary goal has been to maintain the strengths and philosophy that have been the hallmark of this book yet enhance the accessibility and personal application of materials for today’s students.

CONTENTS

Part 1 Nutrition Basics
1 The Science of Nutrition
2 Tools of a Healthy Diet
3 The Food Supply
4 Human Digestion and Absorption

Part 2 Energy-Yielding Nutrients and Alcohol
5 Carbohydrates
6 Lipids
7 Protein
8 Alcohol

Part 3 Metabolism and Energy Balance
9 Energy Metabolism
10 Energy Balance, Weight Control, & Eating Disorders
11 Nutrition, Exercise, and Sports

Part 4 Vitamins and Minerals
12 Fat-Soluble Vitamins
13 Water-Soluble Vitamins
14 Water and Major Minerals
15 Trace Minerals

Part 5 Nutrition Applications in the Life Cycle
16 Nutritional Aspects of Pregnancy and Breastfeeding
17 Nutrition during the Growing Years
18 Nutrition through Adulthood

Appendices
A Human Physiology
B Chemistry
C Glycolysis, Citric Acid Cycle, Electron Transport Chain, Eicosanoids, and Homocysteine Metabolism
D Dietary Advice for Canadians
E Exchange Systems
F Fatty Acids in Foods
G Height-Weight Tables
H Nutrition Calculations
I English-Metric Conversions
J Estimated Average Requirements (EARs) for Nutrients
K CDC Growth Charts
L Sources of Nutrition Information
M Dietary Intake and Energy Expenditure Assessment

CONTENDES
NUTRITION: A KEY TO HEALTH
Chapter 1: What You Eat and Why
Chapter 2: Guidelines for Designing a Healthy Diet
Chapter 3: The Human Body: A Nutrition Perspective

ENERGY NUTRIENTS AND ENERGY BALANCE
Chapter 4: Carbohydrates
Chapter 5: Lipids
Chapter 6: Proteins
Chapter 7: Energy Balance and Weight Maintenance

VITAMINS, MINERALS, AND WATER
Chapter 8: Overview of the Micronutrients
Chapter 9: Nutrients Involved with Fluid and Electrolyte Balance
Chapter 10: Nutrients that Function as Antioxidants
Chapter 11: Nutrients Involved in Bone Health
Chapter 12: Nutrients Involved with Energy Metabolism and Blood Health

NUTRITION: BEYOND THE NUTRIENTS
Chapter 13: Nutrition: Fitness and Sports
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Chapter 15: Food Safety
Chapter 16: Undernutrition throughout the World

NUTRITION: A FOCUS ON THE LIFE STAGES
Chapter 17: Pregnancy and Breastfeeding
Chapter 18: Nutrition from Infancy through Adolescence
Chapter 19: Nutrition during Adulthood

APPENDIXES:
A: Solutions to Case Studies and Check Your Knowledge
B: Daily Values Used in Food Labels
C: Dietary Advice for Canadians
D: The Exchange System
E: Dietary Intake and Energy Expenditure Assessment
F: Chemical Structures in Nutrition
G: Height-Weight Tables
H: Sources of Nutrition Information
I: English-Metric Conversions

International Edition

CONTEMPORARY NUTRITION
A Functional Approach

By Gordon M Wardlaw and Anne M Smith of Ohio State University, James E Bailey

2009 (February 2008)
ISBN: 9780077227784
ISBN: 9780071284639 [IE]

www.mhhe.com/wardlawconfa1

Contemporary Nutrition: A Functional Approach is an alternate version of Wardlaw-Smith’s Contemporary Nutrition, 7e. While Contemporary Nutrition: A Functional Approach shares the recognized strengths of the seventh edition, it offers a unique approach to the coverage of vitamins and minerals. It departs from a traditional presentation by instead organizing vitamins and minerals within the context of physiological functions and the health conditions they influence. The text will provide students who lack a strong science background the ideal balance of reliable nutrition information and practical consumer-oriented knowledge. With their friendly writing style, the authors act as the student’s personal guide to dispelling common misconceptions and to gaining a solid foundation for making informed nutrition choices.

CONTENTS
NUTRITION: A KEY TO HEALTH
Chapter 1: What You Eat and Why
Chapter 2: Guidelines for Designing a Healthy Diet
Chapter 3: The Human Body: A Nutrition Perspective

ENERGY NUTRIENTS AND ENERGY BALANCE
Chapter 4: Carbohydrates
Chapter 5: Lipids
Chapter 6: Proteins
Chapter 7: Energy Balance and Weight Maintenance

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Chapter 8: Overview of the Micronutrients
Chapter 9: Nutrients Involved with Fluid and Electrolyte Balance
Chapter 10: Nutrients that Function as Antioxidants
Chapter 11: Nutrients Involved in Bone Health
Chapter 12: Nutrients Involved with Energy Metabolism and Blood Health

NUTRITIONCALC PLUS 3.2 CD-ROM

By ESHA Research

2009 (December 2008)
ISBN: 9780077312435

www.mhhe.com/ncp3

NutritionCalc Plus 3.0 is a suite of powerful dietary self-assessment tools. Use NutritionCalc Plus 3.0 to analyze and monitor personal diet and health goals. An easy-to-use interface and the reliability of the ESHA database make NutritionCalc Plus 3.0 the best choice for nutrition analysis software. Enhancements to 3.0 include the ability to track up to three profiles, 365-day calendar function, a 27,000-food database, and a new recipe function.

NEW TO THIS EDITION
• NEW! Both the CD and Online versions now share an identical user-friendly interface. Instructors will be able to write one set of assignment directions, regardless of which version students have purchased.
• NEW! NCP 3.0 now offers the ability to enter up to three Profiles. Users can enter their own personal data and intakes, as well as those of two other individuals (e.g., assigned case study, diabetic person, vegetarian friend).
• NEW! NCP 3.0 now offers an intuitive 365-day calendar in which users can easily track their daily food intakes and activities.
• NEW! Users will now be able to create and analyze their own Recipes and add them to their personal database. This feature gives users ultimate flexibility in creating accurate food lists.
• NEW! To ensure an accurate dietary analysis, caution notes now appear to alarm users of possible entry error. For instance:
  - If a user enters an amount for a single food that exceeds 1/3 of his/her recommended daily calories, the user will receive a warning message asking to verify whether the amount chosen is correct.
  - A warning note will appear if the activities chosen exceed 24 hours in a day.

Multimedia
- If the activities entered do not match the user’s Profile’s Activity Level, NCP will generate a notice asking if the user wishes to return to his/her Profile and adjust the Activity Level.

- NEW! NCP 3.0 now gives users access to 27,000 foods, including more ethnic and fast food choices. All nutrient data comes from ESHA Research, the country’s leading nutrient database company.

- NEW! Each step in the diet analysis process is now fully supported by integrated Help and Info descriptions. Each screen provides instructions, as well as handy tips and explanatory notes.

- NEW! Users can now easily email reports or download documents into Excel or Word (and similar programs) to make completing assignments even easier.

**FEATURES**

- Four easy steps are all users need to successfully complete for an accurate dietary analysis:
  - Profile – Create a profile by entering personal information, such as weight and height, to generate individualized nutrient recommendations.

  - Food Intake – Compile a food intake list by searching for foods eaten and entering amounts and specifying meals.

  - Activities – Estimate activity level and calories burned by tracking specific daily exercise.

  - Reports – Analyze diet and exercise with 9 different customized reports.

- The latest DRI values are included for essential nutrients, vitamins, and minerals.

- Users can analyze and adjust their energy expenditure and weight control goals.

- Intuitive tool bar icons make navigating through the program easy.

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  - Profile – Create a profile by entering personal information, such as weight and height, to generate individualized nutrient recommendations.

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  - Activities – Estimate activity level and calories burned by tracking specific daily exercise.

  - Reports – Analyze diet and exercise with 9 different customized reports.

- The latest DRI values are included for essential nutrients, vitamins, and minerals.

- Users can analyze and adjust their energy expenditure and weight control goals.

- Intuitive tool bar icons make navigating through the program easy.

**NUTRITIONCALC PLUS 3.2 ONLINE ACCESS CARD**

*By ESHA Research*

2009 (January 2008)


www.mhhe.com/ncp3

NutritionCalc Plus 3.0 is a suite of powerful dietary self-assessment tools. Use NutritionCalc Plus 3.0 to analyze and monitor personal diet and health goals. An easy-to-use interface and the reliability of the ESHA database make NutritionCalc Plus 3.0 the best choice for nutrition analysis software. Enhancements to 3.0 include the ability to track up to three profiles, 365-day calendar function, a 27,000-food database, and a new recipe function.

**NEW TO THIS EDITION**

- NEW! Both the CD and Online versions now share an identical user-friendly interface. Instructors will be able to write one set of assignment directions, regardless of which version students have purchased.

- NEW! NCP 3.0 now offers the ability to enter up to three Profiles. Users can enter their own personal data and intakes, as well as those of two other individuals (e.g., assigned case study, diabetic person, vegetarian friend).

- NEW! Users will now be able to create and analyze their own Recipes and add them to their personal database. This feature gives users ultimate flexibility in creating accurate food lists.
This text describes the four major methods of nutritional assessment (dietary, anthropometric, biometric, and clinical) in an understandable and contemporary way. It thoroughly covers assessment of the hospitalized individual, but also serves as an invaluable resource to the nutrition professional working in such areas as public health and community nutrition, corporate health, and sports medicine.

NEW TO THIS EDITION

- Updated figures and tables reflect most recent data on nutritional status and health

CONTENTS

1 Introduction to Nutritional Assessment
2 Standards for Nutrient Intake
3 Measuring Diet
4 National Dietary and Nutrition Surveys
5 Computerized Dietary Analysis Systems
6 Anthropometry
7 Assessment of the Hospitalized Patient
8 Nutritional Assessment in Disease Prevention
9 Biochemical Assessment of Nutritional Status
10 Clinical Assessment of Nutritional Status
11 Counseling Theory and Technique

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# NEW TITLES

## PLANTS & ANIMALS

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<td>9780073040530</td>
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<td>Biology of the Invertebrates, 6e</td>
<td>Pechenik</td>
<td>9780073028262</td>
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This introductory text assumes little prior scientific knowledge on the part of the student. It includes sufficient information for some shorter introductory botany courses open to both majors and nonmajors, and is arranged so that certain sections can be omitted without disrupting the overall continuity of the course. Stern emphasizes current interests while presenting basic botanical principles.

NEW TO THIS EDITION

- Most of the chapters include new opening photographs, revisions as suggested by reviewers, and updated additional readings.
- Chapter 1: New text on use of ethanol in vehicles.
- Chapter 4: A discussion of chimeras.
- Chapter 6: An introduction to dendroclimatology.
- Chapter 10: New art to expand upon presentation of the Calvin cycle.
- Chapter 13: A discussion of transposable elements and an explanation of the United States National Plant Genome Initiative.
- Chapter 17: A discussion of drug resistant bacteria.
- Chapter 23: Clarification of the use of “n” and “x” for describing ploidy levels in plants.
- Chapters 15 (Evolution), 16 (Taxonomy), and 25 (Ecology) have been extensively modified.

An introductory section has been added to Chapter 15, outlining applications of evolutionary theory in agriculture, medicine, ecology, and biotechnology, and new photos have been added to enhance the discussion.

- Chapter 16 has been modified to include a discussion of challenges faced by taxonomists when classifying plants. Morphological, breeding, ecological, cladistic, eclectic, and nominalistic species concepts are also described.

- Chapter 25 has been significantly revised and updated to include new photographs as well as discussions of communities; the effect of soil mineral content on plant species distribution; trophic efficiency; allelopathy; life histories; the water, carbon, and nitrogen cycles; succession, using Mount St. Helens as an example; climate change and its potential implications; wind, water, and soil erosion, land reclamation; loss of biodiversity; acid rain; wetlands; species invasions; and land restoration.

CONTENTS

Chapter 1: What Is Plant Biology?
Chapter 2: The Nature of Life?
Chapter 3: Cells
Chapter 4: Tissues
Chapter 5: Roots and Soils
Chapter 6: Stems
Chapter 7: Leaves
Chapter 8: Flowers, Fruits, and Seeds
Chapter 9: Water in Plants
Chapter 10: Plant Metabolism
Chapter 11: Growth
Chapter 12: Meiosis and Alternation of Generation
Chapter 13: Genetics
Chapter 14: Plant Breeding and Propagation
Chapter 15: Evolution
Chapter 16: Plant Names and Classification
Chapter 17: Domain (Kingdom) Bacteria, Domain (Kingdom) Archaea, and Viruses
Chapter 18: Kingdom Protista
Chapter 19: Kingdom Fungi
Chapter 20: Introduction to the Plant Kingdom: Bryophytes
Chapter 21: The Seedless Vascular Plants: Ferns and Their Relatives
Chapter 22: Introduction to Seed Plants: Gymnosperms
Chapter 23: Seed Plants: Angiosperms
Chapter 24: Flowering Plants and Civilization
Chapter 25: Ecology
Chapter 26: Biomes

INVITATION TO PUBLISH

McGraw-Hill is interested in reviewing textbook proposal for publication. Please contact your local McGraw-Hill office or email to asiapub@mcgraw-hill.com

Visit McGraw-Hill Education (Asia)
Website: www.mheducation.asia
This introductory, one quarter/one-semester text takes a multidisciplinary approach to studying the relationship between plants and people. The authors strive to stimulate interest in plant science and encourage students to further their studies in botany. Also, by exposing students to society’s historical connection to plants, Levetin and McMahon hope to instill a greater appreciation for the botanical world. Plants and Society covers basic principles of botany with strong emphasis on the economic aspects and social implications of plants and fungi.

CONTENTS

I Plants and Society: The Botanical Connections to Our Lives
1 Plants in Our Lives

II Introduction to Plant Life: Botanical Principles
2 The Plant Cell
3 The Plant Body
4 Plant Physiology
5 Plant Life Cycle: Flowers
6 Plant Life Cycle: Fruits and Seeds
7 Genetics
8 Plant Systematics and Evolution
9 Diversity of Plant Life

III Plants as a Source of Food
10 Human Nutrition
11 Origins of Agriculture
12 The Grasses
13 Legumes
14 Starchy Staples
15 Feeding a Hungry World

IV Commercial Products Derived from Plants
16 Stimulating Beverages
17 Herbs and Spices
18 Materials: Cloth, Wood, and Paper

V Plants and Human Health
19 Medicinal Plants
20 Psychoactive Plants
21 Poisonous and Allergy Plants

VI Algae and Fungi: The Impact of Algae and Fungi on Human Affairs
22 The Algae
23 Fungi in the Natural Environment
24 Beverages and Foods from Fungi
25 Fungi that Affect Human Health

VII Plants and the Environment
26 Plant Ecology

Appendix A Metric System
Appendix B Classification of Plants
PLANTS & ANIMALS

5 Plant Life Cycle: Flowers
6 Plant Life Cycle: Fruits and Seeds
7 Genetics
8 Plant Systematics and Evolution
9 Diversity of Plant Life

III Plants as a Source of Food
10 Human Nutrition
11 Origins of Agriculture
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23 Fungi in the Natural Environment
24 Beverages and Foods from Fungi
25 Fungi that Affect Human Health

VII Plants and the Environment
26 Plant Ecology
Appendix A Metric System
Appendix B Classification of Plants

International Edition

ECONOMIC BOTANY
3rd Edition
By Beryl Simpson and Molly Ogorzaly of University of Texas at Austin
2001/ 210 pages
ISBN: 9780072909388
ISBN: 9780071181884 [IE]
www.mhhe.com/biosci/pae/botany/simpson-links/weblinks.mhtml

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1 Plants and Their Manipulation by People
2 Origins of Agriculture
3 Fruits and Nuts of Temperate Regions
4 Fruits and Nuts of Warm Regions
5 Cereal Grains and Forage Grasses
6 Legumes
7 Foods from Leaves, Stems, and Roots
8 Spices, Herbs, and Perfumes
9 Vegetable Oils and Waxes
10 Hydrogels, Elastic Latexes, and Resins
11 Medicinal Plants
12 Psychoactive Drugs and Poisons from Plants
13 Stimulating Beverages
14 Alcoholic Beverages
15 Fibers, Dyes, and Tannins
16 Wood, Cork, and Bamboo
17 Ornamental Plants
18 Algae
19 Uses of Plants in the Future

Lab Manuals

LABORATORY MANUAL TO ACCOMPANY STERN'S INTRODUCTORY PLANT BIOLOGY
12th Edition
By James Bidlack, University of Central Oklahoma
2011 (January 2010) / 256 pages
ISBN: 9780073040530

Animal Behavior

International Edition

ANIMAL BEHAVIOR
5th Edition
By Lee C Drickamer, Southern Illinois University, Carbondale, Stephen H Vessey, Bowling Green State University and Elizabeth Jakob, University of Massachusetts - Amherst
2002
ISBN: 9780070121997
ISBN: 9780071130202 [IE]

CONTENTS
Part One The Study of Animal Behavior
1 Introduction
2 History of the Study of Animal Behavior
3 Approaches and Methods
Part Two Behavior Genetics and Evolution
4 Genes and Evolution
5 Behavioral Genetics
6 Evolution of Behavior Patterns
Part Three Mechanisms of Behavior
7 The Nervous System and Behavior
8 Hormones and Behavior, and Immunology and Behavior
9 Biological Timekeeping
10 Development of Behavior
11 Learning Behavior
12 Communication
Part Four Finding Food and Shelter
13 Migration, Orientation, and Navigation
14 Habitat Selection
15 Foraging Behavior
Part Five Social Organization and Mating Systems
16 Aggression
PLANTS & ANIMALS

17 Sexual Reproduction and Parental Care
18 Parental Investment and Mating Systems
19 Evolution of Social Systems
References
Glossary

Marine Biology

International Edition

MARINE BIOLOGY
8th Edition

By Peter Castro, California State Poly University-Pomona and Michael E Huber, Global Coastal Strategies, Brisbane-Australia

2010 (October 2009) / 480 pages
ISBN: 9780073524160
ISBN: 9780071113021 [IE]
http://www.mhhe.com/castrohuber8e

Marine Biology covers the basics of marine biology with a global approach, using examples from numerous regions and ecosystems worldwide. This introductory, one-semester text is designed for non-majors. Authors Castro and Huber have made a special effort to include solid basic science content needed in a general education course, including the fundamental principles of biology, the physical sciences, and the scientific method. This science coverage is integrated with a stimulating, up-to-date overview of marine biology.

NEW TO THIS EDITION
❖ New and updated Eye on Science boxed readings throughout the book reflect current scientific research and technology in the field of marine biology. New topics include:
- CSI: Ocean (use of the VENUS seafloor observatory in forensic research on how bodies decompose in the ocean)
- Microbes and Minerals (the role of chemosynthesis in forming Earth's diverse array of minerals)
- Monitoring of Open-Ocean Microbes
- Biological Mixing of the Ocean (how organisms may contribute to mixing processes)
- Ecology and Economics
- Exploring the Cayman Trench
❖ We have also updated the information on climate change, ocean acidification, the nitrogen cascade, and stratospheric ozone depletion to reflect the torrent of new research on global change. Examples include new findings on the accelerating rate of climate change, loss of Arctic sea ice, and ecological impacts, for example on polar bears.

Parasitology

International Edition

FOUNDATIONS OF PARASITOLOGY
8th Edition

By Larry S Roberts, Florida Int'l University-Miami and John Janovy Jr, University of Nebraska-Lincoln

2009 (October 2008) / 728 pages
ISBN: 9780073028279
ISBN: 9780071311038 [IE]
http://www.mhhe.com/robertsjanovy8e

A parasitology text for biology and/or zoology students at the undergraduate level. Emphasizes principles with related information on the biology, physiology, morphology, and ecology of the major parasites of humans and domestic animals. This is not a diagnostic manual for medical students.

CONTENTS
1 Introduction to Parasitology
2 Basic Principles and Concepts I: Parasite Systematics, Ecology and Evolution
3 Basic Principles and Concepts II: Immunology and Pathology
4 Parasitic Protozoa: Form, Function, and Classification
5 Kinetoplastia: Trypanosomes and Their Kin
6 Other Flagellated Protozoa
7 The Amebas
8 Phylum Apicomplexa: Gregarines, Coccidia, and Related Organisms
9 Phylum Apicomplexa: Malaria Organisms and Pirolasms
10 Phylum Ciliophora: Ciliated Protistan Parasites
11 Microsporida and Myxozoa: Parasites with Polar Filaments
12 The Mesozoa: Pioneers or Degenerates?
13 Introduction to Phylum Platyhelminthes
14 Trematoda: Aspidobothrea
15 Trematoda: Form, Function, and Classification of Digeneans
16 Digeneans: Strigeiformes
17 Digeneans: Echinostomatiformes
18 Digeneans: Plagiorchiformes and Opisthorchiformes
19 Monogononoea
20 Cestoidea: Form, Function, and Classification of the Tapeworms
Invertebrate Biology

BIOLOGY OF THE INVERTEBRATES
6th Edition

By Jan A Pechenik, Tufts University

2010 (January 2009) / 608 pages
ISBN: 9780073028262
ISBN: 9780071270410 [IE]
http://www.mhhe.com/pechenik6e

This textbook is the most concise and readable invertebrates book in terms of detail and pedagogy (other texts do not offer boxed readings, a second color, end of chapter questions, or pronunciation guides). All phyla of invertebrates are covered (comprehensive) with an emphasis on unifying characteristics of each group.

NEW TO THIS EDITION

- A new chapter has been added called: The Xenoturbellids.
- Chapter 13 The Annelids and Chapter 18 Three Phyla of Uncertain Affiliation: Gastrotricha, Chaetognatha, and Cyliophora have been heavily revised and updated.
- Many new photographs and drawings have been added, to clarify the text and to help generate interest among students.

COMPLIMENTARY COPIES

Complimentary desk copies are available for course adoption only.
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Website: www.mhedcation.asia
Vertebrate Biology

Textbook

International Edition

VERTEBRATES COMPARATIVE ANATOMY,
FUNCTION, EVOLUTION
5th Edition
By Kenneth Kardong, Washington State University-Pullman
2009 (August 2008) / 800 pages
ISBN: 9780073040585
ISBN: 9780071270335 [IE]
http://www.mhhe.com/kardong5e

This one-semester text is designed for an upper-level majors course. Vertebrates features a unique emphasis on function and evolution of vertebrates, complete anatomical detail, and excellent pedagogy. Vertebrate groups are organized phylogenetically, and their systems discussed within such a context. Morphology is foremost, but the author has developed and integrated an understanding of function and evolution into the discussion of anatomy of the various systems.

Contents
1 Introduction
2 Origin of Chordates
3 The Vertebrate Story
4 Biological Design
5 Life History
6 Integument
7 Skeletal System: The Skull
8 Skeletal System: The Axial Skeleton
9 Skeletal System: The Appendicular Skeleton
10 The Muscular System
11 The Respiratory System
12 The Circulatory System
13 The Digestive System
14 The Urogenital System
15 The Endocrine System
16 The Nervous System
17 Sensory Organs
18 Conclusions

Laboratory

COMPARATIVE VERTEBRATE ANATOMY
A Laboratory Dissection Guide, 5th Edition
By Kenneth Kardong, Washington State University-Pullman and Edward J Zalisko, Blackburn College
2009 (October 2008) / 400 pages
ISBN: 9780072970081

This high-quality laboratory manual may accompany any comparative anatomy text, but correlates directly to Kardong’s Vertebrates: Comparative Anatomy, Function, Evolution text. This lab manual carefully guides students through dissections and is richly illustrated. First and foremost, the basic animal architecture is presented in a clear and concise manner. Throughout the dissections, the authors pause strategically to bring the students’ attention to the significance of the material they have just covered.

Contents
1 Introduction
Classification and Comparison
Defining the Chordates
Studying Advice
Designing for Students
2 Protochordates
3 Agnathans—Examination of a Primitive Vertebrate: The Lamprey
Agnathans
Adult Lamprey Anatomy
Anatomy of the Lamprey (Ammocoete) Larva
4 Vertebrate Integuments
Introduction
Examination of Vertebrate Integuments
Specializations of the Integument
5 Skeletal System
Tissues of the Skeletal System
Divisions of the Skeletal System
Postcranial Skeleton
Skull
Cranial Skeleton
Teeth
6 Muscular System and External Anatomy
Introduction
Shark Dissection
Necturus
Cat
7 Digestive Systems
Introduction
Shark

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VERTEBRATE BIOLOGY
By Donald Linzey, Wytheville Community College
2001 / 552 pages
ISBN: 9780697363879 (Out of Print)
ISBN: 9780071188661 [IE]
www.digitalzoology.com

Contents
Part 1 The Vertebrate Story: An Overview
Part 2 Systematics and Vertebrate Evolution
Part 3 Vertebrate Zoogeography
Part 4 Early Chordates and Jawless Fishes
Part 5 Gnnathostome Fishes
Part 6 Amphibians
Part 7 Evolution of Reptiles
PLANTS & ANIMALS

Necturus
Cat
8 Circulatory and Respiratory Systems
Introduction
Shark
Necturus
Cat
9 Urogenital System
Introduction
Shark
Necturus
Cat
10 Nervous System
Introduction
Shark
Sheep Brain

Comparative Vertebrate Anatomy

International Edition

VERTEBRATES COMPARATIVE ANATOMY, FUNCTION, EVOLUTION
5th Edition
By Kenneth Kardong, Washington State University-Pullman
2009 (August 2008) / 800 pages
ISBN: 9780073040585
ISBN: 9780071270335 [IE]
http://www.mhhe.com/kardong5e

This one-semester text is designed for an upper-level majors course. Vertebrates features a unique emphasis on function and evolution of vertebrates, complete anatomical detail, and excellent pedagogy. Vertebrate groups are organized phylogenetically, and their systems discussed within such a context. Morphology is foremost, but the author has developed and integrated an understanding of function and evolution into the discussion of anatomy of the various systems.

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8 Skeletal System: The Axial Skeleton
9 Skeletal System: The Appendicular Skeleton
10 The Muscular System
11 The Respiratory System
12 The Circulatory System
13 The Digestive System
14 The Urogenital System
15 The Endocrine System
16 The Nervous System
17 Sensory Organs
18 Conclusions
NEW TO THIS EDITION

- Incorporating feedback from current users and reviewers of the text, there has been an overall update of content throughout. The ecological perspective remains at the forefront of the book.

- In response to reviewer suggestions, pronunciations have been added to the Key Terms list at the end of each chapter as well as the glossary.

- The most up-to-date phylogenetic evolutionary tree has been added to the front cover of the book. This diagram will allow students immediate and continual reminders of the relationships among the animal phyla they are studying.

- In response to reviewer suggestions Concept Review questions (with answers) which include both true/false and multiple choice have been added to the end of each chapter.

- Chapter 8 has been completely rewritten in accordance with the 2005 reclassification of the Eukarya by the International Society of Protostologists. Emphasis is placed on the medically important protists.

- Chapter 10 includes coverage of two new phyla (1) Acoelomorpha and (2) Cycliophora, one of the most recently described phyla, which contains animals that live only on the mount parts of lobsters.
A top choice among students and instructors alike, Animal Diversity continues to earn the appreciation of both science majors and non-majors alike. The book uses the theme of evolution to develop a broad-scale view of animal diversity—students focus not only the organisms themselves, but also the processes that produce evolutionary diversity. The book is unique in its comprehensive survey of zoological diversity and its emphasis on evolutionary, systematic and ecological principles, all in one package.

Contents
1 Science of Zoology and Evolution of Animal Diversity
2 Animal Ecology
3 Animal Architecture
4 Taxonomy and Phylogeny of Animals
5 Protozoan Groups
6 Sponges: Phylum Porifera
7 Radiate Animals: Cnidarians and Ctenophores
8 Acoelomate Bilateral Animals: Flatworms, Ribbon Worms, and Mesozoans
9 Gnathiferans and Smaller Lophotrochozoans
10 Molluscs
11 Annelids and Allied Taxa
12 Smaller Ecdysozoans
13 Arthropods
14 Gnathiferans and Smaller Lophotrochozoans
10 Molluscs
11 Annelids and Allied Taxa
12 Smaller Ecdysozoans
13 Arthropods
14 Gnathiferans and Smaller Lophotrochozoans
15 Vertebrate Beginnings: The Chordates
16 Fishes
17 The Early Tetrapods and Modern Amphibians
18 Amniote Origins and Nonavian Reptiles
19 Birds
20 Mammals

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Zoology Laboratory - Majors

LABORATORY STUDIES IN ANIMAL DIVERSITY
5th Edition
By Cleveland Hickman, Washington & Lee University
2009 (December 2008) / 288 pages
ISBN: 9780073349251

Laboratory Studies in Animal Diversity offers students hands-on experience in learning about the diversity of life. It provides students the opportunity to become acquainted with the principal groups of animals and to recognize the unique anatomical features that characterize each group as well as the patterns that link animal groups to each other.

CONTENTS
Part 1: Activity of Life
1 Ecological Relationships of Animals
2 Introduction to Animal Classification
Part 2: The Diversity of Animal Life
3 The Microscope
4 Protozoan Groups
5 The Sponges
6 The Radiate Animals
7 The Flatworms
8 Five Small Protostome Phyla
9 The Molluscs
10 The Annelids
11 The Chelicerate Arthropods
12 The Crustacean Arthropods
13 The Arthropods: Myriapods and Insects
14 The Echinoderms
15 Phylum Chordata: A Deuterostome Group
16 The Fishes—Lampreys, Sharks, and Bony Fishes
17 Class Amphibia
18 The Nonavian Reptiles
19 The Birds
20 The Mammals

GENERAL ZOOLOGY LABORATORY MANUAL
15th Edition
By Charles Lytle, North Carolina State University—Raleigh and John Meyer/North Carolina State University
2009 (November 2008) / 400 pages
ISBN: 9780073051628
http://www.mhhe.com/zoology

General Zoology Laboratory Guide is ideal for the laboratory that emphasizes the dissection and microscopic study of live and preserved specimens. Recognized for its accuracy and readability, this manual is comprehensive in its representation of the major groups of animal phyla. This new edition is suitable for a wide range of course needs and structures.

CONTENTS
Laboratory Safety
Comparative Safety of Preservatives
Handling and Care of Animals in the Laboratory
1. Microscopy
2. Animal Cells and Tissues
3. Mitosis and Meiosis
4. Development
5. Morphology, Classification, and Systematics
6. Protozoa
7. Porifera
8. Cnidaria and the Radiate Phyla
9. Platyhelminthes
10. Other Protostome Phyla
11. Mollusca
12. Annelida
13. Arthropoda
14. Echinodermata
15. Chordata
16. Shark Anatomy
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### PHYSICS & ASTRONOMY

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This is an outstanding text with a long history that has been updated and given a fresh look. The 2010 copyright year represents the 50th anniversary of the publishing of this classic text. The text is also accompanied by strong media component with the ARIS online homework system, “CPS” eInstruction student response system questions, more extensive online quizzing, and PowerPoint lectures. Aimed at presenting the essentials of physics, chemistry, earth science, and astronomy in a clear, easy-to-understand way, The Physical Universe shows students how science works, how scientists approach problems, and why science constantly evolves in its search for understanding. The text can also be packaged with its long time companion student study guide, which includes a review of chapter terms and concepts; self quizzing for extra practice; and solved problems from the text.

NEW TO THIS EDITION

NEW Chapter 4 entitled “Energy and the Future” has much newly added text coverage, 17 sidebars, and 35 illustrations, 22 of them new.

CONTENTS

1 The Scientific Method
   How Scientists Study Nature
2 Motion
   Describing Motion
   Acceleration of Gravity
   Gravitation
3 Energy
   Work
   Energy
   Momentum
   Relativity
   Energy and Civilization
4 Energy and the Future
   The Energy Problem
   Fossil Fuels
   Alternative Sources
   Strategies for the Future
5 Matter and Heat
   Temperature and Heat
   Fluids
   Kinetic Theory of Matter
   Changes of State
   Energy Transformations
6 Electricity and Magnetism
   Electric Charge
   Electricity and Matter
   Electric Current
   Magnetism
   Using Magnetism
7 Waves
   Wave Motion
   Sound Waves
   Electromagnetic Waves
   Wave Behavior
8 The Nucleus
   Atom and Nucleus
   Radioactivity
   Nuclear Energy
   Fission and Fusion
   Elementary Particles
9 The Atom
   Quantum Theory of Light
   Matter Waves
   The Hydrogen Atom
   Quantum Theory of the Atom
10 The Periodic Law
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   The Periodic Law
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   Chemical Bonds
11 Crystals, Ions, and Solutions
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12 Chemical Reactions
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   Reaction Rates
   Oxidation and Reduction
13 Organic Chemistry
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   Structures of Organic Molecules
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   Chemistry of Life
14 Atmosphere and Hydrosphere
   The Atmosphere
   Weather
   Climate
   The Hydrosphere
15 The Rock Cycle
   Rocks
   Within the Earth
   Erosion
   Vulcanism
16 The Evolving Earth
   Tectonic Movement
   Plate Tectonics
   Methods of Historical Geology
   Earth History
17 The Solar System
   The Family of the Sun
   The Inner Planets
   The Outer Planets
   The Moon
18 The Stars
   Tools of Astronomy
   The Sun
   The Stars
   Life Histories of the Stars
19 The Universe
   Galaxies
   The Expanding Universe
   Evolution of the Universe
Physical Science, Eighth Edition, is a straightforward, easy-to-read, but substantial introduction to the fundamental behavior of matter and energy. It is intended to serve the needs of non-science majors who are required to complete one or more physical science courses. It offers exceptional, straight-forward writing, complimented with useful pedagogical tools. Physical Science introduces basic concepts and key ideas while providing opportunities for students to learn reasoning skills and a new way of thinking about their environment. No prior work in science is assumed. The text offers students complete coverage of the physical sciences with a level of explanation and detail appropriate for all students. The sequence of chapters in Physical Science is flexible, and the instructor can determine topic sequence and depth of coverage as needed. The materials are also designed to support a conceptual approach, or a combined conceptual and problem-solving approach. With laboratory studies, the text contains enough material for the instructor to select a sequence for a two-semester course. It can also serve as a text in a one-semester physics and chemistry course.

CONTENTS

1 What Is Science?
2 Physics
3 Motion
4 Energy
5 Heat and Temperature
6 Waves and Sound
7 Electricity
8 Chemistry
9 Atoms and Periodic Properties
10 Chemical Bonds
11 Chemical Reactions
12 Water and Solutions
13 Organic Chemistry
14 Nuclear Reactions
15 Astronomy
16 The Universe
17 The Solar System
18 Earth in Space
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20 Plate Tectonics
21 Building Earth's Surface
22 Shaping Earth's Surface
23 Geologic Time
24 Atmosphere of Earth
25 Weather and Climate
26 Earth's Waters
27 Appendix A Mathematical Review
28 Appendix B Solubilities Chart
29 Appendix C Relative Humidity Table
30 Appendix D Solutions to Follow-UP Examples
31 Appendix E Solutions for Group A Parallel Exercises

LAB MANUAL TO ACCOMPANY PHYSICAL SCIENCE
8th Edition
By Bill Tillery, Arizona State University-Tempe
2009 (September 2008)
ISBN: 9780073349190

The laboratory manual, written and classroom tested by the author, presents a selection of laboratory exercises specifically written for the interests and abilities of non-science majors. There are laboratory exercises that require measurement, data analysis, and thinking in a more structured learning environment. Alternative exercises that are open-ended "Invitations to Inquiry" are provided for instructors who would like a less structured approach. When the laboratory manual is used with Physical Science, students will have an opportunity to master basic scientific principles and concepts, learn new problem-solving and thinking skills, and understand the nature of scientific inquiry from the perspective of hands-on experiences. The instructor's edition of the laboratory manual can be found on the ARIS Site for Physical Science.

CONTENTS

Introduction
Materials Required for Each Experiment
1. Graphing
2. Ratios
3. Motion
4. Free Fall
5. The Pendulum
6. Projectile Motion
7. Newton's Second Law
8. Conservation of Momentum
9. Rotational Equilibrium
10. Centripetal Force
11. Archimedes' Principle
12. Boyle's Law
13. Work and Power
14. Friction
15. Hooke's Law
16. Thermometer Fixed Points
17. Absolute Zero
18. Specific Heat
19. Static Electricity
20. Electric Circuits
21. Series and Parallel Circuits
22. Ohm's Law
23. Magnetic Fields
24. Electromagnets
25. Standing Waves
26. Speed of Sound in Air
27. Reflection and Refraction
28. Physical and Chemical Change
29. Hydrogen
30. Oxygen
31. Conductivity of Solutions
32. Percentage Composition
33. Metal Replacement Reactions
34. Producing Salts by Neutralization
35. Identifying Salts
36. Solubility Curves
37. Natural Water
38. Measurement of pH
39. Amount of Water Vapor in the Air
40. Nuclear Radiation
41. Growing Crystals
42. Properties of Common Minerals
43. Density of Igneous Rocks
44. Latitude and Longitude
45. Topographic Maps
46. Telescopes
47. Celestial Coordinates
48. Motions of the Sun
49. Phases of Moon
50. Power Output of Sun
51. Special Project

Appendix
I. The Simple Line Graph
II. The Slope of a Straight Line
II. Experimental Error
IV. Significant Figures
V. Conversion of Units
VI. Scientific Notation

SCHAUM'S OUTLINE OF PHYSICAL SCIENCE
2nd Edition
By Arthur Beiser, formerly of New York University
1988 / 368 pages
ISBN: 9780070044197
A Schaum's Publication

CONTENTS
Physical Quantities.
Motion in a Straight Line.
The Laws of Motion.
Circular Motion and Gravitation.
Energy.
Momentum.
Relativity.
Fluids.
Heat.
Kinetic Theory of Matter.
Thermodynamics.
Electricity.
Electric Current.
Magnetism.
Electromagnetic Induction.
Waves.
Lenses.
Quantum Physics.
The Nucleus.
Radioactivity and Elementary Particles.
Theory of the Atom.
The Periodic Law.
Molecules and Solids.
Formulas and Equations.
Stoichiometry.
Gas Stoichiometry.
Solutions.
Acids and Bases.
Oxidation and Reduction.
Electrochemistry.
Chemical Energy.
Reaction Rates and Equilibrium.
Organic Chemistry.
The Atmosphere.
Weather.
The Oceans.
Earth Materials.
Erosion and Sedimentation.
Vulcanism and Diastrophism.
The Earth's Interior.
Continental Drift.
Earth History.
Earth and Sky.
The Solar System.
The Sun.
The Stars.
The Universe.

SCHAUM'S OUTLINE OF LAGRANGIAN DYNAMICS
By Dave Wells, University of Texas
1967 / 368 pages
ISBN: 9780070692589
A Schaum’s Publication

CONTENTS
Background Material.
Lagrange’s Equations of Motion of a Single Particle.
Lagrange’s Equations of Motion for a System of Particles.
Conservative Systems.
Dissipative Forces.
General Treatment of Moments and Products of Inertia.
Lagrangian Treatment of Rigid Body Dynamics.
The Euler Method of Rigid Body Dynamics.
Small Oscillations about Positions of Equilibrium.
Small Oscillations about Steady Motion.
Forces of Constraint.
Driving Forces Required to Establish Known Motions.
Effects of Earth’s Figure and Daily Rotation on Dynamical Problems.
Application of Lagrange’s Equations to Electrical and Electromechanical Systems.
Hamilton’s Equations of Motion.
Hamilton’s Principle.
Basic Equations of Dynamics in Vector and Tensor Notation.
Appendix: Relations between Direction Cosines.

Integrated Sciences

INTEGRATED SCIENCE
5th Edition
By Bill W Tillery, Arizona State University--Tempe, Eldon Enger and Frederick C Ross of Delta College
2011 (January 2010)
ISBN: 9780077354824
ISBN: 9780071222136 [IE]
http://www.mhhe.com/tillery

Integrated Science, Fifth Edition is a straightforward, easy-to-read, yet substantial introduction to the fundamental behavior of matter and energy in living and nonliving systems. The authors provide even, well-integrated coverage of physics, chemistry, earth science, astronomy, and biology. The text’s pedagogy (chapter outlines, core concept maps, and overviews) reveals how the science disciplines are interrelated and integrated throughout the text. This edition continues to introduce basic concepts and key ideas while providing opportunities for students to learn reasoning skills and a new way of thinking about their environment. The book is intended to serve the needs of non-science majors who are required to complete one or more science courses as part of a general or basic studies requirement. No prior work in science is assumed. The language, as well as the mathematics, is as simple as can be practical for a college-level science course.

NEW TO THIS EDITION
- A section on Climate Change and Global Warming has been added to chapter 17.
Ch 22 includes a NEW brief section on recent applications of evolutionary theory.

CONNECT Physics for Integrated Science includes all Parallel Exercises from the text (in open-ended, numerical entry algorithmic format whenever possible) as well as all Questions for Thought in multiple-choice format (written by the authors of the text). CONNECT allows instructors to manage their courses and create online auto-graded homework, quizzes, and tests with an integrated grade book.

Instructors also have access to PowerPoint lecture outlines, an Instructor’s Manual, an Instructor’s Edition Lab Manual, electronic images from the text, clicker questions, quizzes, animations, and many other resources directly tied to text-specific materials in Integrated Science. Students have access to self-quizzing, animations, and more.

Contents
Ch 1 What Is Science?
Ch 2 Motion
Ch 3 Energy
Ch 4 Heat and Temperature
Ch 5 Wave Motions and Sound
Ch 6 Electricity
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Ch 8 Atoms and Periodic Properties
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Ch 11 Nuclear Reactions
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Ch 15 The Earth
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Visit McGraw-Hill Education (Asia) Website: www.mheducation.asia

NEW

LAB MANUAL TO ACCOMPANY INTEGRATED SCIENCE 5th Edition
By Bill W Tillery, Arizona State University-Tempe, Eldon Enger, Delta College and Robert S Ross, California State University-Chico
2011 (February 2010)
ISBN: 9780077292867

The lab manual was written and classroom-tested by the authors of the text. It has been revised in recent editions to emphasize a more inquiry-oriented approach and to increase the number of biology labs. Each lab begins with an open-ended “Invitations to Inquiry,” designed to peak student interest in the lab concept. This is followed by laboratory exercises that require measurement and data analysis for work in a more structured learning environment. When the laboratory manual is used with Integrated Science text, students will have an opportunity to understand the nature of scientific inquiry from the perspective of hands-on experiences in order to master basic scientific principles and concepts and learn new problem-solving and thinking skills. There is also an instructor’s edition lab manual available for instructors on Instructor’s Companion Site.

Conceptual Physics

International Edition

PHYSICS OF EVERYDAY PHENOMENA 6th Edition
By Thomas Griffith, Pacific University
2009 (September 2008) / 528 pages
ISBN: 9780073512112
ISBN: 9780071284523 [IE]
http://www.mbh.com/griffith

The Physics of Everyday Phenomena, Sixth Edition, introduces students to the basic concepts of physics using examples of common occurrences. Intended for use in a one-semester or two-semester course in conceptual physics, this book is written in a narrative style, frequently using questions designed to draw the reader into a dialogue about the ideas of physics. This inclusive style allows the book to be used by anyone interested in exploring the nature of physics and explanations of everyday physical phenomena. Beginning students will benefit from the large number of student aids and the reduced math content. Professors will appreciate the organization of the material and the wealth of pedagogical tools.

Contents
Chapter One--Physics, the Fundamental Science
Chapter Two--Describing Motion
Chapter Three--Falling Objects and Projectile Motion
Chapter Four--Newton’s Laws: Explaining Motion
Chapter Five--Circular Motion, the Planets, and Gravity
Chapter Six--Energy and Oscillations
Chapter Seven--Temperature and Heat
Chapter Eight--Momentum and Impulse
Chapter Nine--The Behavior of Fluids
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Chapter 10: Elasticity and Oscillations
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Chapter 12: Sound
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A.7 Approximations
A.8 Vectors
Appendix B: Table of Selected Isotopes
Answers to Selected Questions and Problems

NEW TO THIS EDITION
❖ New “Connections” feature identifies areas in each chapter where important concepts are revisited. A marginal “Connections” heading and summary adjacent to the coverage in the main text help students easily recognize that a previously introduced concept is being applied to the current discussion.
❖ New Checkpoint questions have been added to applicable sections of the text. The answers to the Checkpoints are found at the end of the chapter.
❖ Non-essential coverage and derivations have been moved from the text to the text’s online site. Identifiers in the text direct students to additional information online.
❖ Electronic Media Integration has been incorporated throughout the text. Icons indicate topics in the text where accompanying interactives, animations, and tutorials can be found online to aid in student understanding of physics concepts.
❖ The topical question from the chapter opening vignette now appears in the margin (along with a reduced version of the chapter opening image).
❖ Applications have been clearly identified as such in the text with a complete listing in the front matter.
❖ Many helpful subheadings have been added to the text to help students quickly identify new subtopics.
❖ End-of-chapter problem sets have been revised and include many new problems: over 100 new problems in total.
❖ The number of problems in the Review & Synthesis sections has been increased in the new edition(s); over 30 new problems in total. The MCAT® Review questions have been retained.

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A.4 Proportions and ratios

International Edition

PHYSICS
2nd Edition
By Alan Giambattista, Betty Richardson and Robert Richardson of Cornell University-Ithaca

2010 (January 2009)
ISBN: 9780077339685
ISBN: 9780070172449 [IE]
http://www.mhhe.com/grr

Physics 2nd edition is an alternate version of the College Physics 3rd edition text by Giambattista/Richardson/Richardson. The key difference is that Physics covers kinematics and forces in the more traditional organization of beginning with Kinematics and proceeding to forces. (College Physics takes an integrated approach to forces and kinematics, introducing forces and interweaving kinematics.)
A.5 Geometry
A.6 Trigonometry
A.7 Approximations
A.8 Vectors
Appendix B: Table of Selected Isotopes
Answers to Selected Questions and Problems

SCHAUM’S OUTLINE OF APPLIED PHYSICS
4th Edition Revised
By Arthur Beiser
2009 (June 2009) / 480 pages
ISBN: 9780071611572
A Schaum’s Publication

Applied Physics is the study of algebra-based physics, a course taken by non-physics majors, mainly in technical schools, 2- and 4- year community colleges and universities, who need to apply physics to their every-day job, as opposed to focusing on further study or theoretical physics. Applied Physics is a required course for many engineers, mechanics, optical engineers, and other technical professions. For example, any kind of higher level mechanic or engineer, such as those found in aviation, throughout the military, or in optical engineering programs, study Applied Physics.

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Chapter 1. Useful Math
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Chapter 7. Energy
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Chapter 12. Simple Machines
Chapter 13. Elasticity
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Chapter 15. Waves and Sound
Chapter 16. Fluids at Rest
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SCHAUM’S OUTLINE OF COLLEGE PHYSICS
10th Edition
By Frederick J Bueche, University of Dayton-Emeritus and Eugene Hecht, Adelphi University
2006 (Nov 2005) / 448 pages
ISBN: 9780071448147
A Schaum’s Publication

An introduction to physics that you don’t need to be a math whiz to understand. Schaum’s Outline of College Physics, Tenth Edition, is a clear, easily understood review of introductory noncalculus-based physics. It is especially helpful if you do not have a strong background in mathematics.

SCHAUM’S A-Z PHYSICS
By Michael Chapple
2003 / 288 pages
ISBN: 9780071419376
A Schaum’s Publication

Schaum’s A-Z handbooks make excellent complements to course textbooks and test preparation guides. Ideal for ambitious high school seniors—especially AP students—and college freshmen, they feature concise, thoroughly cross-referenced definitions of hundreds of key terms and phrases that help students quickly break through the jargon barrier. Clear explanations of key concepts, supplemented with lucid illustrations, help build mastery of theory and provide a ready reference to supplement class work. Each entry begins with a clear, one-sentence definition and is followed by an explanation and examples.

- A-to-Z format for ready reference
- Clear definitions and explanations, cross-referenced and enhanced with numerous worked examples and illustrations
- Extended explanations of more important concepts
- Review lists of entries that relate to main topics in the Appendix aid review

SCHAUM’S EASY OUTLINE OF COLLEGE PHYSICS
By J. Bueche, Emeritus University of Dayton, Eugene Hecht, Adelphi University and George J. Hademenos
2000 / 138 pages
ISBN: 9780070527119
A Schaum’s Publication

CONTENTS
Newtonian Mechanics.
Density, Elasticity, and Fluids.
Heat, Temperature, and Thermodynamics.
Waves.
Electricity and Magnetism.
Light and Geometrical Optics.

SCHAUM’S OUTLINE OF BEGINNING PHYSICS II
By Alvin Halpern
1998 / 592 pages
ISBN: 9780070257078
A Schaum’s Publication

CONTENTS
Wave Motion.
Sound.
Coulomb’s Law and Electric Fields.
Electric Potential and Capacitance.
Simple Electric Circuits.
Magnetism—Effect of the Field.
Magnetism—Source of the Field.
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Electromagnetic Waves.
Light and Optical Phenomena.
Mirrors, Lenses and Optical Instruments.
Interference, Diffraction and Polarization.
Special Relativity.
Particles of Light and Waves of Matter: Introduction to Quantum Physics.
SCHAUM'S OUTLINE OF BEGINNING PHYSICS I
By Alvin Halpern, City University of New York
1995 / 471 pages
ISBN: 9780070256538
A Schaum’s Publication
CONTENTS
Introduction and Mathematical Background.
Motion in a Straight Line.
Motion in a Plane.
Forces and Equilibrium.
Newton’s Second Law.
Work and Mechanical Energy.
Energy, Power and Simple Machines.
Impulse and Momentum.
Equilibrium for Rigid Bodies.
Rotational Motion.
Elasticity and Objects under Stress.
Simple Harmonic Motion.
Fluids at Rest.
Fluids in Motion.
Temperature and Heat.
Thermal Energy Transfer.
Gas Laws and Kinetic Theory.
Thermodynamics: The First and Second Laws.

3,000 SOLVED PROBLEMS IN PHYSICS
By Alvin Halpern
1988
ISBN: 9780070257344
A Schaum’s Publication
http://books.mcgraw-hill.com/cgi-bin/getbook.pl?isbn=0070257345&adkey=W02003
Solved Problem Series -- These books help readers review and master what they've learned by showing them how to solve thousands of relevant problems. Perfect for preparing for graduate or professional exams, these detailed reminders of problem-solving techniques show readers the best strategies for answering even the toughest questions, including the types that appear on typical tests.

Technical Physics

International Edition

PHYSICS
7th Edition
By Paul E. Tippens
2007 (Dec 2005)
ISBN: 9780073222707
ISBN: 9780071107594 [IE]
ISBN: 9780071107969 [IE with OLC]
http://www.mhhe.com/tippens7e
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University Physics

New

International Edition

UNIVERSITY PHYSICS
Standard Version, Chapters 1-35

By Wolfgang Bauer and Gary Westfall of Michigan State University-East Lansing

2011 (January 2010)
ISBN: 9780077354701
ISBN: 9780071221788 [IE]
http://www.mhhe.com/bauerwestfall

University Physics, 1e by Bauer and Westfall is a comprehensive text with enhanced calculus coverage incorporating a consistently used 7-step problem solving method. The authors include a wide variety of everyday contemporary topics as well as research-based discussions. Both are designed to help students appreciate the beauty of physics and how physics concepts are related to the development of new technologies in the fields of engineering, medicine, astronomy and more.

FEATURES

- Organized like a good research seminar: “Tell them what you will tell them, then tell them, and then tell them what you told them!” The authors start each chapter with What We Will Learn: a quick summary of the main points without any equations. And at the end of each chapter, What We Have Learned/Exam Study Guide contains chapter key concepts including major equations, symbols, and key terms. All symbols and letters used in the chapter’s formulas are also explained.

- University Physics consistently-used multi-step problem solving theme including Solved Problems, Examples, Problem Solving Practice, and EOCPs. Numbered Solved Problems are fully-stepped out, worked problems, each consistently following the 7-step method described in Chapter 1. Briefer Examples (Problem statement and Solution only) focus on a specific point(s) or concept. The briefer Examples also serve as a bridge between fully worked-out Solved Problems (with all 7-steps) and the homework problems (with no help). Problem Solving Practice will provide additional Solved Problems, again following the full 7-step format, and appear immediately before the end of chapter problems in order to review and emphasize the fundamental concepts of the chapter. Additional Problem Solving Strategies and Guidelines are also given here.

- Recent research results are presented throughout the text illustrating the incredible advances of the last few decades. The “Big Picture” section at the beginning of the text is designed to introduce students to some of the amazing new frontiers of research.

- University Physics discusses the broad topic of energy through concepts of different energy sources (fossil, renewable, nuclear, etc.), energy efficiency, alternative energy sources, and effects of our energy supply choices on the environment and global warming.

- End of chapter Question and Problem sets: Multiple-Choice Questions, Questions, Problems, and Additional Problems contributed by a panel of writers to provide a wide variety of content and level. These same contributors authored the test bank questions for consistency.

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INVITATION TO PUBLISH

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Visit McGraw-Hill Education (Asia)
Website: www.mheducation.asia
University Physics, 1e includes enhanced calculus-coverage, including some mathematical topics that have been removed from other texts. However, these topics have been written such that they can be left-out without affecting the topic coverage. Detailed Derivations have also been called-out with a specified design so that they can be included or not, as appropriate for the course. There is also a Math Appendix which includes a calculus primer.

- Self Test Opportunities Questions are included after the coverage of major concepts within the text.
- In-Class Exercises are designed to be used with personal response system technology. They appear in the text so that students may begin contemplating the concepts. These exercises are also available in PowerPoint format.

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SCHAUM’S OUTLINE OF MATHEMATICS FOR PHYSICS STUDENTS
By Robert Steiner, Teachers College at Columbia University and Philip Schmidt, State University of New York-New Paltz
2007 (January 2007) / 409 pages
ISBN: 9780071461580
A Schaum’s Publication

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Chapter 17: The Calculus of Single-Variable Functions: A Physics Approach
Chapter 18: Vectors

Part III: Advanced Topics in Mathematics

OPTICS

4th Edition
By Ajoy Ghatak, Indian Institute of Technology, Delhi, India
2008 (July 2008) / 532 pages
ISBN: 9780070262157
McGraw-Hill India Title
www.mhhe.com/ghatak/optics4e

This comprehensive and thoroughly revised edition, covering the fundamentals for all-Classical, Modern and Everyday Optics, would meet the requirements of undergraduate students of science and engineering. Researchers involved in general areas of optics and laser would find this book immensely useful.

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2. What is Light?

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17), Magnetars and gamma ray-ray flares (Chapter 20), the fraction of stars in binary and multiple systems (Chapter 21), membership of Local Group of Galaxies (Chapter 24 and Appendices), high redshift supernovae and the acceleration of expansion (Chapter 26), WMAP results (Chapter 26), and planets orbiting other stars (Chapter 27).

- 23 Interactives located on the Astronomy website. Each Interactive is programmed in Flash for a strong visual appeal. Each includes an analysis tool (interactive model), a tutorial describing its function, content describing its principle themes, related exercises, and solutions to the exercises.

- Planetary activities written for compatibility with Starry Night planetarium software! Versions of these exercises are also available on the Astronomy website.

- Electronic Media Integration - icons have been placed throughout the text to indicate instances where animations and interactives can be found on the Astronomy website related to certain topics.

- Fix offers a substantial End-of-Chapter section:
- Chapter Summary - the summary highlights the key elements of the chapter;
- Key Terms - terms are defined in context and found in the glossary;
- Conceptual Questions - the Conceptual Questions require qualitative verbal answers;
- Problems - the reader’s mastery of the equations can be tested by the Problems at the end of each chapter;
- Figure-Based Questions: require the reader to extract the answer from a particular graph or figure in the chapter;
- Group Exercises - these exercises, offer students the opportunity to work within a small or large group to understand difficult astronomy concepts. About 1-4 per chapter.

- Historical emphasis: Throughout the text the historical development of astronomy has been emphasized to show astronomy, like other sciences, advances through the efforts of many scientists and to show how present ideas are developed.

- Planetary Data Boxes are included throughout the text

- Worked Example Boxes are provided after most equations. These show how and when to use an equation and tell why the equation is important.

- Presentation Center - Build instructional materials wherever, whenever, and however you want! Presentation Center is an online digital library containing assets such as photos, artwork, animations, PowerPoints, and other types of media that can be used to create customized lectures, visually enhanced tests and quizzes, compelling course websites, or attractive printed support materials.

- Access to your book, access to all books! This ever-growing digital library gives instructors the power to utilize assets specific to their adopted textbook as well as content from other McGraw-Hill books in the library. Presentation Center’s dynamic search engine allows you to explore by discipline, course, textbook chapter, asset type, or keyword. Simply browse, select, and download the files you need to build engaging course materials. All assets are copyrighted by McGraw-Hill Higher Education but can be used by instructors for classroom purposes.

- Fix offers a substantial End-of-Chapter section:
- Over 300 new and 100 revised end of chapter problems have been written for this edition. Problems are organized and cross reference to the section of the text where the problem topic is discussed.

NEW TO THIS EDITION

- InterChapter Essays (optional readings) focus on topics of general interest, such as time and life in the universe. NEW – A new essay has been added to this edition on “Special and General Relativity”.

EXPLORATIONS: AN INTRODUCTION TO ASTRONOMY
6th Edition

By Thomas T Arny, University of Mass-Amherst

2010 (September 2009)
ISBN: 9780077345099
ISBN: 9780070172753 [IE]

http://www.mhhe.com/arny

Arny: Explorations-An Introduction to Astronomy, 6th edition, is built on the foundation of its well known writing style, accuracy, and emphasis on current information. This new edition continues to offer the most complete technology/new media support package available. That technology/new media package includes: Interactives, Animations, and introducing Connect - online homework and course management.

NEW TO THIS EDITION

- Over 300 new and 100 revised end of chapter problems have been written for this edition. Problems are organized and cross reference to the section of the text where the problem topic is discussed.

- InterChapter Essays (optional readings) focus on topics of general interest, such as time and life in the universe. NEW – A new essay has been added to this edition on “Special and General Relativity”.

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New chapter!!! Chapter 1, “The Night Sky” has been broken apart into two new chapters; Chapter 1, “The Cycles of the Sky” and Chapter 2, “The Rise of Astronomy”.

McGraw-Hill’s Connect is a complete, online tutorial, electronic homework, and course management system, designed for greater ease of use than any other system available. This program enables students to complete their homework online, as assigned by their instructors. Connect provides all instructor resources online, as well provides the ability to create or edit questions from the question bank, import your own content, and automatically grade and report easy-to-assign homework, quizzes, and testing.

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PATHWAYS TO ASTRONOMY
with Starry Nights Pro DVD, Version 5.0
2nd Edition
By Stephen E. Schneider and Thomas T. Arny of University of Massachusetts
2009 (September 2008)
ISBN: 9780077401832

http://www.mhhe.com/schneider

Pathways to Astronomy breaks down introductory astronomy into its component parts. The huge and fascinating field of astronomy is divided into 84 units. These units are woven together to flow naturally for the person who wants to read the text like a book, but it is also possible to assign them in different orders, or skip certain units altogether. Professors can customize the units to fit their course needs. They can select individual units for exploration in lecture while assigning easier units for self-study, or they can cover all the units in full depth in a content-rich course. With the short length of units, students can easily digest the material covered in an individual unit before moving onto the next unit. Pathways to Astronomy offers the most complete technology media support package available. That technology media package includes: Starry Night Planetarium Software; ARIS (text web site providing a complete online electronic homework and course management system); 23 Interactives (on ARIS); Animations (on ARIS). Electronic Media Integration has been incorporated throughout the text by the use of icons to indicate where additional understanding can be gained through an animation or interactive.

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SCHAUM'S OUTLINE OF ASTRONOMY
By Starcey Palen, University of Washington
2002 / 304 pages
ISBN: 9780071364362
A Schaum’s Publication
Providing a basic introduction to a beginning astronomy course, with an emphasis on problem-solving methods ordinarily taught “on the fly” or in ad-hoc tutorials, this essential guide provides a focused, comprehensive presentation of basic astronomical problem-solving techniques. Readers learn by example with the help of more than 200 detailed problems supplemented with over 100 detailed charts and graphs.

SCHAUM’S OUTLINE OF QUANTUM MECHANICS
2nd Edition
By Yoav Peleg, Reuven Pnini, Eliahu Zaarur, Eugene Hecht of Adelphi University
2010 (April 2010) / 368 pages
ISBN: 9780071623582
A Schaum’s Publication
Schaum’s Outline of Quantum Mechanics provides a systematic review of quantum mechanics with clear and concise explanations, accompanied by numerous exercises that will allow students to work on their own, for both initial learning and review. The revised edition will include comprehensive review of mathematical foundations, the Schrodinger Equation, angular momentum, spin, the Harmonic Oscillator, numerical methods, and scattering theory.

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Schrodinger Equation and Applications.
Foundations of Quantum Mechanics.
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Solution Methods in Quantum Mechanics.
Identical Particles.
Addition of Angular Momenta.
Scattering Theory.
Semiclassical Treatment of Radiation.

STRING THEORY DEMYSTIFIED
By David McMahon
2009 (August 2008) / 306 pages
ISBN: 9780071498708
A Professional Publication
Trying to understand string theory but ending up with your brain in knots? Here’s your lifeline! This straightforward guide explains the fundamental principles behind this cutting-edge concept. String Theory Demystified elucidates the goal of the theory—to combine general relativity and quantum theory into a single, unified framework. You’ll learn about classical strings, conformal field theory, quantization, compactification, and T duality. The book covers supersymmetry and superstrings, D-branes, the holographic principle, and cosmology. Hundreds of examples and illustrations make it easy to understand the material, and end-of-chapter quizzes and a final exam help reinforce learning. This fast and easy guide offers:

- Numerous figures to illustrate key concepts
- Sample problems with worked solutions
- Coverage of equations of motion, the energy-momentum tensor, and conserved currents
- A discussion of the Randall-Sundrum model
- A time-saving approach to performing better on an exam or at work

INVITATION TO PUBLISH
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Simple enough for a beginner, but challenging enough for an advanced student, String Theory Demystified is your key to comprehending this theory of everything.

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Final Exam Solutions
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ASTRONOMY FOR THE UTTERLY CONFUSED
By Terry Jones, University of Minnesota and Jeanne Hanson
2007 (December 2006) / 352 pages
ISBN: 9780071471589
A Professional Publication

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Ch 1: The Universe in Time and Space
Ch 2: The Earth’s Place
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Ch 4: Key Concepts and Basic laws
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Ch 6: The Rocky Planets and Moons
Ch 7: The Smaller Bodies
Ch 8: Brahe, Copernicus, Einstein, and On
Ch 9: Down to the Atom and Below
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Ch 11: How Stars Evolve
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Ch 13: Formation and Evolution
Ch 14: The Role of Dark Matter
Ch 15: The Role of Dark Energy
Ch 16: Expansion, Contraction, Dissolution
Ch 17: Space Travel

SCHAUM’S OUTLINE OF PHYSICS FOR PRE-MED, BIOLOGY AND ALLIED HEALTH STUDENTS
By George Hademenos, University of California at Los Angeles
1998 / 256 pages
ISBN: 9780070254749
A Schaum’s Publication

Students of medicine and the life sciences will appreciate the special perspective of this invaluable study guide. It explains how physics principles and concepts apply in these particular fields, including more than 70 drawings and graphs to help students visualize, understand and remember the relationships. The hundreds of problems solved step-by-step also help boost learning and grades by reinforcing the ideas and aiding recall.

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LIBERAL ARTS CHEMISTRY
(Non Science Majors)

Textbooks

International Edition

CHEMISTRY IN CONTEXT
6th Edition
By American Chemical Society
2009 (January 2008)
ISBN: 9780077221348
ISBN: 9780071270137 [IE]
http://www.mhhe.com/cic

Following in the tradition of the first five editions, the goal of this market leading textbook, Chemistry in Context, fifth edition, is to establish chemical principles on a need-to-know basis within a contextual framework of significant social, political, economic and ethical issues. The non traditional approach of Chemistry in Context reflect today’s technological issues and the chemistry principles imbedded within them. Global warming, alternate fuels, nutrition, and genetic engineering are examples of issues that are covered in CIC.

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1 The Air We Breathe
2 Protecting the Ozone Layer
3 The Chemistry of Global Warming
4 Energy, Chemistry, and Society
5 The Water We Drink
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7 The Fires of Nuclear Fission
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Appendix 2: The Power of Exponents
Appendix 3: Clearing the Logjam
Appendix 4: Answers to Your Turn Questions Not Answered in the Text
Appendix 5: Answers to Selected End-of-Chapter Questions

LABORATORY MANUAL TO ACCOMPANY
CHEMISTRY IN CONTEXT
Applying Chemistry to Society, 6th Edition
By American Chemical Society
2009 (January 2008) / 288 pages
ISBN: 9780073048772

For those whose course including a laboratory component, a Laboratory Manual, compiled and edited by Gail A. Steehler (Roanoke College), is available for the 6th edition. The experiments use microscale equipment (wellplates and Beral-type pipets) and common materials. Project-type and cooperative/collaborative laboratory experiments are included. New experiments are on the ozone and biodiesel. Additional experiments are available on the Online Learning Center, as is the instructor’s guide.

CONTENTS
1 What Am I Breathing? Preparation and Properties of O2 and CO2
2 Is it Pure or a Mixture? Chromatographic Study of Felt-Tip Pen Inks
3 Can I Spot a Trend? A Graphic Experience
4 What Protects Us from Ultraviolet Light?
5 Visibly Delighted: How Do Colored Solutions Interact with Light?
6 What Does a Molecule Look Like? Bonds, Molecular Models, and Molecular Shapes
7 How Can We Measure the Mass of a Molecule? Weighing Gases
8 Chemical Moles: Soda to Table Salt
9 Hot Stuff: An Energy Conservation Problem
10 Which Fuels Provide the Most Heat?
11 Can Waste Oil be Turned into a Fuel?
12 A Conductivity Detector for Ions
13 How Much Acid is in Food?
14 Which Common Materials are Acids or Bases?
15 Does Acid Reign?
16 Solubilities: An Investigation
17 Is My Bottled Water Safe?
18 Which Common Materials are Acids or Bases?
19 Does Acid Rain Fall in My Neighborhood?
20 Solubilities: An Investigation
21 Measurement of Radon in Air
22 Can We Get Electricity from Chemical Reactions?
23 How Do Polymer Properties Connect to Structure?
24 Why Do Plastics Get Sorted for Recycling?
25 What Drugs are in an Analgesic Tablet?
26 How Much Fat Is in Potato Chips and Hot Dogs?
27 How Much Sugar Is in Soft Drinks and Fruit Juices?
28 How Much Vitamin C Is in Juice and Vitamin Tablets?
29 How Can We Isolate DNA?
30 Performance-Based Assessment Activities
A Conceptual Introduction to Chemistry, 2e by Bauer/Birk/Marks offers today's student a fresh perspective to the introduction of chemistry. This new textbook offers a conceptual approach to chemistry by starting first with macroscopic phenomena, and then presenting the underlying microscopic detail. Each chapter opens with a real-life scenario that helps students connect abstract chemical concepts to their own lives. The math found in A Conceptual Introduction to Chemistry, 2e is introduced on a need-to-know basis, with “Math Toolboxes” in select chapters to help support the math skills required in that chapter.

NEW TO THIS EDITION

- All new Chapter 17, Biochemistry – In response to many faculty who like the approach of this textbook, but also teach Biochemistry, we added a completely new chapter on Biochemistry. The chapter discusses the four classes of biomolecules; proteins, nucleic acids, carbohydrates, and lipids.

- Math Toolboxes have been reworked, expanded, and now include accompanying end-of-chapter problems. To help students easily reference Math toolboxes, toolbox icons have been added to the text margin which will point students to the appropriate review material.

- The authors believe that the best approach to incorporating math involves development of associated math on an as-needed basis with emphasis on concepts that problems are trying to illustrate. This text integrates need-to-know mathematical ideas that are important to chemists into conceptual discussions. Thorough math reviews are provided in math toolboxes that are referenced within appropriate sections of the text and placed at the end of the relevant chapter.

- New and Expanded Applications – Because we know how important it is for students to apply chemistry to their world, we have added or expanded, especially medical and environmentally related applications throughout the text, marginal notes, worked examples and end-of-chapter problems.

- New and Revised End-of-Chapter Problems. We think it is important to keep problems fresh and up-to-date, so we have added more than 200 new problems and more than 100 revised problems to this edition.
Allied Health/Nursing Chemistry (General, Organic and Biochemistry)

Textbooks

NEW

International Edition

GENERAL, ORGANIC & BIOCHEMISTRY
7th Edition

By Katherine Denniston and Joseph Topping of Towson University and Robert Caret, San Jose State University

2011 (January 2010)
ISBN: 9780077354800
ISBN: 9780071221870 [IE]
www.mhhe.com/denniston
www.successinchem.com

The seventh edition of General, Organic, and Biochemistry is designed to help undergraduate health-related majors, and students of all other majors, understand key concepts and appreciate the significant connections between chemistry, health, disease, and the treatment of disease. This text continues to strike a balance between theoretical and practical chemistry, while emphasizing material that is unique to health-related studies. The text has been written at a level intended for students whose professional goals do not include a mastery of chemistry, but for whom an understanding of the principles and practice of chemistry is a necessity. Designed for the one- or two-semester course, this text has an easy-to-follow problem-solving pedagogy, vivid illustrations, and engaging applications.

NEW TO THIS EDITION

• McGraw-Hill's Connect Chemistry is a complete, online tutorial, electronic homework, and course management system, designed for greater ease of use than any other system available. For students, Connect contains self-study tools such as animations, interactive quizzes, and more. This program enables students to complete their homework online, as assigned by their instructors. Connect provides all instructor resources online, as well provides the ability to create or edit questions from the question bank, import your own content, and automatically grade and report easy-to-assign homework, quizzing, and testing.

• Clear and effective approach to problem solving!
  • Each chapter includes examples that show the student, step-by-step, precisely how to properly determine the correct answer. Example boxes include a relevant Practice Problem and instructions on which end-of-chapter problems are similar in nature.
  • NEW! 230 new problems have been added to the seventh edition. The authors have created a wide variety of paired concept problems. The answers to the odd-numbered questions are found in the back of the book as reinforcement for students as they develop problem-solving skills. The students must then be able to apply the same principles to the related even-numbered paired problems.
  • Critical Thinking Problems: Each chapter includes a set of critical thinking problems. These problems are intended to challenge the students to integrate concepts to solve more complex problems. They make a perfect complement to the classroom lecture, since they provide an opportunity for in-class discussion of complex problems dealing with daily life and the health care sciences.

• Engaging Applications!
  • New to this edition are the Forensic Chemistry, Green Chemistry and Kitchen Chemistry boxes.
  • Clinical, Medical and Human Perspectives appear throughout the book. The Medical, Clinical, Human and Environmental Perspectives provide updated information in various health fields and other growing areas of chemistry to engage students’ interest and help them understand chemistry as related to their lives.

CONTENTS

Part 1 General Chemistry
1 Chemistry: Methods and Measurement
2 The Structure of the Atom and the Periodic Table
3 Structure and Properties of Ionic and Covalent Compounds
4 Calculations and the Chemical Equation
5 States of Matter: Gases, Liquids, and Solids
6 Solutions
7 Energy, Rate, and Equilibrium
8 Acids and Bases and Oxidation-Reduction
9 The Nucleus, Radioactivity, and Nuclear Medicine

Part 2 Organic Chemistry
10 An Introduction to Organic Chemistry: The Saturated Hydrocarbons
11 The Unsaturated Hydrocarbons: Alkenes, Alkynes, and Aromatics
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13 Aldehydes and Ketones
14 Carboxylic Acids and Carboxylic Acid Derivatives
15 Amines and Amides

Part 3 Biochemistry
16 Carbohydrates
17 Lipids and Their Functions in Biochemical Systems
18 Protein Structure and Function
19 Enzymes
20 Introduction to Molecular Genetics
21 Carbohydrate Metabolism
22 Aerobic Respiration and Energy Production
23 Fatty Acid Metabolism
This new GOB textbook is written with the same student-focused, direct writing style that has been so successful in the Smith: Organic Chemistry text. Smith writes with a bulleted approach that delivers need-to-know information in a succinct style for today's students. Armed with an excellent illustration program full of macro-to-micro art, as well as many applications to biological, medical, consumer, and environmental topics, this book is a powerhouse of learning for students.

**FEATURES**

- Text written in a succinct writing style, utilizing bulleted points for emphasis of important information.
- Art program provides macro-to-micro illustrations throughout.
- Common applications of chemistry to everyday life are found in margin-placed Health Notes, Consumer Notes, and Environmental Notes, as well as “Focus on Health and Medicine,” “Focus on the Environment,” and “Focus on the Human Body” sections of the text.
- “How To” boxes provide students with detailed instructions on how to work through key processes.
- End-of-chapter sections include study aids including key reactions, key terms, and key concepts, which are tied to the chapter goals at the start of the chapter.
- Bulleted lists of important concepts. Instead of long paragraphs of content, the author breaks down the key concepts into bulleted lists.
- Stepped out problem solving (including “Analysis and Solution”), followed by related problems that contain answers in the textbook's Appendix.

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Chapter 22: Nucleic Acids and Protein Synthesis
Chapter 23: Digestion and the Conversion of Food into Energy
Chapter 24: Carbohydrate, Lipid, and Protein Metabolism
CHEMISTRY

Lab Manuals

NEW

LAB MANUAL FOR GENERAL, ORGANIC & BIOCHEMISTRY 7th Edition
By Charles H Henrickson, Larry C Byrd and Norman W Hunter of Western Kentucky University

2011 (January 2010)
ISBN: 9780077296728

Henrickson/Byrd/Hunter, A Laboratory Manual for General, Organic, and Biochemistry, 7e, Offers clear and concise laboratory experiments to reinforce understanding of the main text concepts. Prelaboratory exercises, questions, and report sheets are coordinated with each experiment to ensure active student involvement and comprehension.

NEW TO THIS EDITION

- Outstanding pedagogy for student learning. The CheckPoints, Rewind and Fast Forward Buttons are meant to enhance student understanding and comprehension by reinforcing current concepts and interconnecting new concepts to others throughout the text. Students are using and asking for more Checkpoints as a study tool. The author has added numerous new Checkpoint multiple-choice questions, many with visuals, testing the student’s understanding of a concept.
- Integrated media applications: animations, Media Player files, and ARIS. Animations have been built from the Visualizing Chemistry two-page art spreads stepping out a process for the student to visualize and learn. There are seven new animations for the second edition. The animations are narrated by the author, Julia Burdge and designated in the text by a Media Player icon. Other areas in the chapter where content is available for the student to download on their Media Player is also marked with an icon. More animations are also included and designated by an icon next to the appropriate content. Finally, end-of-chapter problems are within our ARIS electronic course management and electronic homework system.
- NEW appendix-- Solubility Product Constants at 25 degrees C.

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Chapter 1 Chemistry: The Central Science
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Chapter 6 Quantum Theory and the Electronic Structure of Atoms
Chapter 7 Electronic Configuration and the Periodic Table
Chapter 8 Chemical Bonding I: Basic Concepts
Chapter 9 Chemical Bonding II: Molecular Geometry and Bonding Theories
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Chapter 18 Entropy, Free Energy, and Equilibrium
Chapter 19 Electrochemistry
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Chapter 23 Metallurgy and the Chemistry of Metals
Chapter 24 Nonmetallic Elements and Their Compounds
Chapter 25 Modern Materials

General Chemistry

Textbooks

NEW

CHEMISTRY 2nd Edition
By Julia Burdge
2011 (January 2010)
ISBN: 9780077354763
ISBN: 9780071221832 [IE]

http://www.mhhe.com/burdge

Chemistry, Second Edition, by Julia Burdge has been created to bridge the gap in the McGraw-Hill general chemistry offerings. This textbook offers a clear writing style written with the students in mind. Julia uses her background of teaching hundreds of general chemistry students per year and creates content to offer more detailed explanation on areas where she knows they have problems. Sitting down with the art house, Julia Burdge worked with the artist to create the style and major art pieces in her text. Out of these discussions, came the creation of the Visualizing Art two-page spreads which detail a process for the students and provide them with the answer to “What is the Point?” Due the success of the art with students, this offering has been doubled in the second edition. With outstanding art, a consistent problem-solving approach, interesting applications woven throughout the chapters, and a wide range of end-of-chapter problems, this is a great second edition text.
GENERAL CHEMISTRY
The Essential Concepts, 6th Edition
By Raymond Chang, Williams College and Jason Overby, College of Charleston

2011 (January 2010)
ISBN: 9780077354718

www.mhhe.com/chang

The sixth edition of General Chemistry continues the tradition of presenting only the material that is essential for a one-year general chemistry course. It strikes a balance between theory and application by incorporating real-world examples; helping students visualize the three-dimensional atomic and molecular structures that are the basis of chemical activity; and developing problem-solving and critical thinking skills. Although the sixth edition incorporates many impressive features, such as macro to micro artwork, animations correlated to the text, and hand-sketched worked examples, General Chemistry is still 200 to 300 pages shorter and much less expensive than other two-semester textbooks. Dr. Chang’s concise-but-thorough approach will appeal to efficiency-minded instructors and value-conscious students.

NEW TO THIS EDITION

- NEW Review of Concepts. A quick review question or set of questions (sometimes with a visual) to test student understanding of the concept just presented.
- Clear Examples. All of the worked examples assist students with step-by-step processes. Additional hand-worked examples show students how a scientist would work out a problem (sometimes called the back-of-the-envelope calculations.). Approximately 40% of the Worked Examples have been revised!

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2010 (January 2009)
ISBN: 9780077274313
ISBN: 9780071272209 [IE]

http://www.mhhe.com/chang10e

Designed for the two-semester general chemistry course, Chang’s best-selling textbook continues to take a traditional approach and is often considered a student and teacher favorite. The book features a straightforward, clear writing style and proven problem-solving strategies. It continues the tradition of providing a firm foundation in chemical concepts and principles while presenting a broad range of topics in a clear, concise manner. The new edition of Chemistry continues to strike a balance between theory and application by incorporating real examples and helping students visualize the three-dimensional atomic and molecular structures that are the basis of chemical activity. An integral part of the text is to develop students’ problem-solving and critical thinking skills. A hallmark of the 10th anniversary edition is the integration of many tools designed to inspire both students and instructors. The textbook is a foundation for the unparalleled, effective technology that is integrated throughout. The multimedia package for the new edition stretches students beyond the confines of the traditional textbook.

NEW TO THIS EDITION

- NEW Review of Concepts—a quick review question or set of questions (sometimes with a visual) to test student understanding of the concept just presented.
- Key Equations are again added to the end-of-chapter material for the student and professor.
- NEW Chemistry in Action boxed essay on Boron Neutron Capture Theory in Chapter 23.
- Conceptual end-of-chapter problems have been added to reinforce the Review of Concepts. The new end-of-chapter problems include visuals for the student to interpret for the correct answer.
- Specific Chapter Changes:
  - Expanded coverage of the common oxides in naming oxoacids in Chapter 2.
  - Revised Section 3.3 on Amounts of Reactants and Products in Chapter 3.
  - Revised the explanation of thermochemical equations in Chapter 6.
  - Expanded coverage on effective nuclear charge in Chapter 8.
  - Expanded explanation of molar heat of vaporization in Chapter 10.
  - Revised the section on frequency factor in the Arrhenius Equation in Chapter 13.
- Further clarified the explanation of pH and also of percent ionization in Chapter 14.

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3 Mass Relationships in Chemical Reactions
4 Reactions in Aqueous Solutions
5 Gases
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7 Quantum Theory and the Electronic Structure of Atoms
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9 Chemical Bonding I: Basic Concepts
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Appendices
1 Derivation of the Names of Elements
2 Units for the Gas Constant
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4 Mathematical Operations

NEW TO THIS EDITION

✓ “Think of It This Way” is a new feature for the 2nd edition. Each of these small snippets of text consists of a few sentences that provide an analogy for a term they need to know. Some of these contain a small illustration to support the text.
✓ Sample Problems and end-of-chapter problems contain more representations of molecular art.

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Appendix D Standard Electrode (Half-cell) Potentials At 298 K
Appendix E Answers To Selected Problems

International Edition

UNIVERSITY CHEMISTRY

By Brian Laird

2009 (March 2008) / 864 pages
ISBN: 9780077221331
ISBN: 9780071270748 [IE]

http://www.mhhe.com/laird

This dynamic new Honors General Chemistry text brings together a practical "Molecular to Macroscopic" approach, a proven problem solving approach that challenges students to think logically, along with a clear and concise writing style. Combined with the author's teaching experience at the University of Kansas, extensive reviewing and accuracy checks, Brian Laird's University Chemistry is certain to meet the needs of both instructor and student.

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APPENDIX 3: Derivation of the Names of the Elements (Source: Appendix 1 9e)
APPENDIX 4: Stable and Unstable Isotopes of the First Ten Elements
CHEMISTRY

International Edition

CHEMISTRY
The Molecular Nature of Matter and Change, 5th Edition
By Martin Silberberg
2009 (January 2008)
ISBN: 9780077216504
ISBN: 9780071278256 [IE]

www.mhhe.com/silberberg

With each edition, Chemistry: The Molecular Nature of Matter and Change by Martin Silberberg is becoming a favorite among faculty and students. Silberberg’s 5th edition contains features that make it the most comprehensive and relevant text for any student enrolled in a general chemistry course. The text contains unprecedented macroscopic to microscopic molecular illustrations, consistent step-by-step worked exercises in every chapter, and an extensive range of end-of-chapter problems which provide engaging applications covering a wide variety of freshman interests, including engineering, medicine, materials, and environmental studies. All of these qualities make Chemistry: The Molecular Nature of Matter and Change the center piece for any General Chemistry course.

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SCHAUHM’S OUTLINE OF COLLEGE CHEMISTRY
9th Edition
By Jerome Rosenberg and Lawrence Epstein of University of Pittsburgh and Peter Krieger, Palm Beach CC Eissey Campus
2010 (August 2009) / 408 pages
ISBN: 9780071635301
A Schaum’s Publication

The best and most up-to-date study guide of its kind, this book summarizes the chemical principles of a first course in college chemistry through problems with clearly explained solutions. This new edition reflects changes in the major current textbooks, and it contains up-to-date information about newer techniques used in environmental chemistry, biochemistry and medicinal chemistry.

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2005 (Jan 2004) / 208 pages
ISBN: 9780072555530
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SCHAUM'S EASY OUTLINES: COLLEGE CHEMISTRY
By Jerome Rosenberg and Lawrence M. Epstein of University of Pittsburgh
2000 / 156 pages
ISBN: 9780070527140
A Schaum's Publication

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LAB MANUAL

COOPERATIVE CHEMISTRY LAB MANUAL
4th Edition
By Melanie M. Cooper, Clemson University
2009 (January 2008) / 176 pages
ISBN: 9780073050232
ISBN: 9780071263344 [IE]
The laboratory course described in the lab manual emphasizes experimental design, data analysis, and problem solving. Inherent in the design is the emphasis on communication skills, both written and oral. Students work in groups on open-ended projects in which they are given an initial scenario and then asked to investigate a problem. There are no formalized instructions and students must plan and carry out their own investigations.

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By Gertrude McKay, Thomas Jefferson University and James R McKay,
Philadelphia College Pharmacy
2003 / 800 pages
ISBN: 9780072315929
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**ORGANIC CHEMISTRY**
*A Brief Course, 4th Edition*
*By Atkins*
2010 (December 2010)
ISBN: 9780071311175
An Asian Publication
(Details unavailable at press time)

**SCHAUM’S OUTLINE OF ORGANIC CHEMISTRY**
4th Edition
*By Herbert Meislich, City College of Cuny, Howard Nechamkin (deceased), Jacob Sharekfin (deceased) and George J Hademenos*
2010 (August 2009) / 512 pages
ISBN: 9780071625128
A Schaum’s Publication

Schaum's Outline of Organic Chemistry provides a systematic review of organic chemistry, with clear and concise explanations, accompanied by numerous exercises that will allow students to work on their own, for both initial learning and review. The revised edition will include solvent effects, CMR spectroscopy, and additional content on polymer chemistry and stereochemistry.

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*A Brief Course, 3rd Edition*
*By Robert C Atkins, James Madison University*
2002 / 608 pages
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ISBN: 9780071266208 [IE - 4 Color Text]
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**SCHAUM’S EASY OUTLINE: ORGANIC CHEMISTRY**
*By Herbert Meislich, City College*
2000 / 138 pages
ISBN: 9780070527188
A Schaum’s Publication

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New to this Edition

- Significant updates are integrated throughout Chapters 1-4:
  - Material on writing organic structures has been expanded and placed in its own new section;
  - The section on writing Lewis structures has been expanded to include more examples of molecules with multiple bonding and heteroatoms;
  - A new section on bonding in water and ammonia that covers hybridization of oxygen and nitrogen has been included;
  - The application of the Hammond postulate has been expanded and a new section on activation energy has been added.
- The previous edition chapters of 18 and 21 (dealing with enolate chemistry) have now been combined into a new chapter 20. Within this new chapter find:
  - An expanded section on enolate regiochemistry;
  - Directed aldol reactions are now covered;
  - A section on the alkylation of chiral enolates has been added.
- Chapter 12, “Reactions of Arenes: Electrophilic and Nucleophilic Aromatic Substitution,” is a completely new chapter, created by combining chapter 23 from the seventh edition, “Aryl Halides,” and chapter 12 from the seventh edition, “Reactions of Arenes”. The rationale for this change involves both practical considerations of the way these topics are already being taught and a connection from the viewpoint of substituent effects and reactivity.
- Carbohydrate chemistry has been significantly updated. New sections on the synthesis of O-glycosides and glycobiology have been added. New sections on liposomes, G-coupled protein receptors, and recombinant DNA technology have been added to the other chapters on biomolecules.
- New Boxed Essays on biosynthetic halogenation, on aromatase inhibitors for cancer chemotherapy, and conducting polymers have been added and the boxed essay on carbon nanomaterials has been revised.
CHEMISTRY

- Over one hundred new problems have been added, many of which involve synthesis of pharmaceuticals and natural products. Several new problems with NMR spectra were introduced in chapter 13.
- Handwritten solutions are now used as guides in solving multiple part problems.
- Chapter 1 has been reorganized to allow the content to flow in an order typical to how it is covered in lecture: formal charge, to Lewis structure, to resonance, to drawing organic structures.
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# PHYSICAL CHEMISTRY

## 6th Edition

By Ira N Levine, Brooklyn College

2009 (April 2008) / 1024 pages

ISBN: 9780072538625

ISBN: 9780071276368 [IE]

Ira N. Levine's sixth edition of Physical Chemistry provides students with an in-depth fundamental treatment of physical chemistry. At the same time, the treatment is made easy to follow by giving full step-by-step derivations, clear explanations and by avoiding advanced mathematics unfamiliar to students. Necessary math and physics have thorough review sections. Worked examples are followed by a practice exercise.

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By George J Hademenos, Candice Mc Closkey, Georgia Perimeter C- Dunwoody, Shaun Murphree, Jennifer M Warner and Kathy Zahler
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Analytical Chemistry

MODERN ANALYTICAL CHEMISTRY
By David Harvey, De Pauw University
2000 / 816 pages
ISBN: 9780072375473 (Out of Print)
ISBN: 9780071183741 [IE]

www.mhhe.com/physsci/chemistry/harvey

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SCHAUM'S OUTLINE OF ANALYTICAL CHEMISTRY
By Adon Gordus, University of Michigan
1985 / 256 pages
ISBN: 9780070237957
A Schaum’s Publication

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TWO SAMPLE MCATs ON CD

SCHAUM'S OUTLINE OF BIOCHEMISTRY
3rd Edition
By Philip Kachel, University of Sydney and Audrey Bersten
2010 (July 2009) / 528 pages
ISBN: 9780071472272
A Schaum's Publication

A complete outline of the fundamentals of biochemistry, the branch of chemistry that deals with the chemical composition of living matter and the molecular nature of the processes of living systems. Biochemists study the chemical structure of biological molecules and seek to define the chemical principles of biological functions. In this new edition, Chapters 8 and 9 are essentially new. Chapter 8, on biochemical signaling, covers how cells respond to changes in their environment. Chapter 9 covers new discoveries in recombinant DNA techniques and sequencing.

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Chapter 1: Origin of Life
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Chapter 11: Fate of Dietary Carbohydrate
Chapter 12: Fate of Dietary Lipid
Chapter 13: Processing Dietary Nitrogen Compounds
Chapter 14: Whole Body Metabolism

SCHAUM'S OUTLINE OF COLLEGE CHEMISTRY
9th Edition
By Jerome Rosenberg and Lawrence M Epstein of University of Pittsburgh and Peter Krieger, Palm Beach CC Eissey Campus
2010 (August 2009) / 408 pages
ISBN: 9780071635301
A Schaum's Publication

This book's unique approach is to draw a broader base of struggling students into the study of chemistry. Today's students possess neither the tools nor the work ethic necessary for success in the study of chemistry as it is traditionally taught. In order to remain engaged these students need to study materials that are relevant to them. Schaum's Outline of College Chemistry meets the needs of today's students by adopting a simplified approach in the content reviews, and eliminating the technical jargon. The solved problems include problems oriented toward real-world situations. Finally, there are 100 additional practice problems in "hot" areas like forensics and materials science that reinforce students learning. This book supports the following major
CHEMISTRY

courses: College Chemistry, General Chemistry, General Chemistry laboratory, Beginning Chemistry, Introductory Chemistry, Chemical Principles, General, Organic and Biochemistry, and AP Chemistry.

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13. Reactions Involving Standard Solutions
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16. Thermodynamics and Chemical Equilibrium
17. Acids and Bases
18. Complex Ions; Precipitates
19. Electrochemistry
20. Rates of Reactions
21. Nuclear Processes

SCHAUM’S OUTLINE OF GENERAL, ORGANIC AND BIOCHEMISTRY FOR NURSING AND ALLIED HEALTH
2nd Edition
By George Odian, and Ira Blei of College of Staten Island, CUNY
2009 (July 2009) / 528 pages
ISBN: 9780071611657
A Schaum’s Publication

Schaum’s Outline of General, Organic, and Biological Chemistry for Allied Health provides a systematic review of chemistry, with clear and concise explanations, accompanied by numerous exercises that will allow students to work on their own, for both initial learning and review. The revised edition will include compounds and chemical bonding, nuclear chemistry and radioactivity, organic compounds, unsaturated hydrocarbons, and nucleic acids.

CONTENTS
1. Chemistry and Measurement
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9. Aqueous Solutions of Acids, Bases, and Salts
10. Nuclear Chemistry and Radioactivity
11. Organic Compounds; Saturated Hydrocarbons
12. Unsaturated Hydrocarbons: Alkenes, Alkynes, Aromatics
13. Alcohols, Phenols, Ethers, and Thioalcohols
14. Aldehydes and Ketones
15. Carboxylic Acids, Esters, and Related Compounds
16. Amines and Amides
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21. Nucleic Acids and Heredity
22. Metabolic Systems
23. Digestion, Nutrition, and Gas Transport

TRANSPORT PHENOMENA IN BIOMEDICAL ENGINEERING
Artificial Organ Design and Development, and Tissue Engineering
By Kal Renganathan Sharma
2010 (May 2010) / 560 pages
ISBN: 9780071633977
A Professional Reference Title

Transport Phenomena in Biomedical Engineering: Artificial Organ Design and Development, and Tissue Engineering provides a comprehensive examination of fluid mechanics within living organisms. In order to construct artificial organs, physiological systems of humans must be analyzed and understood. These include heat conduction, convection, fluid flow and pressure drop in the flow of blood, oxygen transport, and other systems. This book thoroughly covers each system and phenomenon.

Transport Phenomena in Biomedical Engineering features:
- Comprehensive and interdisciplinary coverage of fluid mechanics, heat transfer, and thermodynamics
- Thorough information on tissue engineering
- Worked examples and exercises illustrating the equations derived.
- End-of-chapter case studies

This leading-edge work covers:
- Fluid Mechanics; Molecular Diffusion; Osmotic Pressure, Permeability and Solute Transport; Rheology of Blood and Transport; Gas Transport; Pharmacokinetic Analysis; Bioartificial Organs; Porous Media; Bio-Heat Transfer; Tissue Engineering; Analytical Solutions to Parabolic Partial Differential Equations; Numerical Solutions to Parabolic Partial Differential Equations

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BIOCHEMISTRY DEMYSTIFIED
By Sharon Walker and David McMahon
2009 (June 2008) / 370 pages
ISBN: 9780071495998
A Professional Reference Publication

Learn BIOCHEMISTRY without stressing out your brain CELLS. Trying to understand the chemical processes of living organisms but having trouble metabolizing the complex concepts? Here's your lifeline! Biochemistry Demystified helps synthesize your understanding of this important topic. You'll start with a review of basic chemical concepts and a look at cell structures and cell division. Next, you'll study carbohydrates, lipids, proteins, nucleic acids, nucleotides, and enzymes. Glycolysis, the citric acid cycle, oxidative phosphorylation, and the control of chemical processes round out the coverage. Hundreds of examples and illustrations make it easy to understand the material, and end-of-chapter questions and a final exam help reinforce learning.

This fast and easy guide offers:
- Numerous figures to illustrate key concepts
- Details on DNA and RNA
- Coverage of hormones and neurotransmitters
- A chapter on analytical techniques and bioinformatics
- A time-saving approach to performing better on an exam or at work
- Simple enough for a beginner, but challenging enough for an advanced student, Biochemistry Demystified is your key to mastering this vital life sciences subject.

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SCHUAUM'S EASY OUTLINE BEGINNING CHEMISTRY
By David E. Goldberg, Brooklyn College
2004 (Oct 2003) / 144 pages
ISBN: 9780071422390
A Schaum’s Publication

What could be better than the bestselling Schaum’s Outline series? For students looking for a quick nuts-and-bolts overview, it would have to be Schaum’s Easy Outline series. Every book in this series is a pared-down, simplified, and tightly focused version of its predecessor. With an emphasis on clarity and brevity, each new title features a streamlined and updated format and the absolute essence of the subject, presented in a concise and readily understandable form.

- Graphic elements such as sidebars, reader-alert icons, and boxed highlights stress selected points from the text, illuminate keys to learning, and give students quick pointers to the essentials.
SCHAUM’S OUTLINE OF PHYSICAL CHEMISTRY
2nd Edition
By Clyde R. Metz, Indiana University
1987 / 512 pages
ISBN: 9780070417151
A Schaum’s Publication
http://books.mcgraw-hill.com/cgi-bin/getbook.pl?isbn=0070417156&adkey=W02003

If you want top grades and excellent understanding of physical chemistry, this powerful study tool is the best tutor you can have! It takes you step-by-step through the subject and gives you accompanying related problems with fully worked solutions. You also get hundreds of additional problems to solve on your own, working at your own speed. This superb Outline clearly presents every aspect of physical chemistry. Famous for their clarity, wealth of illustrations and examples, and lack of dreary minutiae, Schaum’s Outlines have sold more than 30 million copies worldwide. Compatible with any textbook, this Outline is also perfect for self-study. For better grades in courses covering physical chemistry you can do better than this Schaum’s Outline!

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# NEW TITLES

## ENVIRONMENTAL SCIENCE & ECOLOGY

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Environmental Science

Introductory Texts

Environmental Science: A Global Concern, Eleventh Edition

By William P Cunningham, University of Minnesota–Minneapolis, Mary Ann Cunningham, Vassar College

2010 (September 2009) / 640 pages
ISBN: 9780073383217
ISBN: 9780070171671 [IE]
http://www.mhhe.com/cunningham11e

New

Environmental Science: A Global Concern, Eleventh Edition, is a comprehensive presentation of environmental science for non-science majors which emphasizes critical thinking, environmental responsibility, and global awareness. This book is intended for use in a one- or two-semester course in environmental science, human ecology, or environmental studies at the college or advanced placement high school level. We have updated data throughout the chapters in this book. Information and examples presented are the most recent available as of the mid-2009. You will find an abundance of specific numbers and current events — details that are difficult to keep up-to-date in a textbook. The goal of this book is to provide an up-to-date, introductory global view of essential themes in environmental science along with emphasis on details and case studies that will help students process and retain the general principles. Because most students who will use this book are freshman or sophomore non-science majors, the authors make the text readable and accessible without technical jargon or a presumption of prior science background.

Contents

Part One Principles for Understanding Our Environment
1 Understanding Our Environment
2 Principles of Science and Systems
3 Matter, Energy, and Life
4 Evolution, Biological Communities, and Species Interactions
5 Biomes: Global Patterns of Life
6 Population Biology

Part Two People in the Environment
7 Human Populations
8 Environmental Health and Toxicology
9 Food and Hunger
10 Farming: Conventional and Sustainable Practices

Part Three Understanding and Managing Living Systems
11 Biodiversity: Preserving Species
12 Biodiversity: Preserving Landscapes
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Part Four Physical Resources and Environmental Systems
14 Geology and Earth Resources
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16 Air Pollution
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18 Water Pollution

Part Five Issues and Policy
19 Conventional Energy
20 Sustainable Energy
21 Solid, Toxic, and Hazardous Waste
22 Urbanization and Sustainable Cities
23 Ecological Economics
24 Environmental Policy, Law, and Planning
25 What Then Shall We Do?
Yellowstone National Park to show how one simple change has far ranging impacts. A new illustration accompanies this addition.

- Chapter 5 Interactions: Environments and Organisms The section on limiting factors and range of tolerance was rewritten and supported with a new illustration. A new food web illustration was substituted. There is a new case study on the changes in food chains in the Great Lakes.

- Chapter 6 Kinds of Ecosystems and Communities A new section on the temperate rainforest was added and supported with photographs and a graph. Many new photographs were added or substituted to help better describe the nature of specific biomes.

- Chapter 9 Energy Sources The chapter was updated with the most recent energy data on energy supply and consumption. The section on renewable energy was reorganized and greatly revised. A new Issues and Analysis feature discusses the pros and cons of corn ethanol production. There are many new and substituted photos.

- Chapter 11 Biodiversity Issues The sections on Biological and Ecosystem Services Values and Threats to Biodiversity were rewritten. A new section on the importance of climate change to biodiversity was added. New figures illustrate the concepts of genetic diversity, species diversity and ecosystem diversity. Many new figures have been added and tables and graphs have been updated. Greatly modified table of Estimated Values of Ecosystem Services.

- Chapter 15 Water Management This chapter features a new figure on the global distribution of the world's water and a new map showing areas of the world experiencing water stress. New content has been added on the role of the oceans as the primary regulator of global climate and an important sink for greenhouse gases. There is also new content on pricing of water in countries and expanded coverage on the restoration of the Everglades. Also featured is expanded coverage on groundwater usage.

- Chapter 19 Environmental Policy and Decision Making This chapter has gone through a major reorganization, including new material on the challenge for United States environmental policy. You’ll also find new material on the complexity of ecological problem solving and China’s rising energy consumption.

- About 100 new photos have been added or substituted throughout the eleventh edition to present real-life situations. Over 50 illustrations, graphs, and charts are new or revised to present detailed information in a form that is easier to comprehend than if that same information were presented in text form.

**CONTENTS**

- Chapter 1 Environmental Interrelationships
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Appendix 1

Tables Glossary Credits Index
The evolutionary foundation for the book has been strengthened.

and other environmental pressures.

powerful ways of investigating ecological systems, as we explore and

as stable isotope analysis and canopy access cranes, provide more

with developing frontiers. Emphasis is placed on how new tools, such

The introduction now links the historical foundations of ecology

from the competition.

focusing only on several key concepts in each chapter sets it apart

the entire planet in the concluding chapter. Its unique organization of

begins with the natural history of the planet, considers portions of the

ing the presentation more applied than theoretical. An evolutionary

is now titled Natural History and Evolution. Moving evolution to this

point in the text sets all the material to follow in a stronger evolutionary

framework. This is particularly significant to section II, which retitled

as Adaptations to the Environment.

✓ The overall conceptual foundation of the text has been enriched.

New concepts presented include the principle of allocation, apparent

competition, indirect mutualism and the ecology of fear.

✓ The treatment of nutrient cycling has been improved. The nutrient

cycling presentation now appears under its own umbrella concept and

is buttressed by the addition of central concepts, including nutrient

sinks, sources, fluxes, and pools, which are critical for understanding

contemporary issues related to the buildup of atmospheric carbon

dioxide.

✓ Lessons learned through the Investigating the Evidence boxes

enrich the graphical presentation. Confidence intervals and standard

error bars are added to selected graphs once the statistical concepts

are introduced in section IV.

✓ New supplementary materials placed online. Suggested read-

ings, answers to concept review questions and answers to critiquing

the evidence questions are now online. In addition, examples cut from

the fourth edition are also available online.

✓ New chapter opener photos, related to chapter content, have

been added to enrich the visual presentation of ecology.

✓ Significant Changes

■ In chapter 2, the maps of individual biomes are now supplemented

by a global map of all the terrestrial biomes that appears on the

inside back cover of the text.

■ In chapter 4, the treatment of evolution by natural selection is ex-

tended by presenting Darwin’s conceptual connection of artificial

selection to natural selection and discussing the significance of

evolution to agriculture, including genetic engineering and geneti-

cally modified organisms.

■ In chapter 5, the principle of allocation and the concept of tradeoffs

is elaborated, improves the foundation for all subsequent discus-

sions of environmental adaptations.

■ In chapter 7, the trophic diversity of life is underscored by present-

ing the ecology of photosynthetic autotrophs, chemosynthetic

autotrophs, and heterotrophs under separate concepts. Photosyn-

thesis is also presented and tied to the evolution of alternative

photosynthetic pathways.

■ In chapter 9, the niche concept is moved up earlier in the text and

tied to patterns of distribution.

■ In chapter 13, the niche concept is revisited and connected to the

concept of competitive exclusion.

■ In chapter 14, the ecology of fear is discussed within the context

of refugees and its significance presented within the context of wolf

restoration in Yellowstone National Park. The discussion foreshad-

ows trophic cascades which appear in chapter 18.

■ In chapter 15, the material on mycorrhizae is updated and

improved by presenting the functional equilibrium model for al-

location of energy by plants.

■ In chapter 16, the discussion of disturbance is extended to include

the extreme levels of disturbance wrought by humans and to point

out how these levels of extension tie into the predictions of the

intermediate disturbance hypothesis. The sampling discussion in

Investigating the Evidence is tied to the canopy crane research

introduced in chapter one.

■ In chapter 17, indirect interactions, including indirect commensalism

and apparent competition are introduced under a new concept and

developed both with text and new artwork.

■ In chapter 18, trophic cascades are presented under the concep-
tual umbrella of indirect interactions, which were introduced in the

previous chapter.

■ In chapter 19, nutrient cycles are more carefully presented within

an enriched conceptual context and tied to current environmental

concerns about the buildup of atmospheric carbon dioxide.
In chapter 21, edge effects and ecotones are included to better define landscape structure for students and to prepare for material on habitat fragmentation in chapter 23.

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1 Introduction to Ecology: Historical Foundations and Developing Frontiers
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21 Landscape Ecology
22 Geographic Ecology
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Labary

ECOLOGY LAB MANUAL
By Darrell S Vodopich, Baylor University

2010 (February 2009) / 256 pages
ISBN: 9780073383187

Darrell Vodopich, co-author of Biology Laboratory Manual, has written a new lab manual for ecology. This lab manual offers straightforward procedures that are do-able in a board range of classroom, lab and field situations.

FEATURES
✓ Straightforward, do-able procedures.
✓ Procedures are do-able in a broad range of classroom, lab, and field situations.
✓ Procedures have specific instructions that can be taught by a teaching assistant with minimal experience as well as by a professor.
✓ Emphasis on lab and field activity rather than detailed theoretical presentations.
✓ Manual is about doing ecology, not just reading theoretical information.
✓ Key Terms – boldfaced at first occurrence.
✓ Numbered lists
✓ Tables
✓ Questions following A heads.
✓ Questions for Further Thought and Study are found at the end of each chapter.

CONTENTS
1 The Nature of Data
2 The Process of Science
3 Soil Analysis
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5 Population Growth
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9 Micro Community Assessment
10 Sampling a Plant Community
11 Sampling Animal Communities
12 Species Diversity
13 Primary Production in an Aquatic Community
14 Competition
15 Natural Selection
16 Adaptations of Vertebrates to Their Environment
17 Adaptations of Plants to Their Environment

2009 (June 2009)
ISBN: 9780070083660

McGraw-Hill India Title

(Details unavailable at press time)
Evolution

**NEW**

**VOLPE’S UNDERSTANDING EVOLUTION**

7th Edition

By Peter Rosenbaum, State University of NY-Oswego

2011 (February 2010) / 288 pages

ISBN: 9780073383231

As an introduction to principles of evolution, this paperback text is ideally suited as a main text for general evolution or as a supplement for general biology, genetics, zoology, botany, anthropology or any life science course that utilizes evolution as the underlying theme.

**NEW TO THIS EDITION**

- This edition has been rewritten and expanded to transmit a wealth of new ideas in evolution fostered by new discoveries in many fields of science. Major adaptive radiations, human evolution, and history of life are some key updated areas. Many new fossils and genetic studies have reframed several of the major details related to evolution.
- A glossary has been added to aid the reader with the challenges of scientific terminology.
- The art program for this edition has been totally updated, with much of the art being revised or replaced.
- New introductory section on the evidence for evolution will help students organize the information that will follow and also help them engage in the public dialogue on accepting evolution.
- Expanded section on creationism, intelligent design (ID), and scientific literacy debate includes issues of public acceptance of evolution and a review of major legal decisions related to this issue. This is important so that students can better understand the issues in the public arena and more easily engage in that public discussion.
- Updated information on major adaptive radiations, human evolution, and history of life. Many new fossils and genetic studies have reframed several of the major details related to evolution.

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Chapter 18- Natural Selection, Social Behavior, and Cultural Evolution  
Epilogue  
Glossary

**International Edition**

**INTRODUCTION TO BIOLOGICAL EVOLUTION**

2nd Edition

By Kenneth Kardong, Washington State University-Pullman

2008 (January 2007) / 416 pages

ISBN: 9780073050775

Written for a general college audience, this book offers an introduction to the principles and significance of Darwinian evolution. It differs from most other textbooks on evolution in three fundamental ways: First, it is intended for students taking evolution early in their studies. Second, it examines the intellectual significance of Darwinian evolution. Third, the text departs from the standard treatment of evolution in other textbooks, wherein the arguments are reductionist, molecular, and overwhelmingly genetic in emphasis. Ken Kardong, also author of Vertebrates: Comparative Anatomy, Function, Evolution, is known for his accessible writing style. His almost conversational approach to this topic puts the reader at ease while learning evolutionary concepts. The result is an inviting book—that will be read.

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1 Evolution of Evolution  
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Website: www.mheducation.asia
Biostatistics

Biostatistics for the Health Sciences
By Karuthan Chinna and Krishnakumari N Krish

2009 / 196 pages (June 2009)
ISBN: 9789833850686
An Asian Publication

This book is an ideal introduction to the study of statistics applied to the field of health sciences. It is intended for undergraduate and postgraduate students in the field of medicine, dentistry, pharmacy, nursing, allied health and other health-related fields with little or no background in statistics.

FEATURES:
- Statistical computation methods are showcased in clinical, medical and research applications
- Relevant formulas are provided for every type of analysis
- Computational mechanics are illustrated using scientific calculators and Excel spreadsheets
- Statistical results are summarized in simple, easy to understand tables
- Writing of precise conclusions based on statistical evidence is emphasized
- End of chapter practice exercises are provided

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Professional References

Global Warming and Climate Change Demystified
By Jerry Silver
2008 / 289 pages
ISBN: 9780071502405
A Professional Reference Title

Global Warming & Climate Change Demystified starts by looking at scientific data gathered from weather instruments, satellite telemetry, ice cores, and coral sections that reveal how the Earth’s temperature is changing. The book goes on to examine the causes of climate change, including both natural processes and human-generated greenhouse gases. Finally, the consequences of global warming are discussed and a wide variety of viable solutions that can be implemented by individuals as well as society as a whole are presented. Complete with end-of-chapter quizzes and a final review to test your knowledge, this book will teach you the fundamentals of global warming and climate change in an unbiased and thorough manner.

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Appendix D. Units of Measurement Applied to Climate Change
Appendix E. Selected Resources
Appendix F. Summary of Key Climate Variables
Appendix G. Lingering Doubts and Concerns
Appendix H. Answers to Chapter Review Questions
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INVITATION TO PUBLISH

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Introduction to Geographic Information Systems, 5e is designed to provide students in a first or second GIS course with a solid foundation in both GIS concepts and the use of GIS. Introduction to GIS strikes a careful balance between GIS concepts and hands-on applications. The main portion of the chapter presents GIS terms and concepts and helps students learn how each one fits into a complete GIS system. At the end of each chapter, an application section with 2-7 tasks presents students with actual GIS exercises and the necessary data to solve the problem.

NEW TO THIS EDITION

- This edition has combined georelational and object-based vector data models into one chapter. A couple of years ago the majority of GIS users were still using georelational vector data such as shapefiles. But now many have turned to object-based vector data such as the geodatabase. Therefore it makes sense to combine these two data models into a chapter and simply call the chapter vector data model.
- New and updated information on:
  - Joins, relates, and relationship classes (Chapter 8)
  - Cartographic representation (Chapter 9)
  - Point pattern analysis (Chapter 11)
  - Viewshed analysis (Chapter 14)
  - Geocoding (Chapter 15).

CONTENTS

1 Introduction
2 Coordinate Systems
3 Vector Data Model
4 Raster Data Model
5 GIS Data Acquisition
6 Geometric Transformation
7 Spatial Data Editing
8 Attribute Data Management
9 Data Display and Cartography
10 Data Exploration
11 Vector Data Analysis
12 Raster Data Analysis
13 Terrain Mapping and Analysis
14 Viewsheds and Watershed
15 Spatial Interpolation
16 Geocoding and Dynamic Segmentation
17 Path Analysis and Network Applications
18 GIS Models and Modeling

MASTERING ARCGIS WITH CD VIDEOCLIPS
4th Edition

This new edition of the text has been updated to reflect ArcView 9.3 software.

New reorganization, to include the following three main sections:
- I- Files and basic skills (current chapters 1,2,4,5,9)
- II- Spatial Analysis (current chapters 6,7,8,14, 15)
- III- Data Management (current chapters 3,10,11,12,13)

CONTENTS

Introduction
1 Introducing ArcGIS
2 Working with ArcMap
3 Coordinate Systems and Map Projections
4 Drawing and Symbolizing Features
5 Working with Tables
6 Queries
7 Spatial Joins
8 Geoprocessing
9 Presenting Data
10 Geocoding
11 Basic Editing in ArcMap
12 More Editing Techniques
13 Working with Geodatabases
14 Analyzing Networks
15 Raster Analysis
Glossary
Selected Answers
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Conversion Table
Human / Cultural Geography

NEW
International Edition

HUMAN GEOGRAPHY
11th Edition
By Jerome D Fellmann, Mark Bjelland, Gustavus Adolphus College, Arthur Getis, San Diego State University and Judith Getis

2010 (October 2009) / 512 pages
ISBN: 9780073522852
ISBN: 9780071220552 [IE]
http://www.mhhe.com/fellmann11e

Fellmann et al’s Human Geography introduces students to the scope and excitement of human geography and its relevance to their daily lives. This edition continues to convey the breadth of human geography and to provide insight into the nature and intellectual challenges of the field of geography itself. The authors pay special attention to gender issues and assume no previous experience in geography on the part of the students.

NEW TO THIS EDITION
- Many new and updated maps have been introduced to the eleventh edition of Human Geography:
  - Two new maps that use the city of New Orleans to illustrate the concepts of site and situation
  - Perceptual regions of North America
  - Global centers of high technology innovation
  - Classification map of world cities based on international business services
  - Map showing geographic shifts in the apportionment of the United States House of Representatives
- Boxed Inserts. These boxes, found in every chapter, expand on ideas included within the text or introduce related examples of chapter concepts or conclusions, often in gender-related contexts. These boxes have been updated or replaced with new discussion texts:
  - New Geography and Public Policy box “Broken Borders” in chapter 3
  - New box titled “Hip Hop Undergoes Globalization and Glocalization” added in chapter 10
  -Revision and updates made to the “Voting Rights and Race” box now includes discussion on the outcome of recent court challenges to majority minority districts and the shape of the revised districts
  - A new box titled “Environmental Justice” has been added in chapter 16
  - Revised material on race and ethnicity of reflect new scholarship, including a complete revision of the “Matter of Race” box
- Revised and expanded topics are seen throughout the new edition:
  - Updated data race and Hispanics in the U.S.
  - New discussion and illustrative photos on the revival of traditional building styles
  - Brownfields, deindustrialization and urban revitalization discussion has been added to link economic geography and urban geography sections

• Additional background information added on the role of the International Monetary Fund and World Bank
• New Latin American City Model has been added to increase global appeal
• More in-depth information on past and ongoing border disputes included
• Introduction of the IPAT equation as a way to integrate human geography topics of population and economic geography into a consideration of environmental impacts. Also, a new discussion on how the scale of environmental impacts shifts with rising standards of living has been added
• Revised discussion of global climate change, offering concrete examples of ways individuals and communities have reduced their environmental impact

- NEW Author! Mark D. Bjelland is a co-author new to this edition. Dr. Bjelland is an associate professor of geography and environmental studies at Gustavus Adolphus College. Dr. Bjelland brings strengths to this book in urban-economic geography, human-environment relationships, the geography of religion, spatial thinking and geospatial techniques.

- Chapter 10 includes the latest available data on the many social and economic indicators. In addition, there is a section reviewing the United Nations “Millennium Development Goals” that are central to the identification of national development objectives and assessment of achievements.

This convenient guide matches the units in Annual Editions: Geography, 23/e with the corresponding chapters in two of our best-selling McGraw-Hill Geography textbooks by Fellmann et al. and Bradshaw et al.

CONTENTS
1 Introduction: Some Background Basics
Part 1 Themes and Fundamentals of Human Geography
  2 Roots and Meaning of Culture
  3 Spatial Interaction and Spatial Behavior
  4 Population: World Patterns, Regional Trends
Part 2 Patterns of Diversity and Unity
  5 Language and Religion: Mosaics of Culture
  6 Ethnic Geography: Threads of Diversity
  7 Folk and Popular Culture: Diversity and Uniformity
Part 3 Dynamic Patterns of the Space Economy
  8 Livelihood and Economy: Primary Activities
  9 Livelihood and Economy: From Blue Collar to Gold Collar
  10 Patterns of Development and Change
Part 4 Landscapes of Functional Organization
  11 Urban Systems and Urban Structures
  12 The Political Ordering of Space
Part 5 Human Actions and Environmental Impacts
  13 Human Impacts on Natural Systems
Appendix A Map Projections
Appendix B 2006 World Population Data
Appendix C Anglo America Reference Map
This market-leading book introduces college students to the breadth and spatial insights of the field of geography. The authors' approach allows the major research traditions of geography to dictate the principal themes. Chapter 1 introduces students to the four organizing traditions that have emerged through the long history of geographical thought and writing: earth science, culture-environment, location, and area analysis. Each of the four parts of this book centers on one of these geographic perspectives.

CONTENTS
1 Introduction
2 Maps
Part 1 The Earth Science Tradition
3 Physical Geography: Landforms
4 Physical Geography: Weather and Climate
5 The Geography of Natural Resources
Part 2 The Culture-Environment Tradition
6 Population Geography
7 Cultural Geography
8 Spatial Interaction
9 Political Geography
Part 3 The Location Tradition
10 Economic Geography
11 An Urban World
12 Human Impact on the Environment
Part 4 The Area Analysis Tradition
13 The Regional Concept
Appendices
Glossary
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INVITATION TO PUBLISH
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Website: www.mheducation.asia

GEOGRAPHY
Intro to Geography
International Edition
INTRODUCTION TO GEOGRAPHY
12th Edition
By Arthur Getis, San Diego State University, Judith Getis and Jerome D Fellmann
2009 (September 2008) / 576 pages
ISBN: 9780073522821
ISBN: 9780071284530 [IE]
www.mhhe.com/getis12e

This market-leading book introduces college students to the breadth and spatial insights of the field of geography. The authors’ approach allows the major research traditions of geography to dictate the principal themes. Chapter 1 introduces students to the four organizing traditions that have emerged through the long history of geographical thought and writing: earth science, culture-environment, location, and area analysis. Each of the four parts of this book centers on one of these geographic perspectives.

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CHANGING LANDSCAPES OF SINGAPORE
By Peggy Teo, Brenda S A Yeoh, Ooi Giok Ling and Karen P Y Lai
2004 / 240 pages
ISBN: 9780071234795
An Asian Publication

The transformations that have occurred in Singapore’s landscape have been rapid since independence. Changing Landscapes of Singapore discusses these changes from the perspective of lived landscapes which have day-to-day meanings for Singaporeans. It begins with an exploration of the major physical changes resulting from rapid urbanisation and industrialisation and Singapore’s attempt to balance the stresses of physical development with the needs of a green agenda. Several other themes relating to landscape change follow. A section on landscapes of community and nationhood investigates how issues concerning shelter (public housing), heritage conservation, street-names and national symbols affect Singaporeans’ notions of belonging. This is followed by a discussion on globalisation and the way it affects the nationstate’s development. This section examines not only Singapore’s efforts at regionalisation and its attempt to gain a better foothold in the workings of the global capitalistic system but also evaluates the impacts of globalisation on the society. The last section on forgotten landscapes is a reminder of who and what may be left behind in striving for excellence. Landscapes reveal and reflect forgotten needs as much as they record what have been remembered and valued. The various strands are brought together in the final chapter where the landscape is used as a lens to raise questions on future challenges. While intended as a general text for university students, this book will also provide source materials for school teachers (junior college and upper secondary levels), the general student population as well as the general reader interested in understanding the country’s rapid landscape changes.

CONTENTS
1 Introduction: Changing Landscapes of Singapore
Part I NATURAL ENVIRONMENTS AND ENGINEERED LANDSCAPES
2 Environmental Planning and Management
3 Engineered Biophysical Landscapes: Parks and Open Spaces for Recreation
Part II LANDSCAPES OF COMMUNITY AND NATIONHOOD
4 Urbanisation and Landscape Changes
5 The Nation, Its Signs and Symbols: Street-names and Monuments
6 Public Housing: The Housing of a Nation
7 Landscapes of Heritage: Historic and Cultural Districts
Part III LANDSCAPES OF GLOBALISATION
8 Achieving Global City Status: Industrial Restructuring and Regionalisation
9 Tourism Capital: Reinterpreting Tourism Space
10 Transnational Connectivities and Local Tensions
Part IV FORGOTTEN LANDSCAPES
11 Neglected Landscapes: Old and Forgotten Singaporeans
12 Landscapes of Death: Cemeteries, Crematoria and Columbaria
13 Changing Landscapes and Future Challenges: A Review
Lemke et al: Physical Geography Laboratory Manual is a comprehensive introductory manual for students without a previous science background. An abundant set of 21 exercises assures that every professor will find a complete set of preferred labs for a semester-long course. Lemke/Ritter/Heywood wrote this lab manual in order to provide equal coverage of the four spheres of the environment—the atmosphere, biosphere, hydrosphere, and lithosphere. The lab manual was written independent of any specific textbook and will work with available physical geography texts.

CONTENTS

EXERCISES
1. Earth-Sun Geometry and Insolation
2. Radiation and Energy Balance at the Earth's Surface
3. Atmospheric Temperature
4. Atmospheric Pressure, Circulation and Wind
5. Water in the Atmosphere
6. Lapse Rates, Adiabatic Processes and Cloud Development
7. Midlatitude Weather and Weather Map Interpretation
8. Climate Classification and Regional Climates
9. Soil Moisture Budgets
10. Analysis of Soil Moisture Properties
11. Climate, Net Primary Production and Decomposition
12. Vegetation Form and Range
13. Bioclimatic Transects
14. Coincident Climates, Vegetation and Soils
15. Rainforest Regeneration Analysis Using Aerial Imagery
16. Introduction to Topographic Maps
17. Igneous Landforms
18. Drainage Basin Analysis
19. Fluvial Landforms
20. Glacial Landforms
21. Coastal Landforms
Appendix A. Units of Measures and Conversions
Appendix B. Drawing Isolines
Appendix C. Constructing Profiles
Appendix D. Using Pocket Stereoscopes
Appendix E. Exercise Topographic Maps and Photos
Appendix F. Thematic World Maps

MAP USE AND ANALYSIS
4th Edition
By John Campbell, University of Wisconsin – Parkside
2001 / 384 pages
ISBN: 9780073037486
ISBN: 9780071252645 [IE]

CONTENTS
Chapter 1 Introduction
Chapter 2 Basic Mapping Processes
Chapter 3 Map Projections
Chapter 4 Locational and Land-Partitioning Systems
Chapter 5 Scale and Generalization Concepts
Chapter 6 Measurement from Maps
Chapter 7 Route Selection and Navigation
World Regional Geography

FEATURES

- This first edition was produced with the same high quality as Contemporary World Regional Geography, 3e, but contains significant content changes including new and revised tables, maps, and completely rewritten text. Students will see that world regional geography is constantly changing in response to developing cultural, economic, and political patterns.
- Less than 400 total pages, this book contains all of the essential topics of the major world regions.
- Superior quality artwork, illustrations, and photos can be found throughout this text.
- A variety of physical and thematic maps have been included in this text. Special attention has been given to the population density maps, featured in all ten chapters, providing an accurate illustration of the population distribution in the world.
- Chapter Opening Vignettes. Chapter introductions take the form of interest- arousing vignettes to focus student attention on the local lives of the region.
- “Debate Tables” can be found in virtually every chapter. These tables provide critical assessment of controversial world issues, engaging students and supporting critical analytical skills. These important tables highlight opposing sides of important world issues. Topics featured in the debate tables include The European Union’s Future; Russia as a World Power; Population Policies in China; Singapore; The Israelis versus Palestinians; HIV/AIDS in Materially Wealthy and Poor Countries; Africa: Future of the Region; Tropical Deforestation; and the Effects of NAFTA.
- Geography At Work Boxes. Interesting Geography At Work boxes, found at the end of each chapter, provide valuable insights into the ways geographical understandings and skills are used in a variety of jobs.
- Foldout World Maps. Foldout world maps from Klett-Perthes can be easily referenced from any chapter in the text. The foldout section at the back of the text focuses on world climate; urbanization and migration; and a guide to map reading.
- Build instructional materials wherever, whenever, and however you want! Presentation Center is an online digital library containing assets such as photos, artwork, animations, PowerPoints, and other types of media that can be used to create customized lectures, visually enhanced tests and quizzes, compelling course websites, or attractive printed support materials.
- Access to your book, access to all books! This ever-growing resource gives instructors the power to utilize assets specific to their adopted textbook as well as content from other McGraw-Hill books in the library. Presentation Center’s dynamic search engine allows you to explore by discipline, course, textbook chapter, asset type, or keyword. Simply browse, select, and download the files you need to build engaging course materials. All assets are copyrighted by McGraw-Hill Higher Education but can be used by instructors for classroom purposes.
- Google Earth Exercises. New Google Earth exercises for Essentials of World Regional Geography engages students in their studies. Google Earth is a free, online application that uses satellite imagery to allow the user to zoom across the globe in a realistic, virtual environment. There are exercises for 9 different regions (in ARIS) with over 25 different multiple choice exercises per region for over 285 exercises total as well as a user’s manual explaining how to use the site.

CONTENTS

1 Essentials of World Regional Geography
2 Europe
3 Russia and Neighboring Countries
4 East Asia
5 Southeast Asia

Chapter 8 Terrain Representation
Chapter 9 Contour Interpretation
Chapter 10 Topographic Features
Chapter 11 Qualitative and Quantitative Information
Chapter 12 Characteristics of Map Features: Shape and Point Patterns
Chapter 13 Characteristics of Map Features: Networks and Trees
Chapter 14 Cartograms and Special Purpose Maps
Chapter 15 Maps and Graphs
Chapter 16 Map Misuse
Chapter 17 Remote Sensing from Airborne Platforms
Chapter 18 Remote Sensing from Space
Chapter 19 Computer-Assisted Cartography
Chapter 20 Digital Map Applications
Chapter 21 Geographic Information Systems
Appendices:
A U.S. and Canadian Map Producers and Information Sources
B Foreign Maps
C Copyright
D Magnetic Compass Use E Map Storage and Cataloging Systems
F British National Grid

NEW

ESSENTIALS OF WORLD REGIONAL GEOGRAPHY
2nd Edition
By George White, Frostburg State University; Joseph Dyond and Elizabeth Chacko of George Washington University and Michael Bradshaw, College of St. Mark & John
2011 (January 2010) / 400 pages
ISBN: 9780073369334

www.mhhe.com/bradshawessentials2e

This shorter version of the highly successful Contemporary World Regional Geography, 3e gives readers a fresh new approach that combines fundamental geographical elements, internal regional diversity, and contemporary issues. This approach allows serious discussion of cultural and environmental issues, as well as political and economic issues. The main innovation in this completely rewritten text is in the ordering of the material covered. While other texts cut photos, illustrations, and boxed material from their WRG books, this essentials version is a completely rewritten text by the authors of Contemporary World Regional Geography, 3e. Each of the nine regional chapters opens with a one- or two-page map of the region, short accounts of people or events to provide a personal flavor of the region, an outline of the chapter contents, and a short section placing the region in its wider global context. Each regional chapter is consistently organized by three sections. The first section summarizes the distinctive physical and human geographies of the region; the second section explores the internal diversity of the region at subregional, selected country, and local levels. The third section focuses on a selection of contemporary issues that are important to the people of each region and frequently have implications for the rest of the world. Each regional chapter follows the same framework, allowing students to easily make comparisons from one world region to the next. Students are encouraged to consider what it means to be part of a global community and to develop their geographical understandings of world events. The authors have created a text that is readable, with a consistent structure within chapters, containing superior maps and illustrations, and finally to offer a concise and more affordable text.
6 South Asia
7 Northern Africa and Southwestern Asia
8 Africa South of the Sahara
9 Australia, Oceania, and Antarctica
10 Latin America
11 North America

International Edition

CONTEMPORARY WORLD REGIONAL GEOGRAPHY
3rd Edition
By Michael Bradshaw, College of St Mark & John, Joseph Dymond, George Washington University, George White, Frostburg State University and Elizabeth Chacko, George Washington University
2009 (September 2009) / 624 pages
ISBN: 9780073051505
ISBN: 9780071284516 [IE]
http://www.mhhe.com/bradshaw3e

Contemporary World Regional Geography provides a current, balanced geographical study of world issues through analysis of ten world regions and the countries in each. It integrates the themes of "global connections" and "local voices" and utilizes a consistent structure within each chapter. NEW to the 3rd edition, each chapter is now organized to begin with environmental issues of the region followed by historical geography, global and local issues and economic, political, cultural, and social issues. The greatest advantage of the new organization is that students will be able to easily compare one region with another to understand similarities and differences.

CONTENTS
1 Globalization and World Regions
2 Concepts in World Regional Geography
3 Europe
4 Russia and Neighboring Countries
5 East Asia
6 Southeast Asia
7 South Asia
8 Northern Africa and Southwestern Asia
9 Africa South of the Sahara
10 Australia, Oceania, and Antarctica
11 Latin America
12 North America
13 A World of Geography
Glossary of Key Terms
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SPECTRAL IMAGERY IN GI SCIENCE
By Stefan Robila and Danlin Yu
2011 (August 2010) / 350 pages
ISBN: 9780071602112
A Professional Reference

Practical techniques for using spectral imaging with Geographic Information Science. This authoritative guide focuses on the application aspects of Geographic Information Science, in particular how spectral remote sensing co-evolves with advances in GIScience. The book provides a contemporary and comprehensive review of spectral imaging and GIScience, and describes how they can be successfully employed in a uniform framework. An extensive collection of case studies written by expert scholars with significant experience in the discipline is included.

CONTENTS
Ch 1. Introduction
Part A. Fundamentals
Ch 2. Spectral Imagery
Ch 3. Spectral Data Processing
Ch 4. GIScience
Ch 5. Advanced GIS processing and modeling/Object oriented Approaches to GIS
Part B. Applications
Ch 6. Agriculture and Vegetation Monitoring
Ch 7. Urban Setting
Ch 8. Hydrology and Responsible Land Use
Ch 9. Oil and Minerals
Ch 10. Archeology
Ch 11. Natural Disasters

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## The Good Earth

**Introduction to Earth Sciences, 2nd Edition**

By David A McConnell, North Carolina State University-Raleigh, David Steer, Katherine Owens and Catherine Knight of University of

2010 (September 2009)

ISBN: 9780077270971

ISBN: 9780070164963 [IE]

http://www.mhhe.com/thegoodearth2e

The Good Earth is the product of collaboration between the content rigor provided by Earth Science specialists (McConnell, Steer) and the results of research on learning as contributed by pedagogical experts (Knight, Owens). The Good Earth has been explicitly designed to be compatible with inquiry-based, active learning in the college classroom. The structural elements of this text will allow the instructor to incorporate these student-centered teaching methods into their Earth Science course. The authors have tested the book’s content and pedagogy in large Earth Science classes for non-majors that are populated with mostly freshmen. Their experiences show that the materials and methods in The Good Earth can improve students’ learning, increase daily attendance, reduce attrition, and increase students’ enthusiasm in comparison with classes taught following a traditional lecture format. The authors have chosen to emphasize three scientific themes throughout the text: i) scientific literacy; ii) Earth Science and the human experience; and, iii) the science of global change. The discussion of scientific methods is woven into the text throughout. They have included numerous examples of human interaction with the Earth that can serve as entry points for students to appreciate the nature of science. Global change is a theme that is evident in much current Earth Science research so our authors have used global change as a content theme throughout the book.

### Contents

- Preface
- 1 Introduction to Earth Science
- 2 Earth in Space
- 3 Near-Earth Objects
- 4 Plate Tectonics
- 5 Earthquakes
- 6 Volcanoes and Other Mountains
- 7 Rocks and Minerals
- 8 Geologic Time
- 9 Weathering and Soils
- 10 Landslides and Slope Failure
- 11 Streams and Floods
- 12 Groundwater and Wetlands
- 13 Oceans and Coastlines
- 14 The Atmosphere
- 15 Weather Systems
- 16 Earth’s Climate System
- 17 Global Change
- Appendices
- Glossary

## Environmental Geology

**Environmental Geology**

9th Edition

By Carla W Montgomery, Northern Illinois University

2011 (February 2010) / 576 pages

ISBN: 9780073524085

ISBN: 9780071222044 [IE]

www.mhhe.com/montgomery9e

Environmental Geology, ninth edition, presents the student with a broad overview of environmental geology. The text looks both at how the earth developed into its present condition and where matters seem to be moving for the future. It is hoped that this knowledge will provide the student with a useful foundation for discussing and evaluating specific environmental issues, as well as for developing ideas about how the problems should be solved.

### New to this Edition

- Coverage in many chapters has been enhanced by Case Studies and more current examples.
- The “For Further Thought” questions at the end of the chapter have been changed to “Exploring Further.” The questions have been revised to encourage inquiry and/or activity-based learning.
Many chapters feature a Case Study of a controversial issue that has an environmental impact.

CONTENTS
Part 1: Fundamentals of Environmental Geology
Chapter 1 Humans and the Geologic Environment
Chapter 2 Earth from a Larger Perspective
Chapter 3 Earth Materials
Chapter 4 Earth’s Structure and Plate Tectonics
Part 2: Hazardous Earth Processes
Chapter 5 Earthquakes and Related Hazards
Chapter 6 Volcanoes and Related Hazards
Chapter 7 Mass Wasting and Related Hazards
Chapter 8 Streams and Flooding
Chapter 9 Coastal Hazards
Part 3: Earth Resources
Chapter 10 Soil Resources
Chapter 11 Water Resources
Chapter 12 Mineral and Rock Resources
Chapter 13 Conventional Fossil Fuel Resources
Chapter 14 Alternative Energy Resources
Part 4: The Health of Our Environment
Chapter 15 Waste Disposal and Pollution
Chapter 16 Global Climate Change
Appendix A Units and Conversions

International Edition
NATURAL DISASTERS
7th Edition
By Patrick Leon Abbott, San Diego State University
2009 (December 2008) / 512 pages
ISBN: 9780073376691
ISBN: 9780070164499 [IE]
http://www.mhhe.com/abbott7e

Reichard’s Environmental Geology emphasizes human interaction with the environment within a geological context. The writing style holds the interest of nonmajor students, and the text brings applications to the forefront so that students feel a connection to the topic.

FEATURES
• The key themes of the text are energy, human interaction in the environment, and climate change.
• Student Learning Outcomes introduce each chapter.
• Environmental Geology includes a unique chapter (2) that describes Earth’s relationship with the solar system and universe.
• The end-of-chapter pedagogy will include Summary Points, Key Terms, Critical Thinking Questions, and Applications (hands-on activities).
Evolution of the Earth reveals the logical framework of geology, shows relations of the science to the totality of human knowledge, and gives some idea of what it is to be a participant in the discipline. In keeping with the preference for a “How do we know?” rather than “What do we know?” approach, the authors stress what assumptions are made by earth historians, what kinds of evidence (and tools for gathering that evidence), and what processes of reasoning and limitations of hypotheses are involved in reconstructing and interpreting the past. Each chapter begins with a list of highlights entitled “Major Concepts”. Many chapters have a summary timeline that puts the entire sequence of events into a quick visual reference frame. The use of dioramas and reconstructions of extinct animals and plants has been greatly expanded, so that students can get a more vivid concept of typical life in any part of the geologic past. In many places, the authors have supplied a full page of color photos of classic fossils from each period to improve the visual recognition of the organisms that give life its distinctive history. The areas of hottest controversy, such as mass extinctions, dinosaur endothermy, the origin of life, and controversies over late Proterozoic tectonics and glaciation, have been given separate sections so that students can appreciate the different sides of the debates.

NEW TO THIS EDITION

- Significant updating of chapter content based on reviewer suggestions and feedback from adopters. Updates include information on Dawn and Earth History, Ocean Ridges and Sea-Floor Spreading, The Great Lakes, and Cenozoic Climate.
- New material added on Tsunamis, Santorini, The Origin and Fate of the Moon, Mountain Building and the Standard Chronology for Precambrian Time.

CONTENTS

Preface
About the Authors
Chapter 1: Time and Terrestrial Change
Chapter 2: Floods, Fossils, and Heresies
Chapter 3: Evolution
Chapter 4: The Relative Geologic Time Scale and Modern Concepts of Stratigraphy
Chapter 5: The Numerical Dating of the Earth
Chapter 6: The Origin and Early Evolution of the Earth
Chapter 7: Mountain Building and Drifting Continents
Chapter 8: Precambrian History An Introduction to the Origin of Continental Crust
Chapter 9: Early Life and Its Patterns
Chapter 10: Earliest Paleozoic History: The Sauk Sequence—An Introduction to Cratons and Epeiric Seas
Chapter 11: The Later Ordovician: Further Studies of Plate Tectonics and the Paleogeography of Orogenic Belts
Chapter 12: The Middle Paleozoic: Time of Reefs, Salt, and Forests
Chapter 13: Late Paleozoic History: A Tectonic Climax and Retreat of the Sea
Chapter 14: The Mesozoic Era: Age of Reptiles and Continental Breakup
Chapter 15: Cenozoic History: Threshold of the Present
Chapter 16: Pleistocene Glaciation and the Advent of Humanity
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An Introduction to the World's Oceans, Tenth Edition, is an introductory oceanography text intended for students without a background in mathematics, chemistry, physics, geology, or biology. It emphasizes the role of basic scientific principles in helping understand the processes that govern the ocean and the earth. To keep the text as current as possible, the authors conduct their own research and examine other findings such as analyzing satellite data and large-scale oceanographic programs. From this vast amount of data, they select interesting, relevant, and understandable examples that illustrate contemporary principles of oceanography. An Introduction to the World's Oceans places greater emphasis on the physical and geological aspects of the oceans than on the chemical and geochemical properties, because the latter disciplines require more specific background knowledge. An ecological approach helps integrate the biological chapters with other subjects. Students are encouraged to look at oceanography as a cohesive and united discipline rather than a collection of subjects gathered under a marine umbrella. As with all previous editions, the authors continue to make each chapter stand as independently as possible, so that professors can assign chapters in the order that best suits their classrooms.

Contents
1 The History of Oceanography
2 The Water Planet
3 Plate Tectonics
4 The Sea Floor and Its Sediments
5 The Physical Properties of Water
6 The Chemistry of Seawater
7 The Structure and Motion of the Atmosphere
8 Circulation and Ocean Structure
9 The Surface Currents
10 The Waves
11 The Tides
12 Coasts, Beaches, and Estuaries
13 Environmental Issues and Concerns
14 The Living Ocean
15 Production and Life
16 The Plankton: Drifters of the Open Ocean
17 The Nektom: Free Swimmers of the Sea
18 The Benthos: Dwellers of the Sea Floor
Appendices
Glossary
Credits
Index
New to this edition

- Content has been updated throughout to keep the text both current and fresh. Some examples include:
  - Chapter 1 now includes a link to video clips of the disastrous 2002 Tsunami that originated in India.
  - Chapter 14 now includes updated box to include the important new discoveries by Phoenix Mars Lander.
  - Chapter 16 has been rearranged and updated to include material on the devastating floods that struck the Midwest in 2008 is also included.
  - Chapter 2 includes updated material on the use of energy generated by tidal friction, ocean waves, and storms to gain an even more detailed image of the crust and upper mantle.
  - Chapter 21 has been extensively rewritten and reorganized. All units are now SI units (with British units in parentheses). The section on energy resources has been divided into non-renewable and renewable sources. Discussion on renewable energy has been expanded to include more information on solar energy, wind power, hydropower, wave energy and biofuels.

Contents

1 Introducing Geology, the Essentials of Plate Tectonics, and Other Important Concepts
2 Earth’s Interior and Geophysical Properties
3 The Sea Floor
4 Plate Tectonics
5 Mountain Belts and the Continental Crust
6 Geologic Structures
7 Earthquakes
8 Time and Geology
9 Atoms, Elements, and Minerals
10 Volcanism and Extrusive Rocks
11 Igneous Rocks, Intrusive Activity, and the Origin of Igneous Rocks
12 Weathering and Soil
13 Mass Wasting
14 Sediment and Sedimentary Rocks
15 Metamorphism, Metamorphic Rocks, and Hydrothermal Rocks
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Chapter 22: The Earth’s Companions
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Appendix B: Identification of Rocks
Appendix C: The Elements Most Significant to Geology
Appendix D: Periodic Table of Elements
Appendix E: Selected Conversion Factors
Appendix F: Rock Symbols
Appendix G: Commonly Used Prefixes, Suffixes, and Roots

NEW TO THIS EDITION

- McGraw-Hill’s Connect Geology for Exploring Geology (www.mhhe.com/reynoldsgeology2e) is a web-based assignment platform that gives students the means to better connect with their coursework, with their instructors, and with the important concepts that they will need to know for success now and in the future.

With Connect Geology, instructors can deliver assignments, quizzes and tests online. Nearly all the questions from the text are presented in an auto-gradable format and tied to the text’s learning objectives. Instructors can edit existing questions and author entirely new problems. Track individual student performance – by question, assignment or in relation to the class overall – with detailed grade reports. Integrate grade reports easily with Learning Management Systems (LMS) such as WebCT and Blackboard. And much more.

By choosing Connect Geology, instructors are providing their students with a powerful tool for improving academic performance and truly mastering course material. Connect Geology allows students to practice important skills at their own pace and on their own schedule. Importantly, students’ assessment results and instructors’ feedback are all saved online – so students can continually review their progress and plot their course to success.

Some instructors may also choose Connect Geology Plus for their students. Like Connect Geology, Connect Geology Plus provides students with online assignments and assessments, plus 24/7 online access to an eBook – an online edition of the text – to aid them in successfully completing their work, wherever and whenever they choose.

- A Glossary of key terms and definitions has been added at the back of the book at the request of reviewers and current users.

CONTENTS

Preface
1 The Nature of Geology
2 Investigating Geologic Questions
3 Plate Tectonics
4 Earth Materials
5 Igneous Environments
6 Volcanoes and Volcanic Hazards
7 Sedimentary Environments
8 Deformation and Metamorphism
9 Geologic Time
10 The Sea Floor and Continental Margins
11 Mountains, Basins, and Continents
12 Earthquakes and Earth’s Interior
13 Climate, Weather, and Their Influences on Geology
14 Shorelines, Glaciers, and Changing Sea Levels
15 Weathering, Soil, and Unstable Slopes
16 Rivers and Streams
17 Water Resources
18 Energy and Mineral Resources
19 Geology of the Solar System
If it's important for you to incorporate the scientific method into your teaching, this lab manual is the perfect fit. In every exercise there are scientific method boxes that provide students with insight into the relevance of the scientific method to the topic at hand. The manual also includes “In Greater Depth” problems, a more challenging probe into certain issues. They are more quantitative in nature and require more in-depth, critical thinking, which is unique to this type of manual.

FEATURES

- The Jones manual contains a chapter dedicated to volcanoes, something seldom seen in lab manuals. This chapter has been revised and refined in this edition.
- Chapters in this lab manual are self-contained, which allows instructors considerable flexibility in the order in which the chapters are taught.
- In Greater Depth problems are a more challenging probe into certain issues. They are more quantitative in nature and require more in-depth critical thinking, which is unique to this type of manual.
- Geologic maps from around the country introduce students to basic regional geography.
- Each lab features questions that require numerical calculations that help improve students’ quantitative reasoning skills and introduce the concept that numbers are essential to the earth sciences.
- The exercises are designed to make students approach and solve problems using scientific methodology as much as possible, rather than following a cookbook method.
- Found at the end of each chapter, the “Applications” section includes the following:
  - An introductory paragraph relates the chapter material to the real world and to the scientific method as illustrated by the problems that follow.
  - A list of “Objectives” precedes a number of problems and indicates what the student should know after completing the problems.
  - A list of “Problems” allows students to answer questions related to the lab experiment they are performing.

LABORATORY MANUAL FOR PHYSICAL GEOLOGY
14th Edition
By James H Zumberge (Deceased), Robert H Rutford and James L Carter, University of Texas at Dallas
2009 (November 2008) / 304 pages
ISBN: 9780073051499
www.mhhe.com/zumberge14e

Laboratory Manual for Physical Geology, 14e is written for the freshman-level laboratory course in physical geology. In this lab, students study Earth materials, geologic interpretation of topographic maps, aerial photographs and Earth satellite imagery, structural geology and plate tectonics and related phenomena. With nearly 30 exercises, professors have great flexibility when developing the syllabus for their physical geology lab course. The ease of use, tremendous selection, and tried and true nature of the labs selected have made this lab manual one of the leading selling physical geology lab manuals.

CONTENTS
Part I: Earth Materials
Part II: The Geologic Column and Geologic Time
Part III: Topographic Maps, Aerial Photographs, and Other Imagery from Remote Sensing
Part IV: Geologic Interpretation of Topographic Maps, Aerial Photographs, and Earth Satellite Images
Part V: Structural Geology
Part VI: Plate Tectonics and Related Geologic Phenomena

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